



**OMP** | OXFORD  
MOSAIC  
PUBLICATIONS

Journal of Social  
— & —  
PSYCHOLOGICAL SCIENCES  
—

Journal of Soc. & Psy. Sci. 2011 Volume 4 (2): 16-49  
Available at: [www.jspsciences.org](http://www.jspsciences.org)

## **Attachment and Grit: Exploring possible contributions of attachment styles (from past and present life) to the adult personality construct of Grit**

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### **Abstract**

It has been suggested that a recently recognized personality trait called grit is responsible for the presence of individual's long-term drive and determination. This study examines the underpinnings of this presumed multi-dimensional trait in terms of self-reported attachment styles to parents during childhood, and to romantic partners during adulthood. 263 voluntary participants completed the Parental Bonding Instrument (PBI; Parker, 1983; Parker et al., 1979), Experiences in Close Relationship Scale-Short Form (ECR-S; Wei et al., 2007) and the Adult Attachment Scale (AAS; Collins & Read, 1990). Additionally, the Grit Scale (Duckworth, & Quinn, 2009; Duckworth et al., 2007) was administered to measure scores on grit, perseverance, consistency, brief grit and ambition. Results largely confirmed the hypotheses; with grit and brief grit being significantly correlated with both current and past attachment variables. Regression results suggested that current adult relationship security outweighed the other predictors of grit considered, with some remaining influence from early childhood relationships. Discussion concerns the likely origins of grit.

*Keywords:* Attachment; Personality; Grit; Ambition; Perseverance

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## **Introduction**

A newly conceptualized personality trait known as grit (Duckworth et al., 2007) has been recently validated to have significant long-term impacts on perseverance and resolve. Past research surrounding grit has focused largely on its relation to the ‘Big Five’ Consciousness as applied to trainees at the West Point, a U.S. Military Academy. Grit studies thus far (Duckworth, 2007) have been informative and illuminating; however, the questions as to what attributes or elements are likely to create the ‘gritty individual’ have not yet been systematically investigated, even in a correlational design such as that which informed the current report. Grit is defined as “perseverance and passion for long-term goals”-(Duckworth 2007). Because personality is largely formed during the years of attachment, it is imperative that such a relationship is explored in depth. The present research on the correlation between childhood-attachment styles and grit has yielded dynamic results. Fundamental connections have been observed which may help bridge the gaps concerning the process and formation of this newly identified personality characteristic. This study will examine the research and address the links between grit and attachment styles.

## **Literature Review**

Duckworth et al., (2007) questioned why some individuals accomplish more than others of equal intelligence. They postulated that certain characteristics (cognitive ability, creativity, vigor, emotional intelligence, charisma, self-confidence, emotional stability & physical attractiveness) are likely characteristics of high achieving individuals. Additionally, they suggested that some of the ‘Big Five’ dimensions might be relevant and necessary for some careers but not others (ex. extraversion for a salesperson, though, irrelevant to a creative writer). Might there be a more-or-less separate 6<sup>th</sup> dimension of personality that is associated with success across a wide range of careers?

Pioneering researchers, Duckworth et al., (2007) thought so, and introduced the concept of grit. Grit is defined as “perseverance and passion for long-term goals” (Duckworth 2007, p. 1087). According to Duckworth et al., (2007) grit entails working persistently toward challenges, upholding effort and concentration over years throughout

hardships, setbacks and stagnancy. Gritty individuals view achievement as a long-term process; their lead is endurance, determination and stamina. Disappointment and/or boredom may indicate to many that it is time to modify one's trajectory, whereas gritty persons continue on track (Duckworth et al., 2007). Gritty individuals sustain this effort and concentration over many years despite disappointments, failures and hardships while in development of their goal. The gritty individual characteristically finishes tasks at hand and pursues long-term goals.

Thus, Duckworth et al. (2007) ascertained a two-factor structure for a 12-item self-report measure of grit. This configuration was consistent with the premise of grit as a multifarious trait encompassing stamina in dimensions of interest and effort (Duckworth et al., 2007). They observed that grit was distributed and shared by the most prominent and successful leaders in every field.

Although all of these findings are imperative, critical and pertinent, searching for the underlying factors of success is of equal importance. The purpose of this study was to explore and determine some likely foundations of grit, enlarging the focus from the individual personality to his or her thoughts and feelings about close personal relationships in the past (childhood) and in the present (vis-à-vis romantic adult relationships).

#### Adults' recollections of their childhood relations with parents

Retrospectively, many adults with anxiety disorders report a childhood of affectionless control, comprised of coldness and overprotective parent behavior (Gerlsma et al., 1990). Might it be that the kind of parenting one receives, or experiences, is an influence upon the amount of grit the child and later adult will have? Anxiety in childhood is certainly a distressing condition, which affects both academic and social functioning (Pine, 1997). Clinical anxiety is found to be one of the most common psychiatric problems experienced by school-aged children (Bell-Dolan & Brazeal, 1993; Bowen et al., 1990; Schniering et al., 2000). Some studies have found a relationship between parenting behavior and childhood anxiety (e.g., Whaley et al., 1999). Jordi & Alonso (2008) found that a lack of care from mother is related to all types of anxiety disorders as well as excessive maternal overprotection. In a study of 2699 adolescents (11-

20 years) recruited from community high schools located in a variety of counties, adolescents who reported more parental nurturance and acceptance tended to be rated by their parents and teachers as less anxious than did adolescents who reported less nurturance (Scott et al., 1991). These combined, are fundamentally associated with all of the different pathologies related to anxiety. Regarding parental overprotection, numerous studies suggest that it can have deleterious effects on the developing child or adolescent, such as symptoms of depression, oppositional behavior and externalizing behavior problems (Burbach et al., 1989; Cappelli et al., 1989; Mayes, et al., 1988; McFarlane, 1987; Miller, et al., 1992).

Studies of childhood anxiety have typically focused on its outcome and its relationship to coping strategies (Whaley et al., 1999), openness to socialization (Darling & Steinberg, 1993), social anxiety and withdrawal (Rubin & Stewart, 1996), and parental criticism and its relationship to perception of self (Wood et al., 2003). Studies of parental overprotection have generally focused on children with illnesses and disabilities (Thomasgard, et al., 1995; Holmbeck, et al., 2002), however, little has focused on parental overprotection and its possible result in terms of grit.

Searching for the outcomes of childhood anxiety and parental overprotection is important, however, there is a gaping hole in the research, being that most studies have examined anxiety and overprotection outcomes in terms of emotionality and socialization. For this study, examining childhood experiences of parental care and parental overprotection, and its importance to current grit, consistency, perseverance and ambition was deemed to be of central importance. Thus, the Parental Bonding Instrument (PBI) was used to detect past overprotection and anxiety. The PBI is the most widely used questionnaire for assessing any parental contributions to a disorder(s) (Parker, 1979). The development of the PBI focused on refining and defining care and protection/control. These dimensions are said to be central to theoretical elucidations about child development, and additionally, low care and overprotection have been consistently suggested as disposing the onset of most psychiatric conditions (Parker 1983). The PBI sufficed for measuring past bonding and relationships to parents, however, current relationships were also of interest.

### Adult Attachment Styles

Hazan and Shaver (1988) have been pioneers in the development of the attachment theory approach to adult love relationships. In this concept, differences in early social experiences construct generally stable variations in relationship styles and the same three attachment styles illustrated in the infant attachment literature (avoidance, resistance/ambivalence, and security) are exhibited in adult romantic love. Their view has presented theoretical and empirical evidence for the relatedness of attachment style to romantic love (Hazan & Shaver, 1987). Over time, the social psychology literature as concerns adult attachments has settled on two dimensions informing adults' feelings and thoughts in close romantic relationships. These are avoidance and anxiety, where being low on both of these dimensions is equivalent to security. Research has specified that securely attached individuals perform better than individuals with avoidant or anxious-ambivalent attachment styles on several relationship variables; commitment, dependency, fulfillment and the incidence of positive and negative emotions experienced in relationships (Baldwin et al., 1996). Individuals with high anxiety have been shown to worry about abandonment, (Hazan & Shaver, 1987) yearn for emotional support, closeness and reassurance from their romantic partners (Collins & Read, 1990). These desires and worries provoke highly anxious persons to monitor their partners and relationships closely for signs of scarce or waning physical or emotional proximity (Cassidy & Berlin, 1994; Simpson et al., 1999). Beyond being an emotional stressor, anxiety has been proven to be a distracting factor, such as in test anxiety (Hodapp, 1991, 1995) and anxiety in childhood affects both academic and social functioning (Pine, 1997).

Additionally, Collins & Feeney (2000) found that avoidant attachment predicted ineffective support seeking. In conjunction, these findings partially led to the hypothesis, that anxious and/or avoidant individuals would be preoccupied by other thoughts, and also have a lack of social support, thus would be distracted and unsupported from attaining a larger goal and persevering.

Thus, the Adult Attachment Scale, (AAS) and the Experiences of Close Relationships Scale-Short Form (ECR-S; Brennan, Clark &

Shaver, 1998) were used to examine and detect current attachment styles. The AAS was developed by Collins & Reid (1990), which embarked on the earlier work of Hazan & Shaver (1987) and Levy & Davis (1988). This scale was developed by breaking down the original three archetypal descriptions of attachment (Hazan & Shaver, 1987) into a series of 21 items. The AAS measures dimensions of security, avoidance and anxiety/ambivalence. Factor analysis of the results led to the materialization of the three key factors that were interpreted by the authors as 1) a capability to be close, 2) depend on others and 3) anxiety over relationships. The ECR-S is another technique for assessing individual differences in partner attachment (Brennan, et al., 1998). This scale operationalizes adult close relationship attachment patterns through subject's conscious beliefs in their close, partner relationships. Through the ECR-S, attachment patterns are identified as in close relationships as haven been 1) dismissing, 2) secure 3) preoccupied and 4) fearful.

## **Hypothesis**

It is hypothesized that 1) adults with positive memories (high care, low overprotection) of their childhood relationships to parents, will have higher grit scores and 2) individuals with adult romantic relationships typified by less anxiety and less avoidance, and more security, will have higher grit scores. It is assumed that these effects will be additive in the sense that highest grit scores will be reported by those adults with both (1) positive childhood memories; and (2) secure adult attachment styles. Lowest grit scores should be evident in those with memories of childhood that involve low care and high interference, and high anxiety or high avoidance in the adulthood styles. Intermediate scores in grit should hold for those with a mixed picture (negative childhood/positive adulthood or positive childhood/negative adulthood).

## **Method**

### *Participants*

4 self-report surveys were placed on the Internet through a portal called "SurveyMonkey.com." Participants were recruited worldwide. They were recruited mostly via the Internet through social networking sites such as Facebook.com, University subject pool sites,

such as “SonaSystems.com,” and through class emails. However, some participants were recruited by word of mouth, and filled out the same survey, paper based. Participants also helped to recruit others by sharing the link to the survey with family and friends.

In total, there were 263 participants, 227 who participated online and 36 who participated on paper. Of those who completed the demographics section, there were 171 Females and 62 males ranging from ages 18-87. The average age was 25, and the most frequently recruited was 21. In descending order, there were 193 Heterosexual, 16 not otherwise specified, 15 Homosexual and 9 Bisexual participants. In terms of Race, Culture and Ethnicity, there were 162 White/Caucasian, 42 Asian, 8 Hispanic and/or Latin American, 7 Mixed-race, 6 not otherwise specified, 5 Black, 4 African, and 2 European. Geographically, there were 206 from North America, 16 from mixed-locations (including Asia, North America, New Zealand, Africa, Europe and the Middle East), 7 from Asia, 4 from Europe, 2 from the Middle East, 1 from Central America and 1 from South America.

### *Procedure*

Data collection was based on questionnaires. Student participants who attended The New School were offered .5 research credits, and other participants were offered the chance to enter a lottery for an iPod mini. Participation was voluntary.

### **Measures**

The Parental Bonding Instrument (PBI; Parker, 1983; Parker, Tupling, & Brown, 1979), Experiences in Close Relationship Scale-Short Form (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007), Adult Attachment Scale (AAS; Collins & Read, 1990) and the Grit Scale (Duckworth, & Quinn, 2009; Duckworth, Peterson, Matthews & Kelly, 2007) were all administered.

#### *Parental Bonding Instrument (PBI)*

The PBI is a self-administered 50-item questionnaire, distributing 25 identical questions for each parent. It measures subjectively perceived parental quality during the first 16 years of life. The two scales, ‘care’ and ‘protection’ are measured for each parent. Care is broken down into two dimensions: 1) affection and warmth,

and 2) rejection, indifference and coldness. Similarly, protection is also comprised of two parts: 1) parent control, overprotection and intrusion and 2) promotion of independence. It is a four-item Likert-type scale with values ranging from “very unlike” to “very like.

*Experiences in Close Relationships- Short Form (ECR-S)*

The ECR-S is a 12-item questionnaire, designed to measure designed to assess a general pattern of adult attachment, which scores for anxiety and avoidance. Participants scored each of these items according to how characteristic it was of them, using a seven-item Likert-type scale with values ranging from “strongly disagree” to “strongly agree.”

*Adult Attachment Scale (AAS)*

The AAS is a 21-item questionnaire, designed to measure dimensions of security, avoidance and anxiety/ambivalence. Participants scored each of these items according to how characteristic it was of them, using a five-item Likert-type scale with values ranging from “not like me at all” to “very much like me.”

*Grit Scale*

The Grit Scale is a 17-item self-survey designed to measure dimensions of Grit, specifically grit, consistency, perseverance, brief grit and ambition. Participants scored each of these items according to how characteristic it was of them, using a five-item Likert-type scale with values ranging from “not like me at all” to “very much like me.”

## Results

Results are presented in 11 sections, and 12 tables reflecting the statistical results obtained from examining this study’s hypotheses.

In order to determine if a relationship existed between age and variables on the Grit Scale, correlations were computed. These are shown below in table 1.1

**Table 1.1: Correlations between age and variable on the grit scale**

Table 1.1 Grit and Age N=238	Age	<i>p</i>
Grit	.18**	.006
Consistency	.12	.058
Perseverance	.13*	.042
Brief Grit	.21**	.001
Ambition	-.07	.252

Note: \* =  $p < .05$ , two-tailed; \*\* =  $p < .01$  level, two-tailed



Table 1.1 shows that a significant positive correlation was found between age and grit, ( $r = 0.18, p < 0.01$ ). Furthermore, age was also significantly positively correlated with perseverance, ( $r = 0.13, p < 0.05$ ) and with brief grit, ( $r = 0.21, p < 0.01$ ). It was therefore decided that age should be controlled for, entered at first step, in the regression modeling predicting grit (see final section of results).

Mean scores were computed and compared to see if there were any differences between online and paper-based surveys, and these results are shown below in table 1.2

**Table 1.2: Mean scores (and standard deviations) for type of administration of survey**

Table 1.2 Mean grit scores for computer ( $N=205$ ) and paper ( $N=36$ ) administration.

	Computer		Paper		$t(df)$	$p$
	$M$	$SD$	$M$	$SD$		
Grit	39.2	6.09	39.8	4.9	-.47(239)	.641
Consistency	18.5	5.1	17.2	5.3	1.36(239)	.176
Perseverance	20.8	2.7	22.6	4.2	-2.42*(40.1)	.020
Brief Grit	26.9	5.0	26.9	4.1	.02(239)	.988
Ambition	20.0	3.8	20.0	3.13	.03(239)	.973

Table 1.2 shows that there were significant differences found in perseverance,  $t(40.12) = -2.42, p < 0.05$ , exhibiting higher overall perseverance scores through out the paper-based surveys as compared to the surveys administered online.

T-tests were computed in order to determine if differences existed between males and females with Grit (see table 1.3)

**Table 1.3: Mean scores (and standard deviations) between males and females with Grit.**

Table 1.3 Mean grit scores for Gender.						
	Female (N =171)		Male (N = 63)		<i>t(df)</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Grit	39.7	5.8	39.0	5.3	.813(232)	.417
Consistency	18.4	5.4	18.3	4.1	.193(145)	.847
Perseverance	21.3	2.6	20.7	3.3	1.20(93.7)	.233
Brief Grit	27.2	4.9	26.6	4.3	.890(232)	.375
Ambition	20.1	3.7	20.1	3.1	-.075(232)	.940

Table 1.3 shows that there were no differences found between genders for the facets of the Grit scale, comprised of grit, consistency, perseverance, brief grit, and ambition.

Correlations were computed in order to determine if there were any relationships between Grit variables and past parental care depending on the gender of the participant, and these results are shown below in table 1.4.

**Table 1.4: Correlations between Grit variables depending on the gender of the participant**

Table 1.4 Gender, Grit and Parental Bonding Instrument (PBI)						
	Female (N = 171)		Male (N = 63)			
	Grit	Consistency	Perseverance	Brief Grit	Ambition	
PBI Care Mother						
Female	.14,	.12	.07	.12	.23**	
Male	.03,	.02	.03	.05	.23	
PBI Overprotection Mother						
Female	-.10,	-.11	-.01	-.11	.06	
Male	.13,	.09	.10	.08	-.07	
PBI Care Father						
Female	.13	.16*	-.06	.12	.06	
Male	.04	.05	.01	.08	.23	
PBI Overprotection Father						
Female	-.14	-.15	.01	-.156*	.03	
Male	-.07	.05	-.18	-.10	-.42**	

Note: \* =  $p < .05$ , two-tailed; \*\* =  $p < .01$  level, two-tailed

Table 1.4 shows that for females, ambition was positively correlated with PBI Mother Care ( $r = .23, p < .01$ ). Furthermore, high PBI Care from Father was related to consistency ( $r = .16, p < .05$ ). Additionally, high Overprotection from Father was negatively correlated with brief grit ( $r = -.16, p < .05$ ). On the other hand, the only significant correlation for males was between PBI overprotection from the Father and ambition ( $r = -.42, p < .01$ ). Given these few hints of gender effects, it was decided to include gender in the first block of regression models, along with age (see last section of results).

Correlations were computed in order to determine if there were any significant relationships between Care and Overprotection from Mother and/or Father in the first sixteen years of ones life and Grit. Results are shown in table 2.

**Table 2: Correlations between Care and Overprotection from Mother and/or Father in the first sixteen years of ones life and Grit**

Table 2. Grit and Parental Bonding Instrument (PBI) ( $N=241$ )					
	Grit	Consistency	Perseverance	Brief Grit	Ambition
PBI Care Mother	.14*	.11	.09	.13*	.24**
PBI Overprotection Mother	-.03	-.05	.03	-.05	.03
PBI Care Father	.15*	.18**	-.02	.15*	.09
PBI Overprotection Father	-.10	-.10	-.03	-.11	-.06

Note: \* =  $p < .05$ , two-tailed; \*\* =  $p < .01$  level, two-tailed

Table 2 shows that the more care one received from ones Mother and/or Father (PBI), the higher the grit and ambition. Thus, grit was significantly correlated to PBI Care from Mother ( $r = .14, p < .05$ ) and PBI Care from Father ( $r = .15, p < .05$ ). Additionally, brief grit told a similar story to PBI Care from Mother ( $r = .13, p < .05$ ) and Father ( $r = .15, p < .05$ ). However, ambition was not related to PBI Care from Father, but was significantly correlated to PBI Care from Mother ( $r = .24, p < .01$ ). On the other hand, consistency was significantly correlated to PBI Care from Father ( $r = .18, p < .01$ ).

Correlations were computed in order to determine if there were any significant relationships between the components of the Grit scale and ECR-S and AAS. These results are shown in table 3.

**Table 3: Correlations between the components of the Grit scale and ECR-S and AAS**

Table 3. Grit and Experiences in Close Relationships- Short Form (ECR-S)/Adult Attachment Scale (AAS)

	Grit	Consistency	Perseverance	Brief Grit	Ambition
ECR Anxiety	-.24**	-.30**	.04	-.24**	-.01
ECR Avoidance	-.18**	-.16*	-.07	-.18**	-.05
AAS Secure	.11	.11	.04	.06	.12
AAS Avoidant	-.06	-.10	.04	-.02	.09
AAS Anxious	-.21**	-.22**	-.05	-.23**	-.05

Note: \* =  $p < .05$ , two-tailed; \*\* =  $p < .01$  level, two-tailed

Table 3 shows that grit and ECR Anxiety were negatively correlated ( $r = -.24, p < 0.01$ ), as were consistency ( $r = -.30, p < 0.01$ ) and brief grit ( $r = -.24, p < 0.01$ ). Thus, the more anxious one is, the less grit they exhibit. Additionally, ECR Avoidance and grit shared a negative correlation ( $r = -.18, p < 0.01$ ). Likewise, consistency and brief grit were negatively correlated with ECR Avoidance ( $r = -.16, p < 0.01$ ;  $r = -.18, p < 0.01$ , respectively). AAS Anxiety shared similar negative correlations to grit ( $r = -.21, p < 0.01$ ), consistency ( $r = -.22, p < 0.01$ ) and brief grit ( $r = -.23, p < 0.01$ ).

### ***Additive Model Hypothesis***

In the first hierarchical regression, overall grit was entered as the dependent variable (see Table 4.1).

**Table 4.1: Hierarchical regression analysis for variables predicting overall grit**

Variable	B coef	SE B	Beta	<i>p</i>
<b>Table 4.1</b> Summary of hierarchical regression analysis for variables predicting overall grit ( <i>N</i> =238)				
Step 1				
Age	.09	.03	.18**	.006
Gender	-.51	.82	-.04	.536
Step 2				
Age	.12	.03	.21**	.002
Gender	-.34	.82	-.03	.678
PBI Care Mother	.11	.06	.14*	.045
PBI Care Father	.03	.04	.05	.434
Step 3				
Age	.08	.03	.15*	.023
Gender	-.41	.78	-.03	.601
PBI Care Mother	.08	.05	.12	.111
PBI Care Father	-.01	.04	-.02	.786
ECR Anxiety	-.21	.07	-.26**	.004
ECR Avoidance	-.17	.06	-.17**	.007
AAS Anxious	-.06	.12	-.05	.553
NOTE: $R^2 = .04$ for Step 1; $R^2 = .06$ for Step 2; $R^2 = .18$ for Step 3.				

Step one of the regression in table 4.1 examined the extent to which age and gender linked up with overall grit. This first step revealed that not gender, but age, significantly linked up with overall grit  $R^2 = .035$ ,  $F(2, 230) = 4.15$ ,  $p < .05$ . Specifically, age was found to be a significant predictor  $\beta = .18$ ,  $p < .01$ . The second step of the regression added included those Parent-Bonding Instrument variables that correlated significantly with overall grit in the bivariate correlations, namely recalled levels of care from mother and father. The addition of these variables significantly contributed to the variance of the model  $\Delta R^2 = .027$ ,  $\Delta F(4, 228) = 3.31$ ,  $p < .05$ . Specifically, PBI Care Mother (not Father) was a significant predictor  $\beta = .14$ ,  $p < .05$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables also significantly strengthened the predictive power of the model  $\Delta R^2 = .12$ ,  $\Delta F(7, 225) = 10.7$ ,  $p < .01$ . In

step three, both ECR Anxiety ( $\beta = -.26, p < .01$ ) and ECR Avoidance ( $\beta = -.17, p < .01$ ) were significant predictors of grit.

In the second hierarchical regression, consistency was entered as the dependent variable (see Table 4.2).

**Table 4.2: Hierarchical regression analysis for variables predicting consistency**

Table 4.2 Summary of hierarchical regression analysis for variables predicting consistency ( $N=238$ )

Variable	B coef	SE B	Beta	p
Step 1				
Age	.06	.03	.14*	.037
Gender	-.03	.76	-.00	.964
Step 2				
Age	.07	.03	.15*	.025
Gender	.02	.77	.00	.983
PBI care Mother	.06	.05	.08	.262
PBI care Father	.05	.04	.09	.206
PBI overprotection Mother	.00	.05	.01	.936
PBI overprotection Father	-.05	.05	-.07	.370
Step 3				
Age	.05	.03	.11	.095
Gender	-.17	.74	-.02	.819
PBI Care Mother	.06	.05	.08	.258
PBI Care Father	.03	.04	.05	.453
PBI Overprotection Mother	.02	.05	.03	.649
PBI Overprotection Father	-.03	.05	-.04	.549
ECR Anxiety	-.25	.07	-.34***	.000
ECR Avoidance	-.13	.07	-.15*	.044
AAS Anxious	.02	.10	.02	.818
AAS Avoidant	.04	.10	.03	.720
AAS Secure	-.07	.10	-.06	.467

NOTE:  $R^2 = .02$  for Step 1;  $R^2 = .05$  for Step 2;  $R^2 = .16$  for Step 3.

Step one of the regression in table 4.2 examined the extent to which age and gender linked up with consistency. This first step revealed that not gender, but age significantly linked up with consistency,  $R^2 = .019, F(2, 230) = 2.22, p = .11$ . Specifically, age was found to be a significant predictor  $\beta = .14, p < .05$ . The second step of the regression added those Parent-Bonding Instrument variables including recalled levels of care from father, which correlated significantly with consistency in the bivariate correlations. The addition of these variables did not significantly contribute to the variance of the model

$\Delta R^2 = .029$ ,  $\Delta F(4, 226) = 1.71$ ,  $p = .15$ . However, age was still the only significant predictor,  $\beta = .15$ ,  $p < .05$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables did significantly strengthen the predictive power of the model  $\Delta R^2 = .114$ ,  $\Delta F(5, 221) = 6.04$ ,  $p < .001$ . In step three, both ECR Anxiety ( $\beta = -.34$ ,  $p < .001$ ) and ECR Avoidance ( $\beta = -.15$ ,  $p < .05$ ) were significant predictors of consistency. Thus lower anxiety and lower avoidance were each significant predictors of higher consistency, with a weak trend effect of (older) age contributing as well in the final model.

In the third hierarchical regression, consistency was entered as the dependent variable (see Table 4.3).

**Table 4.3: Hierarchical regression analysis for variables predicting consistency**

**Table 4.3** Summary of hierarchical regression analysis for variables predicting consistency ( $N=238$ )

Variable	B coef	SE B	Beta	$p$
Step 1				
Age	.07	.03	.16*	.021
Gender	.01	.76	.00	.994
Administration (Online vs. Paper)	-1.36	.95	-.10	.153
Step 2				
Age	.08	.03	.18*	.010
Gender	.03	.76	.00	.974
Administration (Online vs. Paper)	-1.64	.97	-.11	.091
PBI care Mother	.07	.05	.10	.185
PBI Care Father	.05	.04	.09	.204
PBI overprotection Mother	.02	.05	.03	.683
PBI overprotection Father	-.05	.05	-.07	.310
Step 3				
Age	.06	.03	.14*	.039
Gender	-.16	.73	-.01	.832
Administration (Online vs. Paper)	-1.10	.92	-.14*	.035
PBI Care Mother	.07	.05	.10	.172
PBI Care Father	.02	.04	.05	.500
PBI Overprotection Mother	.04	.05	.06	.379
PBI Overprotection Father	-.04	.05	-.05	.464
ECR Anxiety	-.25	.07	-.35***	.000
ECR Avoidance	-.13	.07	-.15*	.048
AAS Anxious	.02	.10	.02	.837
AAS Avoidant	.03	.10	.03	.778
AAS Secure	-.06	.10	-.04	.565

NOTE:  $R^2 = .03$  for Step 1;  $R^2 = .06$  for Step 2;  $R^2 = .18$  for Step 3.

This analysis differed from the previous in that administration (paper versus online survey) was included as a predictor. Step one of the regression in table 4.3 examined the extent to which age, gender, and administration linked up with consistency. This first step suggested that these variables as a package showed a trend toward linking up with the dependent variable,  $R^2 = .028$ ,  $F(3, 229) = 2.17$ ,  $p = 0.09$ . When examined individually, age was found to be a significant predictor  $\beta = .16$ ,  $p < .05$ . The second step of the regression added those Parent-Bonding Instrument variables, including recalled levels of care from father, which correlated significantly with consistency in the bivariate correlations. As in the previous regression analysis, the addition of these variables did not significantly contribute to the variance of the model  $\Delta R^2 = .060$ ,  $\Delta F(4, 225) = 1.93$ ,  $p = .11$ . Age was still the only significant predictor of consistency  $\beta = .18$ ,  $p < .05$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables did significantly strengthen the predictive power of the model  $\Delta R^2 = .18$ ,  $\Delta F(5, 220) = 6.39$ ,  $p < .001$ . In step three; in addition to age ( $\beta = .14$ ,  $p < .05$ ), administration ( $\beta = -.14$ ,  $p < .05$ ), as well as both ECR Anxiety ( $\beta = -.35$ ,  $p < .001$ ) and ECR Avoidance ( $\beta = -.15$ ,  $p < .05$ ) were significant predictors of consistency. This final model suggests that consistency was linked in an additive way (as shown in Table 4.3) with (older) age, (lower) anxiety and avoidance, and also answering the questions on paper as opposed to online.

In the fourth hierarchical regression, brief grit was entered as the dependent variable (see Table 4.4).



**Table 4.4: Hierarchical regression analysis for variables predicting brief grit**

**Table 4.4** Summary of hierarchical regression analysis for variables predicting brief grit ( $N=238$ )

Variable	B coef	SE B	Beta	<i>p</i>
Step 1				
Age	.09	.03	.20**	.002
Gender	-.45	.69	-.04	.520
Step 2				
Age	.10	.03	.23**	.001
Gender	-.53	.71	-.05	.453
PBI care Mother	.09	.05	.13	.075
PBI care Father	.02	.03	.03	.641
PBI overprotection Mother	.02	.04	.03	.653
PBI overprotection Father	-.07	.05	-.11	.118
Step 3				
Age	.08	.03	.19**	.004
Gender	-.55	.67	-.05	.415
PBI Care Mother	.09	.05	.13	.053
PBI Care Father	.01	.03	.03	.668
PBI Overprotection Mother	.03	.04	.05	.434
PBI Overprotection Father	-.05	.05	-.07	.313
ECR Anxiety	-.16	.06	-.23**	.008
ECR Avoidance	-.20	.06	-.25**	.001
AAS Anxious	-.11	.09	-.12	.214
AAS Avoidant	.15	.09	.14	.098
AAS Secure	-.13	.09	-.11	.142

NOTE:  $R^2 = .05$  for Step 1;  $R^2 = .08$  for Step 2;  $R^2 = .22$  for Step 3.

Step one of the regression in table 4.4 examined the extent to which age and gender linked up with brief Grit. This first step revealed that not gender, but age significantly linked up with brief grit  $R^2 = .045$ ,  $F(2, 230) = 5.38$ ,  $p < .01$ . Specifically, age was found to be a significant predictor  $\beta = .20$ ,  $p < .01$ . The second step of the regression added included those Parent-Bonding Instrument variables that correlated significantly with brief grit in the bivariate correlations, namely recalled levels of care from mother and father. The addition of these variables did not significantly contribute to the variance of the model  $\Delta R^2 = .037$ ,  $\Delta F(4, 226) = 2.25$ ,  $p = .065$ . Specifically, age was still the only significant predictor  $\beta = .23$ ,  $p < .01$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables did significantly strengthen the predictive power of the model  $\Delta R^2 = .136$ ,  $\Delta F(5, 221) = 7.65$ ,  $p < .001$ . In step

three, age ( $\beta = -.19, p < .01$ ) as well as ECR Anxiety ( $\beta = -.23, p < .01$ ) and ECR Avoidance ( $\beta = -.25, p < .01$ ) were significant predictors of brief grit.

In the fifth hierarchical regression, ambition was entered as the dependent variable (see Table 4.5).

**Table 4.5: Hierarchical regression analysis for variables predicting ambition**

**Table 4.5** Summary of hierarchical regression analysis for variables predicting ambition ( $N=238$ )

Variable	B coef	SE B	Beta	<i>p</i>
Step 1				
Age	-.03	.02	-.08	.206
Gender	-.01	.53	-.00	.981
Step 2				
Age	-.01	.02	-.03	.693
Gender	-.05	.53	-.01	.932
PBI care Mother	.11	.04	.23**	.002
PBI care Father	.01	.03	.02	.754
PBI overprotection Mother	.04	.03	.10	.179
PBI overprotection Father	-.03	.04	-.05	.491
Step 3				
Age	-.01	.02	-.04	.581
Gender	-.08	.53	.01	.874
PBI Care Mother	.12	.04	.24**	.002
PBI Care Father	.02	.03	.05	.528
PBI Overprotection Mother	.04	.03	.09	.218
PBI Overprotection Father	-.02	.04	-.03	.675
ECR Anxiety	.00	.05	.00	.968
ECR Avoidance	-.10	.05	-.16*	.042
AAS Anxious	-.10	.07	-.14	.164
AAS Avoidant	.24	.07	.30**	.001
AAS Secure	.10	.07	.12	.168

NOTE:  $R^2 = .01$  for Step 1;  $R^2 = .06$  for Step 2;  $R^2 = .12$  for Step 3.

Step one of the regression in table 4.5 examined the extent to which age and gender linked up with ambition. This first step revealed that neither gender or age significantly linked up with ambition  $R^2 = .007$ ,  $F(2, 230) = .808, p = .447$ . The second step of the regression added those Parent-Bonding Instrument variables, including level of care from mother, which significantly correlated with ambition in the bivariate correlations. The addition of these variables significantly contributed to the variance of the model  $\Delta R^2 = .054, \Delta F(4, 226) =$

3.25,  $p < .05$ . Specifically, PBI Care Mother (not Father) was a significant predictor  $\beta = .23$ ,  $p < .01$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables also significantly strengthened the predictive power of the model  $\Delta R^2 = .057$ ,  $\Delta F(5, 221) = 2.86$ ,  $p < .05$ . In step three, PBI Care from Mother ( $\beta = -.24$ ,  $p < .01$ ) as well as both ECR Anxiety ( $\beta = -.16$ ,  $p < .05$ ) and ECR Avoidance ( $\beta = .30$ ,  $p < .01$ ) were significant predictors of ambition. Finally, some support for the additive model (where early as well as current relationship factors contributed independently to the outcome) were observed.

In the last hierarchical regression, perseverance was entered as the dependent variable (see Table 4.6).

**Table 4.6: Hierarchical regression analysis for variables predicting perseverance**

**Table 4.6** Summary of hierarchical regression analysis for variables predicting perseverance ( $N=238$ )

Variable	B coef	SE B	Beta	<i>p</i>
Step 1				
Age	-.03	.02	-.08	.206
Gender	-.01	.53	-.00	.981
Step 2				
Age	-.01	.02	-.03	.693
Gender	-.05	.53	-.01	.932
PBI care Mother	.11	.04	.23**	.002
PBI care Father	.01	.03	.02	.754
PBI overprotection Mother	.04	.03	.10	.179
PBI overprotection Father	-.03	.04	-.05	.491
Step 3				
Age	-.01	.02	-.04	.581
Gender	-.08	.53	.01	.874
PBI Care Mother	.12	.04	.24**	.002
PBI Care Father	.02	.03	.05	.528
PBI Overprotection Mother	.04	.03	.09	.218
PBI Overprotection Father	-.02	.04	-.03	.675
ECR Anxiety	.00	.05	.00	.968
ECR Avoidance	-.10	.05	-.16*	.042
AAS Anxious	-.10	.07	-.14	.164
AAS Avoidant	.24	.07	.30**	.001
AAS Secure	.10	.07	.12	.168

NOTE:  $R^2 = .020$  for Step 1;  $R^2 = .06$  for Step 2;  $R^2 = .12$  for Step 3.

Step one of the regression in table 4.6 examined the extent to which age and gender linked up with perseverance. This first step

revealed that neither gender or age significantly linked up with perseverance  $R^2 = .020$ ,  $F(2, 230) = 2.31$ ,  $p = .101$ . The second step of the regression added included those Parent-Bonding Instrument variables. The addition of these variables didn't significantly contribute to the variance of the model  $\Delta R^2 = .021$ ,  $\Delta F(4, 226) = 1.23$ ,  $p = .30$ . However, age did become a significant predictor of perseverance when these PBI variables were added,  $\beta = .15$ ,  $p < 0.05$ . In step three, current relationship quality variables [ECR/AAS factors] were added to the model. These variables did not significantly strengthen the predictive power of the model  $\Delta R^2 = .037$ ,  $\Delta F(5, 221) = 1.75$ ,  $p = .12$ . However, ECR Avoidance ( $\beta = -.16$ ,  $p < .05$ ) was a significant predictor of perseverance. Given that the increase in R-squared at this final step was not significant, it would appear that perseverance is an aspect of grit not strongly linked to the attachment variables considered.

## Discussion

Firstly, it was hypothesized that adults with positive memories (high care, low overprotection) of their childhood relationships to parents would have higher Grit scores. Secondly, it was hypothesized that individuals with adult romantic relationships characterized by less anxiety, less avoidance, and more security, would also have higher Grit scores. It was assumed that these effects could be additive in the sense that highest grit scores would be reported by those adults with both (1) positive childhood memories; and (2) secure adult attachment styles. This was the first study to explore the relationship between Grit and attachment styles, therefore, there are many notable findings.

Consistent with the hypotheses, the links between parental care and the facets of the Grit scale, it was found that high grit scores were significantly linked to high past mother and father care. Additionally, high care from mother was shown to be a significant predictor of grit. Brief grit performed similarly, in that it was significantly linked to high care from mother and father. Generally, it may be possible that early care fuels one's ability to cope and therefore may contribute to the development of grit. These findings are also concurrent with past research, insofar as individuals who received high care from parents often fare better. For example, individuals with high parental care generally experience secure attachments with caregivers and close

partners (Smith & Pederson 1988; Isabella 1993; Ward & Carlson 1995; Van Ijzendoorn & De Wolf 1997; Braungart-Rieker et al. 2001; Coppola et al. 2006) thus, yielding positive emotional and social development (Landry et al. 2000; Kivijarvi et al. 2004), satisfactory cognitive development (Landry et al. 2000) and obedience between the age of 15–31 months (Lehman et al. 2002).

Moreover, consistency was significantly related to past care from father, but not mother, and was also related to female consistency, but not male consistency. Contrastingly, ambition was linked to high care from mother, but not father, and was linked to female ambition, but not male ambition. In addition, high care from mother was a significant predictor for ambition. It is incredibly curious as to why females only responded to high parental care, yielding higher grit scores. Could it be that care from mom, security and positive memories may support ego functioning, and thus are found to be important in developing grit?

Kobak and Sceery (1988) proposed that securely attached individuals are expected to deal with psychological distress by acknowledging it as well as engaging in constructive action to reduce distress. Individuals with high parental care and thus, secure attachment, are said to have low anxiety and avoidance dimensions, and therefore, cope well with stress by either seeking support from attachment figures or by recalling mental demonstrations of support received in the past (Mikulincer and Shaver, 2003). In support of the first hypothesis, secure relationships with peers are related to adaptation to college, academic achievement, college retention rates and well being among college students (Abby et al. 1985; Brooks and DuBois 1995; Fass and Tubman 2002; Zea et al. 1995). This finding alone helped to pave the way for the primary hypothesis, however, in conjunction; these findings help to possibly explain why high parental care, as expected, was significantly linked to various factors in the Grit Scale.

Although attachment security is related to low anxiety and low avoidance, and attachment anxiety and avoidance were negatively correlated with the Grit Scale parts, it is curious as to why secure attachment styles on the ECR-S and AAS were not related to or predictors of any facets of the Grit Scale. What is more, high care from mother and father were significantly correlated with the Grit

Scale, and as mentioned earlier, individuals with high parental care generally experience secure attachments (Smith & Pederson 1988; Isabella 1993; Ward & Carlson 1995; Van Ijzendoorn & De Wolf 1997; Braungart-Rieker et al. 2001; Coppola et al. 2006). Also, secure attachment to parents is found to be related to lower levels of anxiety among children, adolescents, and college students (Armsden and Greenberg 1987; Brown and Whiteside 2008), so it would be hypothesized that security and the Grit Scale would link up. Research in this area would be interesting to explore further.

In terms of anxiety, the current findings show that present attachment anxiety styles are significantly correlated with grit. Furthermore, anxiety was also a significant predictor of lower grit scores. Brief grit also showed similar results to grit, being that current anxiety attachment styles were significantly correlated with brief grit. Additionally, consistency was negatively correlated with anxiety and anxiety was also a significant predictor for consistency. These findings parallel past research such that anxiety in childhood affects both academic and social functioning (Pine, 1997). Also, individuals high in anxiety have been shown to worry about abandonment, (Hazan & Shaver, 1987) crave emotional support, nearness and assurance from their romantic partners (Collins & Read, 1990) which all may obstruct possible Grit. Current avoidant styles were significantly negatively correlated with grit. Moreover, adult avoidance was a significant predictor of lower grit scores. Brief grit was also significantly linked to current avoidant attachment styles, as was consistency. In addition, current avoidant styles were shown to be significant predictors of consistency and perseverance. One may speculate that because grit means facing challenges and overcoming obstacles, to succeed one cannot avoid, but instead confront. This being consistent with this studies finding, may be one explanation for why avoidance styles were negatively correlated with the Grit Scale. Avoidance and anxiety may interfere with the ability to develop grit, making it harder to persevere and are therefore possible predictors of low grit. Earlier research has shown that securely attached persons perform better than avoidant or anxious persons in several ways, such as loyalty, reliance, achievement, and positive and negative emotions experienced in relationships (Baldwin et al., 1996) and Collins & Feeney (2000) found that avoidant attachment predicted ineffective

support seeking. Due to the past research, it was to be expected that individuals high in anxiety and/or avoidance would score lower in the factors of the Grit Scale.

In terms of overprotection, high father overprotection showed a significant negative correlation to female grit, and was negatively correlated to lower male ambition, but not female ambition. Theoretically, overprotection may decrease self-reliance and reduce experience, and thus could be a predictor of low grit. For instance, parental over-control is assumed to limit the development of children's autonomy, leading to perceptions of the environment as uncontrollable and a limited sense of personal competence or mastery. In turn, these beliefs are hypothesized to contribute to the development of anxiety in children (Barlow, 2002; Chorpita et al., 1996; Chorpita et al., 1998; Dadds, 2002; Rapee, 2001). It is questionable as to why there were gender differences in father overprotection and its relationship to lower ambition, which would be interesting to further research.

Additional findings suggest that grit, perseverance and brief grit had positive correlations with age, thus the older one's age, the "grittier" they are according to the above findings. Furthermore, age was a significant predictor for grit, brief grit, consistency and perseverance. There may be many reasons for this finding, and one may speculate that generally, in a community sample, the older one is, the more one has proven one can achieve. Thus, one has more to show in terms of accomplishment and therefore, may exhibit higher grit and perseverance.

To account for anticipated differences, identical online surveys and paper-based surveys were administered to participants. As predicted, there were slight differences. However, the only significant difference was found in perseverance, where perseverance was much higher in the paper-based sample. Not only thought as both were independent predictors in the final regression model, so this is a curious result indeed. The majority of the paper surveys were administered to a community middle class population, whereas the Internet based surveys were more evenly distributed. College students were more inclined to use the Internet survey base, whereas the older middle class participants were more inclined to engage in the paper-based survey. Could it be that the older one is, and perhaps more accomplished, the higher the perseverance? Further research is needed

to determine why perseverance was higher in the paper-based sample.

In conclusion, the personality trait of grit would appear from these results to be partially accounted for by relationship (attachment) variables, specifically lower avoidance and lower anxiety in current adult relationships, and higher care experiences in past (childhood) relationships with mother and father. To the extent that one's thoughts and feelings about current (and past) attachments change, it may be assumed that levels of grit may change accordingly. Further research is needed to explore in fuller details the associations between personal relationships and personality.



## Appendix A

### Consent Form

Study conducted by: Jaclyn levy

Please read the following information and, if you consent to participating, sign below. The purpose of this study is to examine possible links between four factors: (1) Beliefs about oneself and romantic partners; (2) what one expects of themselves; (3) the quality of memories of early childhood; (4) a personality trait called “grit.” In this way, the research hopes to better understand sources of well-being.

The study will be represented as a research paper for Jaclyn Levy’s Senior Work Project in Psychology for Eugene Lang College. Subjects will be asked to fill out three questionnaires concerning the self, relationships, and family history. Each subject will be assigned a number in order to preserve the subject’s anonymity. In order to further maintain anonymity, please do not put your name on any of the forms. For Lang student participants taking a psychology course, you may be able to receive course credit and for other participants you can enter a lottery to win an ipod-mini.

I have read and understand the above information. I am aware that some questions touch on sensitive subjects that require recapturing memories and feelings from the past. I understand that, at any time, if I feel uncomfortable, I have the right to end my participation with no negative consequences and my responses will remain anonymous. If there are any questions please feel free to contact Jaclyn Levy ([LevyJ661@newschool.edu](mailto:LevyJ661@newschool.edu)), the supervisor of the research, Dr. Howard Steele ([SteeleH@newschool.edu](mailto:SteeleH@newschool.edu)), or the Institutional Review Board-Human Subjects Committee coordinator (212-229-5727 ext. 3102).

Subject Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Principle Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

### **PARENTAL BONDING INSTRUMENT (PBI) MOTHER FORM**

This questionnaire lists various attitudes and behaviors of parents. As you remember your **MOTHER** in your first 16 years please circle the most appropriate answer.

1. Spoke to me in a warm and friendly voice
  - Very like

- Moderately like
  - Moderately unlike
  - Very unlike
2. Did not help me as much as I needed  
*\*repeat answer order for all questions*
  3. Let me do those things I liked doing
  4. Seemed emotionally cold to me
  5. Appeared to understand my problems and worries
  6. Was affectionate to me
  7. Liked me to make my own decisions
  8. Did not want me to grow up
  9. Tried to control everything I did
  10. Invaded my privacy
  11. Enjoyed talking things over with me
  12. Frequently smiled at me
  13. Tended to baby me
  14. Did not seem to understand what I needed or wanted
  15. Let me decide things for myself
  16. Made me feel I wasn't wanted
  17. Could make me feel better when I was upset
  18. Did not talk with me very much
  19. Tried to make me feel dependent on her/him
  20. Felt I could not look after myself unless she/he was around
  21. Gave me as much freedom as I wanted
  22. Let me go out as often as I wanted
  23. Was overprotective of me
  24. Did not praise me
  25. Let me dress in any way I pleased

### **FATHER FORM**

This questionnaire lists various attitudes and behaviors of parents. As you remember your **FATHER** in your first 16 years please circle the most appropriate answer.

1. Spoke to me in a warm and friendly voice
  - Very like
  - Moderately like
  - Moderately unlike
  - Very unlike
2. Did not help me as much as I needed  
*\*repeat answer order for all questions*
3. Let me do those things I liked doing
4. Seemed emotionally cold to me
5. Appeared to understand my problems and worries
6. Was affectionate to me
7. Liked me to make my own decisions
8. Did not want me to grow up
9. Tried to control everything I did
10. Invaded my privacy
11. Enjoyed talking things over with me
12. Frequently smiled at me
13. Tended to baby me

14. Did not seem to understand what I needed or wanted
15. Let me decide things for myself
16. Made me feel I wasn't wanted
17. Could make me feel better when I was upset
18. Did not talk with me very much
19. Tried to make me feel dependent on her/him
20. Felt I could not look after myself unless she/he was around
21. Gave me as much freedom as I wanted
22. Let me go out as often as I wanted
23. Was overprotective of me
24. Did not praise me
25. Let me dress in any way I pleased

### **Experiences in Close Relationships**

**Instruction:** The following statements concern how you feel in romantic relationships. I am interested in how you generally experience relationships, **not just in what is happening in a current relationship.** Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale:

1. It helps to turn to my romantic partner in times of need.
  - Strongly Disagree
  - Disagree Slightly
  - Disagree
  - Neutral
  - Slightly Agree
  - Agree Strongly
  - Agree
2. I need a lot of reassurance that I am loved by my partner.
- \*repeat answer order for each question*
3. I want to get close to my partner, but I keep pulling back.
4. I find that my partner(s) don't want to get as close as I would like.
5. I turn to my partner for many things, including comfort and reassurance.
6. My desire to be very close sometimes scares people away.
7. I try to avoid getting too close to my partner.
8. I do not often worry about being abandoned.
9. I usually discuss my problems and concerns with my partner.
10. I get frustrated if romantic partners are not available when I need them.
11. I am nervous when partners get too close to me.
12. I worry that romantic partners won't care about me as much as I care about them.

### **Feelings about relationships**

1. I find it difficult to allow myself to depend on others
  - Very much like me
  - Mostly like me
  - Somewhat like me

- Not much like me
  - Not like me at all
2. People are never there when you need them  
*\*repeat answer order for each question*
  3. I am comfortable depending on others
  4. I know that others will be there when I need them
  5. I find it difficult to trust others completely
  6. I am not sure that I can always depend on others to be there when I need them
  7. I do not often worry about being abandoned
  8. I often worry that my partner does not really love me
  9. I find others are reluctant to get as close as I would like
  10. I often worry my partner will not want to stay with me
  11. I want to merge completely with another person
  12. My desire to merge sometimes scares people away
  13. I find it relatively easy to get close to others
  14. I do not often worry about someone getting close to me
  15. I am somewhat uncomfortable being close to others
  16. I am nervous when anyone gets too close
  17. I am comfortable having other depend on me
  18. Often, love partners want me to be more intimate than I feel comfortable being

### Grit Scale

Directions for taking the Grit Scale: Please respond to the following 17 items. Be honest – there are no right or wrong answers!

1. I aim to be the best in the world at what I do.
  - Very much like me
  - Mostly like me
  - Somewhat like me
  - Not much like me
  - Not like me at all
2. I have overcome setbacks to conquer an important challenge.  
*\*repeat answer order for each question*
3. New ideas and projects sometimes distract me from previous ones.
4. I am ambitious.
5. My interests change from year to year.
6. Setbacks don't discourage me.
7. I have been obsessed with a certain idea or project for a short time but later lost interest.
8. I am a hard worker.
9. I often set a goal but later choose to pursue a different one.
10. I have difficulty maintaining my focus on projects that take more than a few months to complete.
11. I finish whatever I begin.
12. Achieving something of lasting importance is the highest goal in life.
13. I think achievement is overrated.
14. I have achieved a goal that took years of work.
15. I am driven to succeed.
16. I become interested in new pursuits every few months.

17. I am diligent.

## **DEMOGRAPHICS**

**Age:**

**Gender/Sex:**

**Race:**

**Ethnicity:**

**Culture:**

**Sexual Orientation:**

**What state(s) did you grow up in?**

Thank you!

Thank you for helping me with my senior thesis. If you would like to enter the lottery to win an Ipod mini, please email [attachment.grit@gmail.com](mailto:attachment.grit@gmail.com) with the best way to contact you for the lottery.

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