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## Pilot Study of the Contributions of Achievement-Striving and Dutifulness on Intimate Partner Violence in Intimate Dyads

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Conscientiousness is a personality trait of introspective awareness of how one's behavior transforms people and situations and how hard-working they are towards realizing goals (Moon, 2001). Conscientiousness may be related to intimate partner violence, where perpetration is conceptualized as enacting behavior onto one's partner that is abusive, controlling, or otherwise aggressive in the context of a romantic relationship, and victimization is conceptualized as having behavior enacted upon you that is abusive, controlling, or otherwise aggressive in the context of a romantic relationship (National Center for Victimization of Crimes, 2012). Intimate partner violence is a relevant phenomenon to study as it affects over one million women and over 800,000 men every year in the U.S. and can escalate to a variety of felonious behaviors like stalking, rape, and homicide (Nicolson, 2019). Considering intimate partner violence's saliency, this pilot study examined how different facets of conscientiousness may differentially be predictive of intimate partner violence.

The history of conscientiousness being measured by psychologists dates back to the Sixteen Personality Factor Questionnaire (16PF) (Cattell, 1968). More recently, conscientiousness has been conceptualized as one of the Five Factor Personality Traits and has been used to characterize individuals as career perfectionists, on one extreme, and criminal offenders, on the other extreme. It has also been found to be positively correlated with psychological health (Thompson, 2008; Roberts et al, 2009). Conscientiousness can be broken down into various facets, including dutifulness, conceptualized as one's tendency to adhere to the ordained and preordained rules and expectations of others, and achievement-striving, conceptualized as one's concern with one's own personal success and how hard one works towards those successes (Moon, 2001).

Conscientiousness has not only been studied as a broad-trait measure, but also through these facets that break the trait down into components differentiated by an individual's orientation-propensity towards one's self or towards others (John, Hampson, & Goldberg, 1991; Stewart 1999). The theory of narrow-trait modeling aims to report on more defined aspects of an individual's personality that may be confounded when measured via the broad-trait model. Narrower subtraits have demonstrated explanatory abilities that differentiate their analyses from broad-traits within various social psychological concepts, such as a participant's sense of identity (Lounsbury, Levy, Leong, & Gibson, 2007). While the broad-trait measure of conscientiousness has been and continues to be well-studied, the literature has fewer studies that look at the contributions of the narrow-trait measures. Particularly, achievement-striving, a self-centered facet, and dutifulness, an other-centered facet, are not well-represented in today's corpus, despite showing meaningful contributions in the studies that they were analyzed.

The broad-trait of conscientiousness has also demonstrated a strong predictive ability for success in various social structures, including intimate dyads

(Sackett & Walmsley, 2014). More surprisingly, though, when taken within the context of an intimate couple, one's partner's conscientiousness can also be linked with one's own improved physical health (Roberts et al, 2009). Specifically, a study that analyzed conscientiousness in married couples found that a husband's conscientiousness had a compensatory effect on his wife's physical health and was a stronger predictor of her health than her own conscientiousness (Roberts et al., 2009). Indeed, conscientiousness is not only a predictor of positive physical health, such as routine check-ups, but it has also been meta-analytically found to be negatively associated with risky health behaviors, including violence (Bogg & Roberts, 2004).

From the Bogg and Roberts study (2004), one might conclude that conscientious individuals are less prone to violence. Though such findings are true for conscientiousness on average, neither the Bogg and Roberts (2004) study nor the Roberts (2009) study looked at conscientiousness from a narrow-trait perspective. A narrow-trait level of analysis would measure the contributions of orientation to self or to others on types of violence, including within dating relationships, to discern if general conscientiousness is a unilateral protective factor against violence, or if it is only protective in the direction of a particular, narrower orientation. For instance, if both individuals in a couple are high in dutifulness but lower in achievement-striving, their orientations towards others within their relationship may buffer against exhibiting forms of aggression to their partner. However, if the partners of another couple score highly in achievement-striving but lower in dutifulness, their orientations towards themselves and their own goals may lead them to more willingly behave aggressively towards their partner.

For instance, participants who score highly in achievement-striving but lower in dutifulness are more likely to engage in an escalation of commitment dilemma than are participants who score highly in dutifulness but lower in achievement-striving (Moon, 2001). This relationship was determined through a hypothetical blank-radar plane dilemma, which involved researchers telling participants that they are the CEO of an airplane research and development team that has nearly completed developing an airplane that cannot be detected by radar. However, participants are then told that a competing company has recently completed development of a blank-radar plane that is cheaper and more effective than the model that the participant's company is developing. Participants must then decide whether they will continue the blank-radar plane research, investing time and money into a product that will likely be outcompeted on the market, or if they will end the development prior to completion in an effort to save time and money. This pilot study found that participants high in achievement-striving were more likely to continue the project and commit more resources to the project, whereas participants who scored highly in dutifulness were more likely to cease the project (Moon, 2001). Such findings appear to demonstrate a propensity for risk-taking and

aggressive decision-making within highly achievement-striving individuals, which makes one wonder if such individuals would score higher in a measurement of intimate partner violence within the context of an intimate dyad than a dutiful individual would.

The differential effects of achievement-striving and dutifulness have also been demonstrated in non-intimate relational settings, like workplaces. Workers who score highly in dutifulness are more likely to voice opposition to work policies that they deem to be detrimental to the company than are participants who score highly in achievement-striving (Tangirala et al., 2013). Dutiful individuals also self-select into work cultures where coworkers and managers are supportive of each other (Moon, Livne, & Marinova, 2013) and are more likely to spend more time supporting coworkers and take charge in supporting others (Moon, Kamdar, Mayer, & Takeuchi, 2008). However, conscientiousness's association with self- and other-controlling behaviors suggests that there may be a connection between the level of conscientiousness between partners in a couple and how likely they are to exhibit controlling behavior towards each other (Fayard, Roberts, Robins, & Watson, 2012).

When studying the nature of personality within a dyad, the interpersonal theory of personality development has postulated explanations for actions that individuals take in the context of their social groups. Interpersonal theorists argue that there is a dominance dimension to behavior (Pincus & Hopwood, 2012). Behavior that is theoretically situated at a position of high dominance can include behaviors like violence and various forms of controlling behavior. Furthermore, highly-dominant individuals tend to have less negative appraisals of intimate partner violence, indicating a dulled affective response to such violence and a higher degree of tolerance (Yalch & Levendosky, 2015). Interestingly, the same study that found this association also found a weaker association between individuals who scored highly on the interpersonal dimension of warmth with less negative appraisals of intimate partner violence.

Though the previous study's association between dominance and appraisal strategies may demonstrate cognitive consonance between controlling individuals and tolerance for intimate partner violence, stronger support for the connection between dominance and self-centeredness with violence can be linked to evidence that antisocial personality types are amongst the strongest predictors of male intimate partner violence perpetration (Dardis, Dixon, Edwards, & Turchik, 2015), and the dimension of self-centeredness that research suggests is a component of antisocial personality types (Benning, Patrick, Blonigen, Hicks, & Iacono, 2016). The consonant directionality of self-centeredness with achievement-striving and perpetration may suggest that forms of intimate partner violence, including emotional abuse or physical abuse, may show interpersonal theory to be accurate about dominance as a predictor of violence. As such, interpersonal theory would

expect the self-orientated facet of achievement-striving to demonstrate a more positive correlation with the perpetration of intimate partner violence than the other-oriented facet of dutifulness.

To hone in on particular types of intimate partner violence, this pilot study will examine three types of abuse: physical, sexual, and emotional. Physical abuse is conceptualized as acts that result in intentional or unintentional bodily harm. Examples of physical abuse include actions resulting in red marks, cuts, welts, bruises, sprains, and broken bones (Peterson, 2018). Sexual abuse is conceptualized as touching and non-touching acts that result in sexual stimulation for the perpetrator or a third-party. Sexual abuse may include voyeurism, forced viewing of pornography, exhibitionism, penetration, oral stimulation, and other sexual activities (Peterson, 2018). Finally, emotional abuse is conceptualized as verbal or otherwise psychological actions meant to manipulate a victim for the benefit or pleasure of the perpetrator. Emotional abuse considers, but is not limited to, actions like stalking, yelling, berating, and ultimatum-based threats (Crisis Text Line, 2019).

When taking into consideration the existing literature, along with the theories of narrow-trait modeling and interpersonal theory, I predict that there will be differential associations between the facets of conscientiousness and victimization versus perpetration of intimate partner violence, such that each facet will explain a unique portion of a respective response variable's variance. I hypothesize that achievement-striving will be directly associated with perpetration of intimate partner violence but be inversely associated with being victimized by intimate partner violence. Also, I hypothesize that dutifulness will be inversely associated with perpetration of intimate partner violence but directly associated with being victimized by intimate partner violence. Essentially, I predict that the other-centered nature of dutifulness will exacerbate victimization, whereas the self-centered nature of achievement-striving will exacerbate perpetration.

## **Method**

### **Participants and Procedures**

For this pilot study, we collected data from young adult couples. "Young adult" is defined as individuals between the ages of 18 and 25. To be considered a young adult couple, one partner must fit within the designated age range (18–25 years old), though we expanded the age range for the other partner to be between the ages of 18 and 30. Data collection was part of the HEART Lab's ongoing Dating in Young Adulthood: Couples' Perspectives (DYAD2) study ( $N = 40$ ). We recruited participants throughout the Greater Cleveland Area using flyers, SONA Systems, public libraries, independent businesses, and social media platforms like

Facebook, NextDoor, Craigslist, and ResearchMatch. Once an individual contacted our lab about participating in our study, we directed them to an online screener that inquired about demographic information and also asked questions to determine if the potential participants were actually in an ongoing relationship.

If the screener determined the couple to be eligible for this pilot study, they were scheduled for a time to arrive at our labs to participate in the pilot study. The first part of this pilot study was a qualitative interview. Questions were asked about relationships in young adulthood and the participant's perceptions about what qualifies as healthy and unhealthy behavior in dating relationships. These interviews were conducted with each individual independently of their partner. After the qualitative interview, each member of the couple completed a self-report battery of tests to measure the variables of interest.

After completing these measures, participants then underwent an observational task to measure the relationship dynamics of the couple within a conversational setting. Participants were presented a set of vignettes pertaining to intimate partner violence that they first completed individually, and then together. These vignettes were designed to generate discussion amongst the couple about the nature of violence, what type of intervention should be administered, and who should receive the intervention. After the couple reached their conclusions on the set of vignettes, a cool-down activity ensued. At this stage, participants were asked to plan out an all-expense-paid vacation together. This activity allowed us to observe the couple's interactions in a more relaxed context that would be more generalizable to their standard behaviors towards each other. Afterwards, participants were invited to participate in DYAD2 Part 2, which involved them individually completing a partner-report measure to assess his or her partner's personality. Participants were given the option of completing the partner-report survey at that time or to reschedule to complete the survey at a later date. For the purposes of this thesis, I only used data from DYAD2 Part 2 and from the questionnaire completed in DYAD2 Part 1.

## Measures

**Conscientiousness.** The participants' personality traits, including achievement-striving and dutifulness, were measured by using the International Personality Items Pool Representation of Neuroticism, Extraversion, and Openness (IPIP NEO) facets freely available to researchers online (Gómez-Fraguela et al., 2014). During DYAD2 Part 1, participants completed the self-report IPIP measure. This tool is an appropriate measure because it has items that specifically discriminate between self-centered facets (i.e., achievement-striving) and other-centered facets (i.e., dutifulness) (IPIP, 2018). Differentiating between these facets is crucial to this pilot study since our hypotheses rest on the assumption that an

individual's relative orientation between him/herself and others will have a significant contribution towards his/her proclivities for and manifestations of intimate partner violence. The IPIP NEO facets are widely used in the extant literature and have been demonstrated to be highly valid and reliable measures of personality (Maples et al., 2014). In fact, recent studies argue that free Big Five measures, like this one, have higher effectiveness in measurement than comparable for-pay measures (Hamby et al., 2016). During DYAD2 Part 2, participants also completed a partner-report form of the IPIP-NEO-120, where they responded to the same items about how they perceived their partner's personality.

***Intimate Partner Violence.*** Intimate partner violence was measured using a modified version of the Conflict in Adolescent Dating Relationship Inventory (CADRI), which assessed intimate partner violence (Wolfe et al, 2001). The CADRI is a powerful tool for measuring intimate partner violence in young adult relationships, as it has been broadly used in not only standalone studies, but also as the main measurement tool in meta-analyses of intimate partner violence (Wincentak et al, 2017). This measure asks about an individual's likelihood for perpetration of and victimization from intimate partner violence and also asks the individual to rate his/her partner on the same items. This pilot study looked at three types of intimate partner abuse: physical, sexual, and emotional. Examples of items that measured physical abuse include "I threw something at [my partner]," and "[My partner] kicked, hit, or punched me," (Wolfe et al, 2001). Examples of items that measured sexual abuse include "I forced [my partner] to have sex when [my partner] didn't want to," and "[My partner] touched me sexually when I didn't want [my partner] to," (Wolfe et al, 2001). Examples of items that measured emotional abuse include "I insulted [my partner] with put-downs," and "[My partner] spoke to me in a hostile or mean tone of voice," (Wolfe et al, 2001).

## **Analysis Plan**

To analyze the relationships between achievement-striving and dutifulness on intimate partner violence perpetration and victimization, this pilot study utilized a Bonferroni corrected set of 3-block setwise hierarchical multiple linear regressions. The first step of analysis was to analyze descriptive statistics for a general profile of the demographic representation within our sample, as well as beginning to discern associations between variables of interest via correlational analyses. Step two involved running a set of six multiple linear regressions with the following response variables: physical abuse perpetration, physical abuse victimization, sexual abuse perpetration, sexual abuse victimization, emotional abuse perpetration, and emotional abuse victimization. The first block for each setwise hierarchical multiple linear regression included dummy coded demographic variables that were considered covariates. These included gender, race (Whites

were the reference group), current educational status (not currently in school was the reference group), highest attained educational level (less than high school was the reference group), and current work status (not currently working was the reference group). The second block was of covariates that consisted of whichever facet of conscientiousness (dutifulness or achievement-striving) and of whichever form of intimate partner violence (perpetration or victimization) that was expected to explain less unique variance than the other facet or form. The third block of predictors consisted of either achievement-striving or dutifulness. Step three involved using a Bonferroni correction on each multiple linear regression's probability value by dividing the .05 significance level by the amount of regressions that were run (i.e. six) to account for inflated Type 2 familywise error rates (VanderWeele & Mathur, 2018). We also re-ran the set of regressions for the partner-report, as well as the self-report version of the IPIP-NEO-120 to determine if there were meaningful difference in conscientiousness facets' contributions to IPV.

## Results

### Demographics

We began by describing our total sample ( $N = 40$ ) by the participants' racial identities, gender identity, current educational status, highest educational status, and current work status. In terms of race, our sample included 54.55% white participants, 18.18% black participants, 15.15% latinx participants, and 12.12% biracial participants. For gender, 57.58% of our participants identified as female while 42.42% identified as males. 81.82% of our sample were full-time students, 6.06% were part-time students, and 12.12% were not in school. The highest attained educational level for the majority of our sample (78.79%) was some college, while the second highest (12.12%) was a high school diploma or GED, with the rest of our sample either having attained a Bachelor's degree or less than a high school diploma. Lastly, 66.67% of our sample worked part-time, 9.09% worked full-time, while 24.24% did not work at the time of our data collection.

### Descriptive Statistics

To provide a general understanding of the sample, Table 1 provides mean values for all of the pilot study's variables of interest.



Table 1  
*Descriptive Statistics for Conscientiousness and IPV*

Variable	<i>n</i>	<i>M</i> ( <i>SD</i> )	<i>Range</i>
Self-Report Duty	32	4.17 (.70)	1 ( <i>SD</i> ) – 5 ( <i>SA</i> )
Self-Report AS	31	3.69 (.72)	1 ( <i>SD</i> ) – 5 ( <i>SA</i> )
Partner-Report Duty	17	3.10 (.42)	1 ( <i>SD</i> ) – 5 ( <i>SA</i> )
Partner-Report AS	17	3.35 (.61)	1 ( <i>SD</i> ) – 5 ( <i>SA</i> )
Physical Abuse Perp	33	1.02 (.10)	1 ( <i>never</i> ) – 4 ( <i>often</i> )
Physical Abuse Vic	33	1.05 (.16)	1 ( <i>never</i> ) – 4 ( <i>often</i> )
Sexual Abuse Perp	33	1.12 (.22)	1 ( <i>never</i> ) – 4 ( <i>often</i> )
Sexual Abuse Vic	33	1.17 (.30)	1 ( <i>never</i> ) – 4 ( <i>often</i> )
Emotional Abuse Perp	33	1.62 (.50)	1 ( <i>never</i> ) – 4 ( <i>often</i> )
Emotional Abuse Vic	33	1.63 (.60)	1 ( <i>never</i> ) – 4 ( <i>often</i> )

\*Note. \*IPV = intimate partner violence, SD = strongly disagree, SA = strongly agree, AS = achievement-striving, Perp = perpetration, Vic = victimization

### Zero-Order Correlations

The next step in analysis was to review zero-order correlations amongst the predictors (self-report dutifulness and achievement-striving and partner-report dutifulness and achievement-striving) and response variables (physical abuse perpetration and victimization, sexual abuse perpetration and victimization, and emotional abuse perpetration and victimization). Table 2 displays the associations amongst the variables of interest.

Table 2  
*Bivariate Correlations for Conscientiousness and IPV*

Variable	<i>s-D</i>	<i>s-AS</i>	<i>p-D</i>	<i>p-AS</i>	<i>PP</i>	<i>PV</i>	<i>SP</i>	<i>SV</i>	<i>EP</i>	<i>EV</i>
<i>s-D</i>	-									
<i>s-AS</i>	.51**	-								
<i>p-D</i>	.18	.10	-							
<i>p-AS</i>	.39	.50	.50*	-						
<i>PP</i>	.09	-.30	-.37	.05	-					
<i>PV</i>	-	-	.56	.74**	.06	-				
<i>SP</i>	.59**	.46**								
			.38	.37	-.14	.56**	-			
<i>SV</i>	.48**									
			.61*	.60	-.14	.60**	.78**	-		
<i>EP</i>	-.43*	-.20	-.31	.09	.48**	.29	.19	.16	-	
<i>EV</i>	-.01	-.37*	.55	.85**	-.02	.71**	.46**	.48**	.57**	-
	-.39*									
			.48**							

\*Note. \* $p < .05$ , \*\* $p < .01$ , IPV = intimate partner violence, *s-* = self, *p-* = partner, *D* = duty, *PP* = physical perpetration, *PV* = physical victimization, *SP* = sexual perpetration, *SV* = sexual victimization, *EP* = emotional perpetration, *EV* = emotional victimization

As seen in Table 2, at the .05 level of significance, the self-reported dutifulness displayed a significant positive relationship with self-reported achievement-striving and a significant negative relationship with physical abuse victimization, sexual abuse perpetration, sexual abuse victimization, and emotional abuse victimization. However, partner-reported dutifulness showed a significant positive relationship with partner-reported achievement-striving and with sexual abuse victimization. At the .05 level of significance, the self-reported achievement-striving displayed a significant positive relationship with self-reported dutifulness and a significant negative relationship with physical abuse victimization, emotional abuse perpetration, and emotional abuse victimization. Furthermore, partner-reported achievement-striving had a significant positive relationship with partner-reported dutifulness, physical abuse victimization, and emotional abuse victimization.

To have a clearer understanding of the validity of the self-report and partner-report versions of the dutifulness and achievement-striving subscales, a multi-trait-multimethod matrix was developed to assess convergent and discriminant validity in Table 3. As seen by Table 3, the convergent validity coefficients are  $r_{\text{dutifulness}} = .50$  and  $r_{\text{achievement-striving}} = .06$ . Due to a large correlation coefficient, the convergent validity for self-report and partner-report appears appropriate for dutifulness, though it should be noted that they were not significant at the .05 level of significance. Due to a small correlation coefficient, there are concerns about the convergent validity for achievement-striving. However, such a small association may simply be an artifact of a small sample size from DYAD2 Part 2. The divergent validity coefficients are  $r_{(\text{self-dutifulness, self-achievement-striving})} = .51$ ,  $r_{(\text{partner-dutifulness, partner-achievement-striving})} = .58$ ,  $r_{(\text{self-dutifulness, partner-achievement-striving})} = .25$ , and  $r_{(\text{partner-dutifulness, self-achievement-striving})} = .50$ . All of the divergent validity correlation

coefficients are too high and are causes for concern about divergent validity. Again, such findings must be taken into the context of the small sample size that may be prohibiting this pilot study from rejecting false null hypotheses and possibly providing incorrect statistical non-significance (Shen, 2017).

Table 3

<i>Multi-trait-Multimethod Matrix for Conscientiousness</i>				
Variable	<i>s-Duty</i>	<i>s-AS</i>	<i>p-Duty</i>	<i>p-AS</i>
<i>s-Duty</i>	-			
<i>s-AS</i>	.51**	-		
<i>p-Duty</i>	.50	.50	-	
<i>p-AS</i>	.25	.06	.58*	-

\*Note. \*  $p < .05$ , \*\*  $p < .01$ , *s-* = self, *p-* = partner, AS = achievement-striving

### Hierarchical Multiple Linear Regressions

Bearing in mind that there were violations of normality, hierarchical regressions were run on the variables of interest. Physical abuse perpetration was analyzed as the response variable first. As per our hypothesis, I predicted that achievement-striving would account for a unique portion of the response variable’s variance and that it would have a direct association with physical abuse perpetration, whereas dutifulness would have an inverse association with physical abuse perpetration. Table 4 outlines which variables were added in which block for all hierarchical regression when there was a perpetration response variable.

Table 4

<i>Hierarchical Blocks Perpetration of Abuse was Regressed on</i>		
Block 1	Block 2	Block 3
<i>Race</i>	-	-
<i>Gender</i>	-	-
<i>Educational Status</i>	-	-
<i>Educational Level</i>	<i>Self- or Partner- duty</i>	-
<i>Work Status</i>	<i>Vic of same type of abuse</i>	<i>Self- or Partner- AS</i>

\*Note. Vic = victimization, AS = achievement-striving

Table 5 outlines which variables were added in which block for all hierarchical regression when there was a victimization response variable.

Table 5  
*Hierarchical Blocks Victimization of Abuse was Regressed on*

Block 1	Block 2	Block 3
<i>Race</i>	-	-
<i>Gender</i>	-	-
<i>Educational Status</i>	-	-
<i>Educational Level</i>	<i>Self- or Partner -AS</i>	-
<i>Work Status</i>	<i>Perp of same type of abuse</i>	<i>Self- or Partner- duty</i>

\*Note. *Perp* = *perpetration*, *AS* = *achievement-striving*

Table 6 outlines which hierarchical regression model corresponds with which predictors and which response variables. Table 7 provides the output from the hierarchical regressions. Our hypothesis that achievement-striving would significantly explain a unique amount of physical abuse perpetration was not supported by the self-report at the .05 level of significance  $\Delta F(1, 15) = .05, p = .83, \Delta R^2 = .002$ . Furthermore, our hypothesis that achievement-striving would have a direct relationship with physical abuse perpetration was not supported by the self-report at the .05 level of significance  $B_{self-AS} = .01, t(30) = -.22, p = .83$ . Our hypothesis that dutifulness would have an inverse relationship with physical abuse perpetration was not supported by the self-report at the .05 level of significance  $B_{self-duty} = .01, t(30) = .19, p = .86$ .

Table 6  
*Variables in Hierarchical Regression Models*

Block 3		
Model #	Variable	Response Variable
1	<i>Self-AS</i>	<i>Physical Perp</i>
2	<i>Partner-AS</i>	<i>Physical Perp</i>
3	<i>Self-Duty</i>	<i>Physical Vic</i>
4	<i>Partner-Duty</i>	<i>Physical Vic</i>
5	<i>Self-AS</i>	<i>Sexual Perp</i>
6	<i>Partner-AS</i>	<i>Sexual Perp</i>
7	<i>Self-Duty</i>	<i>Sexual Vic</i>
8	<i>Partner-Duty</i>	<i>Sexual Vic</i>
9	<i>Self-AS</i>	<i>Emotional Perp</i>
10	<i>Partner-AS</i>	<i>Emotional Perp</i>

11 *Self-Duty*            *Emotional Vic*  
 12 *Partner-Duty*       *Emotional Vic*

\*Note. AS = achievement-striving, Perp = perpetration, Vic = victimization

Table 7  
*Hierarchical Regression Model on Physical Abuse  
 Perpetration with Self-Report*

Model #	Block #	$\Delta R^2$	$\Delta F(df1, df2)$	<i>p</i> -value
1	1	.52	1.60(12, 18)	.18
	2	<.01	0.01 (2, 16)	.99
	3	<.01	0.05 (1, 15)	.83
2	1	-	-	-
	2	.36	2.25 (2, 8)	.17
	3	.24	4.29 (1, 7)	.08
3	1	.46	1.26 (12, 18)	.32
	2	.07	1.13 (2, 16)	.35
	3	.13	5.89 (1, 15)	.03*
4	1	-	-	-
	2	.02	0.08 (2, 8)	.92
	3	.09	0.69 (1, 7)	.43
5	1	.30	0.64 (12, 18)	.79
	2	.47	16.26 (2, 16)	<.01
	3	.01	0.86 (1, 15)	.37
6	1	-	-	-
	2	.90	34.96 (2, 8)	<.01
	3	.03	2.54 (1, 7)	.16
7	1	.24	0.48 (12, 18)	.90
	2	.44	11.33 (2, 16)	<.01**
	3	.01	0.34 (1, 15)	.57
8	1	.53	1.10 (5, 5)	.46
	2	.46	42.77 (2, 3)	.01
	3	.01	1.50 (1, 2)	.35

9	1	.60	2.29 (12, 18)	.05
	2	.15	4.81 (2, 16)	.02*
	3	.01	0.83 (1, 15)	.38
10	1	.82	4.57 (5, 5)	.06
	2	.14	5.99 (2, 3)	.09
	3	<.01	0.18 (1, 2)	.72
11	1	.42	1.11 (12, 18)	.41
	2	.26	6.37 (2, 16)	.01*
	3	.04	1.82 (1, 15)	.20
12	1	.66	1.91 (5, 5)	.25
	2	.21	2.37 (2, 3)	.24
	3	.1	5.43 (1, 2)	.15

\*Note. \*  $p = .05$ ,  $p = .01$

To see if there would be consistency in results between the self-report and partner-reports of conscientiousness facets, the same hierarchical regression was rerun, except with the partner-report variables of dutifulness and achievement-striving. Due to the small sample size and too much missing demographic data, the first block of demographic variables was omitted.

Our hypothesis that achievement-striving would significantly explain a unique amount of physical abuse perpetration was not supported by the partner-report at the .05 level of significance, though it did exhibit a trend effect,  $\Delta F(1, 7) = 4.29$ ,  $p = .08$ ,  $\Delta R^2 = .24$ . Though the directionality is correct, our hypothesis that achievement-striving would have a direct relationship with physical abuse perpetration was not supported by the partner-report at the .05 level of significance, though it did exhibit a trend effect,  $B_{partner-AS} = .11$ ,  $t(10) = 2.10$ ,  $p = .08$ . Furthermore, our hypothesis that dutifulness would have an inverse relationship with physical abuse perpetration was supported by the partner-report at the .05 level of significance, but was not significant after a Bonferroni correction,  $B_{partner-duty} = -.25$ ,  $t(10) = -3.24$ ,  $p = .01$ .

Next, physical abuse victimization was analyzed as the response variable to see whether dutifulness would explain a unique portion of variance from physical abuse victimization and whether it would have a direct association with physical abuse victimization, and achievement-striving would have an inverse association with physical abuse victimization. Our hypothesis that dutifulness would significantly explain a unique amount of physical abuse victimization was supported by the self-report at the .05 level of significance, but not supported after a Bonferroni correction,  $\Delta F(1, 15) = 5.89$ ,  $p = .03$ ,  $\Delta R^2 = .13$ . Furthermore, our

hypothesis that dutifulness would have a direct relationship with physical abuse victimization was supported by the self-report at the .05 level of significance, but was not significant after a Bonferroni correction,  $B_{self-duty} = -.13$ ,  $t(30) = -2.43$ ,  $p = .03$ . Our hypothesis that achievement-striving would have an inverse relationship with physical abuse victimization was not supported by the self-report at the .05 level of significance,  $B_{self-AS} = -.01$ ,  $t(30) = -.29$ ,  $p = .78$ .

Next, the same hierarchical regression was rerun, except with the partner-report variables of dutifulness and achievement-striving, to check for consistency across the self-report and partner-reports of conscientiousness. Due to the small sample size and too much missing demographic data, the first block of demographic variables was omitted. Our hypothesis that dutifulness would significantly explain a unique amount of physical abuse victimization was not supported by the partner-report at the .05 level of significance  $\Delta F(1, 7) = .69$ ,  $p = .43$ ,  $\Delta R^2 < .009$ . Moreover, our hypothesis that dutifulness would have a direct relationship with physical abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-duty} = -.22$ ,  $t(10) = -.83$ ,  $p = .43$ . Our hypothesis that achievement-striving would have an inverse relationship with physical abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-AS} = .07$ ,  $t(10) = .48$ ,  $p = .65$ .

After looking at physical abuse, the next step was to review sexual abuse. First, I tested our hypotheses whether achievement-striving would account for a unique proportion of the sexual abuse perpetration's variance and whether it would have a direct association with sexual abuse perpetration. Also, I hypothesized that dutifulness would exhibit an inverse association with sexual abuse perpetration. Our hypothesis that achievement-striving would significantly explain a unique amount of sexual abuse perpetration was not supported by the self-report at the .05 level of significance  $\Delta F(1, 15) = .86$ ,  $p = .37$ ,  $\Delta R^2 = .01$ . Furthermore, our hypothesis that achievement-striving would have a direct relationship with sexual abuse perpetration was not supported by the self-report at the .05 level of significance  $B_{self-AS} = .05$ ,  $t(30) = .93$ ,  $p = .37$ . Our hypothesis that dutifulness would have an inverse relationship with sexual abuse perpetration was supported by the self-report at the .05 level of significance, but is non-significant upon applying a Bonferroni correction,  $B_{self-AS} = -.16$ ,  $t(30) = -2.23$ ,  $p = .04$ .

To see if there would be consistency in results between the self-report and partner-reports of conscientiousness facets, the same hierarchical regression was rerun, except with the partner-report variables of dutifulness and achievement-striving. Due to the small sample size and too much missing demographic data, the first block of demographic variables was omitted. Our hypothesis that achievement-striving would significantly explain a unique amount of sexual abuse perpetration was not supported by the partner-report at the .05 level of significance,  $\Delta F(1, 7) = 2.54$ ,  $p = .16$ ,  $\Delta R^2 = .03$ .

Furthermore, though the directionality is correct, our hypothesis that achievement-striving would have a direct relationship with sexual abuse perpetration was not supported by the partner-report at the .05 level of significance,  $B_{partner-AS} = .07$ ,  $t(10) = 1.59$ ,  $p = .16$ . Our hypothesis that dutifulness would have an inverse relationship with sexual abuse perpetration was not supported by the partner-report at the .05 level of significance,  $B_{partner-duty} = -.09$ ,  $t(10) = -1.64$ ,  $p = .15$ .

Sexual abuse victimization was analyzed next as the response variable to test our hypotheses that dutifulness would explain a unique portion of variance from sexual abuse victimization and whether it would have a direct association with sexual abuse victimization, as well as whether achievement-striving would have an inverse association with sexual abuse victimization. Our hypothesis that dutifulness would significantly explain a unique amount of sexual abuse victimization was not supported by the self-report at the .05 level of significance,  $\Delta F(1, 15) = .34$ ,  $p = .57$ ,  $\Delta R^2 = .01$ . Furthermore, our hypothesis that dutifulness would have a direct relationship with sexual abuse victimization was not supported by the self-report at the .05 level of significance  $B_{self-duty} = -.08$ ,  $t(30) = -.58$ ,  $p = .57$ . Our hypothesis that achievement-striving would have an inverse relationship with sexual abuse victimization was not supported by the self-report at the .05 level of significance,  $B_{self-AS} = .01$ ,  $t(30) = .06$ ,  $p = .95$ .

Next, the previous hierarchical multiple regression was rerun, except with the partner-report variables of dutifulness and achievement-striving, to check for consistency across the self-report and partner-reports of conscientiousness. Our hypothesis that dutifulness would significantly explain a unique amount of sexual abuse victimization was not supported by the partner-report at the .05 level of significance  $\Delta F(1, 2) = 1.50$ ,  $p = .35$ ,  $\Delta R^2 = .01$ , thus being consistent with the findings of the self-report. Though the directionality is correct, our hypothesis that dutifulness would have a direct relationship with sexual abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-duty} = .22$ ,  $t(10) = 1.22$ ,  $p = .35$ . Our hypothesis that achievement-striving would have an inverse relationship with sexual abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-AS} = .04$ ,  $t(10) = .41$ ,  $p = .72$ .

Once analyses on sexual abuse were complete, the next stage of this pilot study was to review emotional abuse perpetration as the response variable. I tested our hypotheses whether achievement-striving would account for a unique proportion of the response variable's variance and whether it would have a direct association with emotional abuse perpetration, as well as whether dutifulness would have an inverse association with emotional abuse perpetration. Our hypothesis that achievement-striving would significantly explain a unique amount of emotional abuse perpetration was not supported by the self-report at the .05 level of significance  $\Delta F(1, 15) = .83$ ,  $p = .38$ ,  $\Delta R^2 = .01$ . Furthermore, our hypothesis that



achievement-striving would have a direct relationship with emotional abuse perpetration was not supported by the self-report at the .05 level of significance  $B_{self-AS} = -.13$ ,  $t(30) = -.91$ ,  $p = .38$ . Our hypothesis that dutifulness would have an inverse relationship with emotional abuse perpetration was not supported by the self-report at the .05 level of significance  $B_{self-duty} = .09$ ,  $t(30) = .61$ ,  $p = .55$ .

To see if there would be consistency in results between the self-report and partner-reports of conscientiousness facets, the same hierarchical regression was rerun, except with the partner-report variables of dutifulness and achievement-striving. Our hypothesis that achievement-striving would significantly explain a unique amount of emotional abuse perpetration was not supported by the partner-report at the .05 level of significance,  $\Delta F(1, 2) = .18$ ,  $p = .72$ ,  $\Delta R^2 = .003$ . Furthermore, our hypothesis that achievement-striving would have a direct relationship with emotional abuse perpetration was not supported by the partner-report at the .05 level of significance,  $B_{partner-AS} = -.10$ ,  $t(10) = 1.27$ ,  $p = .72$ . Our hypothesis that dutifulness would have an inverse relationship with emotional abuse perpetration was not supported by the partner-report at the .05 level of significance,  $B_{partner-duty} = .71$ ,  $t(10) = .17$ ,  $p = .33$ .

Emotional abuse victimization was analyzed next as the response variable to test our hypotheses that dutifulness would explain a unique portion of variance from emotional abuse victimization and whether it would have a direct association with emotional abuse victimization, as well as whether achievement-striving would have an inverse association with emotional abuse victimization. Our hypothesis that dutifulness would significantly explain a unique amount of emotional abuse victimization was not supported by the self-report at the .05 level of significance,  $\Delta F(1, 15) = .04$ ,  $p = .20$ ,  $\Delta R^2 = .04$ . Our hypothesis that dutifulness would have a direct relationship with emotional abuse victimization was not supported by the self-report at the .05 level of significance,  $B_{self-duty} = -.25$ ,  $t(30) = -1.35$ ,  $p = .20$ . Our hypothesis that dutifulness would have an inverse relationship with emotional abuse victimization was not supported by the self-report at the .05 level of significance,  $B_{self-AS} = -.13$ ,  $t(30) = -.70$ ,  $p = .49$ .

Next, we reran the same hierarchical regression, except with the partner-report variables of dutifulness and achievement-striving, to check for consistency across the self-report and partner-reports of conscientiousness. Our hypothesis that dutifulness would significantly explain a unique amount of emotional abuse victimization was not supported by the partner-report at the .05 level of significance  $\Delta F(1, 2) = 5.43$ ,  $p = .15$ ,  $\Delta R^2 = .10$ . Our hypothesis that dutifulness would have a direct relationship with emotional abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-duty} = -1.25$ ,  $t(10) = -2.33$ ,  $p = .15$ . Our hypothesis that achievement-striving would have an inverse relationship with emotional abuse victimization was not supported by the partner-report at the .05 level of significance,  $B_{partner-AS} = .32$ ,  $t(10) = 1.17$ ,  $p = .36$ .

## Discussion

Upon analyses and making proper corrections on decision rules, none of our hypotheses were supported by the data. There were a few associations, like how more dutiful individuals engaged in less sexual abuse perpetration, which aligned with our respective hypothesis. However, there was insufficient evidence to deny that such associations were not merely observed by chance when considering how many hypotheses were tested. Overall, our pilot study lacked the explanatory power to make any meaningful statements about whether achievement-striving or dutifulness meaningfully related to physical abuse, sexual abuse, or emotional abuse. Generally speaking, our pilot study non-significantly suggests that persons who are more dutiful or who exhibit more achievement-striving may be less likely to engage in intimate partner violence perpetration and may also be less likely to be victimized. Such findings suggest that the broad-trait of conscientiousness is a protective factor against numerous forms of intimate partner violence.

Though we hypothesized that the orientation of personality facets may have differential findings on intimate partner violence, the pilot study's results are reasonable when considering broad-trait modeling. Conscientiousness, as a broad-trait, is positively associated with greater success and happiness within various social units, like romantic couples (Sacket & Walmsley, 2014). Though achievement-striving and dutifulness are differentially oriented towards the source of one's diligence, they are both reflective indicators of conscientiousness, so it is sensible that they will associate with many variables in a similar manner (Roberts et al, 2014). Conscientious individuals, apart from those who score very highly on facet industriousness, tend to avoid taking risks that may significantly damage their reputations, as they fear the repercussions that stigmatization may have on their careers, social relationships, and other units of value (Weller & Tikir, 2011). As such, it is not surprising that both dutiful and achievement-striving individuals are unlikely to engage in perpetration nor to risk being victims of intimate partner violence, since being known to be in an unhealthy relationship may have social consequences on their formal and informal bonds (Conley et al, 2013).

Apart from the nature of conscientiousness, the interaction between intimate partner violence and personality profiles may also explain our pilot study's lack of significant findings. Studies that analyzed the consequences of chronic male intimate partner violence on women determined that female victims are more likely to develop personality disorders as a result of being abused and persons who develop personality disorders are at a higher risk of being victims of abuse (Pico-Alfonso et al, 2008). Similar research has also determined that persons who develop personality disorders tended to have low scores of emotional stability (e.g., trait neuroticism) and of conscientiousness at a broad-trait level. Therefore, inferring that such persons would also have lower scores on both dutifulness and

achievement-striving is reasonable, as opposed to there being a differentiation amongst facets (Hopwood & Zannarini, 2010). Furthermore, research that analyzes personality profiles of intimate partner violence perpetrators concludes that perpetrators normally tend to act out, behave in a hostile manner, and have below-average problem-solving skills (Else et al, 2006). Such a profile is unlikely of a person who scores highly on broad-trait conscientiousness, so theory and prior research are able to make sense of our pilot study's lack of significant findings (Fayard et al, 2012).

### **Limitations**

Our pilot study's most pronounced weakness was a small sample size, especially for DYAD2 Part 2's partner-report. Small sample sizes have an inflated false discovery rate. As such, even though our pilot study failed to support our hypotheses nor even make a significant claim, this could simply be an artifact of an underpowered sample size that is not necessarily reflective of a lack of a true association amongst the studied constructs (Hahs-Vaughn, 2017). This small sample size problem may also explain the multi-trait-multimethod matrix uncovering a lack of convergent and divergent validities across the self-report and partner-report versions of the IPIP-NEO-120. Also, the assumptions for hierarchical multiple linear regressions were not entirely met due to violations of the assumption of a normal distribution of residuals on all response variables, which was particularly problematic for the partner-reported facets of conscientiousness as predictors due to their small sample size not being robust to violations of normality (Montgomery, 2013). Lastly, since all studies under the purview of DYAD2 collected data from young adult couples, concerns over nesticity arise that may violate the assumption of independence of errors between the responses of an actor and his/her partner (Cook & Kenney, 2005). As such, if sample size requirements were met, multilevel modeling would have been the ideal analysis plan to control for nesticity (Hahs-Vaughn, 2017).

### **Future Research**

Subsequent studies should try replicating this pilot study's design, but continue data collection so that multilevel modeling approaches can be used to analyze data for the actor, his/her partner, and the couple. By doing so, inferences about intimate partner violence can be made, not only for individuals and their respective dutifulness and achievement-striving levels, but also for how those levels for persons in a couple interact with one and other. Such a design would allow for hypothesis testing of questions like whether there would be more intimate partner violence within couples where one member scores very highly in

dutifulness while the other scores very highly in achievement-striving. Also, considering aforementioned relationships from the literature about levels of trait neuroticism and intimate partner violence, future research may also want to take a narrow-trait model approach to trait neuroticism to see if particular facets and their differential elements (e.g., orientation) contribute differentially to intimate partner violence. Future research may also want to investigate different types of intimate partner violence, like threatening behaviors, to see if other types are differentially explained by different facets of conscientiousness and other personality traits. Alternatively, positive psychological concepts, like positive conflict resolution, can be analyzed to see if a narrow-trait model approach discovers differing levels of success at such interventions. Such discoveries would be salient to couples' therapists, who may want to teach behaviors related to the strongest predictors of positive conflict resolution success to their clients.

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