

He Said, She Said: The Role of Self and Peer Rated Attractiveness in the Personality-Victimization Relationship

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Abstract

Our own and others' perceptions of our attractiveness are impressively salient. Such perceptions have the power to influence not only the respect and attention we receive from others but also how we are treated in platonic and romantic relationships. This association is found to be particularly relevant for children and adolescents' victimization. I hypothesized that the relationship between attractiveness and victimization is influenced by personality. Victimization outcomes are thought to differ in shy and attractive adolescents compared to outgoing and attractive adolescents. In the current study, links between personality, attractiveness, and victimization were explored. Participants ($N = 539$, $M = 11.82$) completed self-report questionnaires to assess personality (via HEXACO Personality Inventory), self-perceptions of attractiveness and victimization. Peer nominations were used to assess students' perceptions of their peers' level of attractiveness and victimization. Significant negative associations were found between Openness and peer nominations of attractiveness and Honesty-Humility and self-reported attractiveness. Furthermore, a significant positive relationship was found between self-reported attractiveness and self-reported indirect victimization. In contrast, significant negative relationships were found between peer-nominated attractiveness and all measures of peer nominated victimization. Mediation analyses resulted in different paths when comparing self-reported and peer nominated victimization. Lastly, contrasting results were found when direct effects were assessed for gender differences. A positive relationship between Emotionality and peer nominated attractiveness was found for girls, while a negative relationship was found for boys. Furthermore, a positive relationship between self-reported attractiveness and self-reported direct victimization was found exclusively in boys. Results have the potential to expand bullying interventions to include not only those who are customarily regarded as victims but all students.

Keywords: attractiveness, self-report, peer nomination, victimization, personality

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Introduction

Bullying perpetration and victimization are persistent problems and a growing concern among children, teens, parents, educators and researchers (Ambert, 1995). Perpetration is associated with antisocial outcomes. Longitudinally, bullying has been linked with criminal activity (Renda et al., 2011) and violent crimes (Ttofi et al., 2012). Peer victimization can lead to severe psychosocial consequences such as anxiety, depression, loneliness, lower global and social self-esteem (Hawker & Boulton, 2000), peer relationship difficulties and social withdrawal (Parkhurst & Asher, 1992; Strauss et al., 1988). Perpetration and victimization overall encompass two distinct categories: 1) bullying aggression and 2) non-bullying aggression. Bullying aggression comprises three core concepts: goal-directedness, causing harm and an imbalance of power between the victim and perpetrator (Volk et al., 2014). Non-bullying aggression refers to aggression where the perpetrator has equal or lesser power than the victim (Lapierre & Dane, 2020). Such behavior does not have to be goal-directed; it may be reactive. Bullying involvement can further be broken down into two forms of aggression, direct and indirect. Direct perpetration and victimization take place face-to-face and can include behaviors such as name-calling, threats or physical violence (Olweus, 1993). Indirect perpetration and victimization comprise behaviors that are carried out without the victim being present, such as gossiping, spreading rumors (Baldry & Farrington, 1999) or social exclusion (Bauman & Del Rio, 2006) and is related to causing social harm (Crick & Grotpeter, 1995).

Age and gender are significant factors that influence bullying involvement. Perpetration and victimization have been reported in children as young as three years old (Bailey, 2007), with perpetration and victimization most frequently occurring between 11 and 13 years old (Eslea & Rees, 2001). Younger children tend to fall victim to more direct victimization. In contrast, those

in mid-childhood and adolescence are at higher risk of indirect victimization (Owens, 1996), with adolescents being indirectly victimized almost twice as often as direct victimization (Shephard, 2018). Furthermore, boys tend to be much more physically aggressive than girls (Lagerspetz et al., 1988), leading to more direct perpetration and victimization (Carbone-Lopez et al., 2010). In comparison, there are mixed findings when it comes to indirect perpetration and victimization. For example, some studies report that girls are involved with indirect perpetration and victimization at a much higher rate than boys (Ostrov & Keating, 2004), whereas others find only inconsequential gender differences (Card et al., 2008).

Perpetration and victimization are complex and multifaceted and are affected not only by age and gender but also by various environmental (Dowd et al., 2005), relational (Rodkin & Hodges, 2003), and individual characteristics (Krank et al., 2011). Considerable research has investigated which individual characteristics interact to play a role in perpetration and victimization. Many studies have examined the association between personality and bullying involvement (e.g., Volk et al., 2019), discovering personality profiles that present risks for perpetration and victimization and an in-depth look at the motivation behind their behavior.

Victimization overall (i.e., by bullying and non-bullying aggression) is particularly interesting when considering attractiveness's association with victimization. Attractiveness is associated with both personality and victimization. Personality has been found to influence attractiveness, with positive personality traits such as being helpful, polite and intelligent being associated with higher overall scores of physical attractiveness (Lewandowski et al., 2007). Further, attractiveness is a highly salient characteristic to adolescents (Zakin, 1983) and plays a prominent role in victimization. For example, both adolescents with low and high attractiveness scores tend to be at higher risk of victimization (Knack et al., 2012; Leenaars et al., 2008).

Further complicating these associations, attractiveness and victimization encompass two different constructs: others' perceptions, as well as our own perceptions. Although expected to measure a similar variable, these two constructs can yield vastly different results (Greitemeyer, 2020). I predict that self-reports and peer nominations measure two rather different constructs within attractiveness and victimization. Very little research has been done to compare others and our own perceptions of attractiveness and victimization. None has been done examining how the association between personality and victimization may change when including these different constructs of attractiveness and victimization. Although personality may be a primary variable that influences adolescents' victimization, determining how others and our own perceptions of attractiveness influence this relationship is of great importance as it could inform and further improve victimization interventions. My thesis evaluates the associations between self-reported personality, self and other-rated attractiveness, and self and other-rated overall victimization. It will further assess how such associations change due to gender. The overall aim is to better understand the personality-victimization relationship.

The Evolutionary Perspective

Attractiveness

In many instances, attractiveness has been deemed subjective. The stereotype "beauty is in the eye of the beholder" has perpetuated and emphasized the notion that personal preference governs what people find attractive. Such a concept is encouraging to those who do not fit the societal norms in terms of their appearances and may in fact have some validity as individuals do differ somewhat in their physical appearance preferences. However, evolutionary theory posits that this statement is flawed. It maintains that specific characteristics have been evolutionarily selected to be considered attractive, leading to ratings of attractiveness being judged in similar

ways and based on similar characteristics across populations, cultures and ethnicities. Within intra- and inter-cultural and ethnic samples, there is overwhelming consensus on what constitutes being attractive (Cunningham et al., 1995; Langlois et al., 2000). Further, sociocultural differences such as preferences for specific make-up or fashion trends tend not to affect attractiveness ratings. In a study by Zebrowitz and colleagues (1993), when African American, White American and Korean men were asked to rate photos for attractiveness, very high inter-rater reliability in attractiveness was found across all three groups (Cronbach $\alpha > 0.8$). Results suggest that people generally use similar indicators and characteristics to determine attractiveness, no matter their cultural or ethnic background.

Across various academics, characteristics of attractiveness are hypothesized to have been selected because they reliably signal increased health, viability and reproductive success, and overall genetic quality (Gangestad & Simpson, 2000; Thornhill & Gangestad, 1999). In women, feminine features such as small noses, clear skin, full lips, or a low waist to hip ratio (WHR) are considered highly attractive (Little et al., 2011); while also being reliable indicators of fitness. Those with such characteristics have increased oestrogen circulation, which is associated with increased fertility (Thornhill & Gangestad, 1996). In men, masculine characteristics such as larger jaws and prominent cheekbones are attractive and are further linked with testosterone, which is associated with fertility (Penton-Voak et al., 2001).

From an evolutionary perspective, women and men select and are romantically attracted to those who display characteristics of high fitness and reproductive success, traits that their offspring can potentially inherit (Bale & Archer, 2013). This heteronormative perspective dominates evolutionary perspectives because heterosexual activity represents the most direct way of obtaining evolutionary success (i.e., passing on one's genes to future generations; Buss, 1989).

Thus, despite the existence of several interesting evolutionary theories on LGBTQ+ perspectives on attractiveness (e.g., Bogaert, 2006), my thesis focuses on heterosexual perspectives.

Evolutionary psychologists have proposed that heterosexual men and women prioritize different characteristics when choosing a mate and consider different characteristics to be “attractive” (Trivers, 1972). Across 37 countries, sex differences in attractiveness have been reported (Buss, 1989). When men regard women as attractive or select them as mates, they tend to emphasize physical appearance and chastity (Buss & Schmitt, 1993). Such preference is present as it is believed that attractiveness signals fertility and fitness, and men are looking for women who have the ability to propagate their genes and give birth to healthy offspring (Symons, 1980). On the other hand, women tend to emphasize resources, characteristics and physical appearance when determining “attractiveness” and selecting a mate. Men with increased intelligence, social status, dominance and physical attractiveness have been identified over various cultures as being highly attractive mates (Buss, 1989). To demonstrate their value as a mate, men tend to brag about their resources (i.e., athleticism or strength) to attract potential mates (Buss, 1988). Furthermore, men’s size and strength are indicators of attractiveness. Such characteristics indicate a man’s capability to provide protection and resources and pass on high-quality genes (Archer, 2009; Buss & Schmitt, 1993b). Such results suggest that resources and physical appearance are significant indicators of attractiveness.

Victimization

As noted above (Knack et al., 2012; Leenaars et al., 2008), victimization has ties to individual attractiveness. Two types of victimization exist: victimization by bullying, which encompasses victimization by a perpetrator who is more powerful than the victim, and overall victimization that encompasses all peer aggression (Schäfer et al., 2002). In boys and girls alike,

indirect victimization by bullying or overall victimization can be used to lower the attractiveness of potential rivals (Leenaars et al., 2008). For example, Vaillancourt & Sharma (2011) found that a female research assistant wearing provocative clothing, compared to conservative clothing, was more likely to be overall indirectly victimized by other women through sarcasm, negative facial expressions and avoidant behavior. Such empirical research highlights that some women identify attractive women as their rivals and engage in tactics to decrease their attractiveness and thus their mate value (Buss, 1989). Furthermore, such indirect victimization could attack social standings and chastity of women, leading them to be seen as promiscuous as it calls into question their fidelity (Buss, 1988; Vaillancourt, 2005). When women are victims of indirect aggression, this can lower men's perceptions of their attractiveness (Fisher et al., 2009). Perpetrators are then able to make themselves seem like a better choice of mate. Furthermore, men also engage in indirect perpetration in order to lower the attractiveness of sexual rivals (Leenaars et al., 2008). When compared to non-perpetrators, perpetration is associated with a higher number of dating and sexual partners (Dane et al., 2017; Gallup & White, 2007; Lapierre & Dane, 2020).

Based on evolutionary theory, along with several academics and empirical academic research (e.g., Leenaars et al., 2008; Volk et al., 2012), it seems that indirect victimization is used across genders as a means to lower the attractiveness of sexual rivals in order to tear them down, hurt their reputation, and, in the case of women, insinuate promiscuity. Given the associations victimization has with both men and women, attractiveness and its evolutionary framework, my thesis will focus on overall victimization rather than perpetration.

Personality

Individual differences have been well documented across gender, development, cultures and ethnicities (Buss, 2009). Differences in personality are essential to various adaptive issues,

such as mate selection, parenting, and overall survival (Buss, 1999; Nettle, 2006; Ozer & Benet-Martínez, 2006). These findings suggest that personality has the power to influence the circumstances people engage with, how they react, and the benefits or consequences of that behavior.

There are a variety of different ways to measure individual differences related to personality. In infants, children and adolescents, it is common practice to measure individual differences using temperament rather than personality (Grist & McCord, 2010). Temperament is the preferred construct domain as it captures behavioral, emotional, and motivational predispositions during the developmental period (Rothbart et al., 2000). Conversely, in adults, personality is used to assess individual differences. Personality includes the reactive and regulatory tendencies that temperament assesses and encompasses judgments, morals, skills, beliefs and cognitions (De Pauw & Mervielde, 2010; Grist & McCord, 2010).

The HEXACO Personality Inventory is a relatively new measure of personality and comprises six dimensions: Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness and Openness. Those high in Honesty-Humility (H) are characterized as fair, sincere, genuine and modest (Ashton & Lee, 2007), whereas those low in Honesty-Humility have tendencies to exploit and manipulate others for self-gain (Ashton et al., 2004). On average, women tend to be higher in Honesty-Humility, which is consistent with suggestions based in evolutionary theory that men can have more to gain from exploiting others, as they have higher reproductive variance than women (Kibeom Lee & Ashton, 2020). Those high in Emotionality (E) are characterized as being emotionally attached, invested in their kin, empathetic, harm-avoidant and help-seeking (Ashton & Lee, 2007). Those low in Emotionality have lower fear and anxiety, kin altruism, and have higher emotional detachment (Ashton & Lee, 2009).

Emotionality is generally found to be higher in women, and this is consistent with the fact that they have a great reproductive investment in their offspring and play a critical role in their offspring's survival (Kibeom Lee & Ashton, 2020). High eXtraversion (X) captures leadership, sociability and liveliness, whereas those at the lower end are reserved and feel awkward in social situations or when given attention (Ashton & Lee, 2007). Higher Agreeableness (A) is associated with higher levels of tolerance and forgiveness, while those low in Agreeableness tend to be reactive and impatient (Ashton & Lee, 2007). Higher poles of Conscientious (C) indicate organization, perfectionism and goal-directed behavior, whereas lower poles are associated with impulsiveness and confrontation (Ashton & Lee, 2007). Lastly, those high in Openness (O) are curious, imaginative and creative, while those low in Openness tend to stick with the status quo and prefer more familiar environments and customs (Ashton & Lee, 2007).

The HEXACO dimensions have been found to have significant associations with temperament. The HEXACO and measures of temperament both measure individual differences and are found to be appropriate for adolescents; it is proposed that researchers select the model that best addresses their research question (Farrell et al., 2015). In further support of the HEXACO, it is very well suited for research examining antisocial behavior as the dimension Honesty-Humility (which is not present in temperament) is associated with bullying, aggression, the pursuit of dominance, psychopathy, revenge and workplace antisocial behavior (Book et al., 2012; Lee et al., 2003, 2013; Oh et al., 2011; Volk et al., 2019; De Vries et al., 2016). Furthermore, the HEXACO offers excellent construct validity (Kibeom Lee & Ashton, 2018) as well as better cross-cultural validity when compared to other personality constructs, including the Five-Factor Model (FFM) (Ashton & Lee, 2007). In addition to such benefits, the HEXACO is grounded in evolutionary theory and has provided convincing justification as to why humans

have evolved to display the six dimensions that encompass this model (Ashton & Lee, 2007). As such, I chose to use the HEXACO Personality Inventory in my thesis.

Self-reports vs. Peer nominations

Self-report and peer nominations have customarily been used to measure victimization (Seals & Young, 2003; Smith et al., 2004). Such methods of measurement can capture a complete picture of behavior. Using the combination of self-report and peer nominations, researchers are able to combat some of the shortcomings associated with both measurement tools. Exclusively using self-report to measure victimization may lead to under or over-reporting as students may be reluctant to admit to their perpetration or victimization for fear of being punished or labeled as a bully or victim (Cornell, 2006; Griffin & Gross, 2004). In contrast, students may over exaggerate their bullying involvement, dramatically altering students' apparent overall rates of perpetration and victimization (Cornell & Loper, 1998). Furthermore, peer nominations may yield inaccurate results as children may report perpetration and victimization based on reputation alone and not first-hand accounts (Fox & Boulton, 2005). An important distinction to note and remember when comparing self-reported and peer nominated measures of victimization would be that peer nominated victimization is measuring received nominations of victimization. Such measure reflects peers saying they victimize a specific individual, as opposed to peers saying a person is generally highly victimized by peer group members. Research studies teasing apart self-reported and peer nominated measures of victimization are few and far between. Of the studies that have compared these styles of measurement, the two are generally positively correlated, yet such correlations are low to moderate at best (e.g., Cole et al., 2006; Pellegrini & Bartini, 2000). As a result, I plan to assess victimization with both self and peer-reports.

I will further be using self-reports and peer nominations to measure attractiveness. I hypothesize that similar to self-report and peer nomination measures of victimization, self-report and peer nomination measures of attractiveness will yield significantly different results. For example, self-reported attractiveness may be under or over-reported, whereas peer nominations of attractiveness may be influenced by status and reputation more than actual attractiveness. In this section, I will explore the limited literature on self-reported and peer nominated attractiveness.

Self-report

A self-report measure typically asks participants to complete an anonymous survey reporting how frequently they engage in a behavior or how true a statement is. Similar to self-report measures of victimization, I hypothesize that self-reported measures of attractiveness measure so much more than meets the eye. As participants are rating their own attractiveness, it is possible they are over or under-reporting their scores of attractiveness. For example, in a study by Greitemeyer (2020), unattractive people tended to overestimate their attractiveness compared to ratings by strangers. In contrast, attractive individuals were much more accurate at estimating their attractiveness (Greitemeyer, 2020). In addition to measuring attractiveness, self-reported attractiveness seems to be measuring self-esteem and confidence (Buunk et al., 2002; Riggio et al., 2015). In a meta-analysis, Feingold (1992) found self-esteem to be positively correlated with self-reported attractiveness ($r = .32$). Furthermore, Leary and Baumeister (2000) found self-reported attractiveness to be strongly positively associated with self-esteem and confidence.

Peer nominations

A peer nomination measure typically asks participants to list or select students who fit the description provided. Data can be gathered from multiple sources, increasing the validity of

students' answers overall. Obtaining an overall picture of attractiveness indicates, on average, how attractive the peer group thinks that participant is. However, that is not all this measure assesses. When variables are associated with peer-valued characteristics, or peer preferences are measured (e.g., likeability, athletic competence), peer nominations are found to encompass not only the average score of the variable in question but also participants' dominance (Butcher, 1986), athletic abilities, status within the classroom social hierarchy (LaFontana & Cillessen, 2002), reputation, attractiveness and likeability (Winder & Wiggins, 1964). All these characteristics are found within the evolutionary framework of men's and woman's attractiveness.

In light of the foregoing research, I hypothesize these two measures of attractiveness are assessing different kinds of attractiveness that could be associated with different characteristics. Consequently, I assume that they will differentially be associated with both self-reported and peer nominated victimization, as well as personality.

Attractiveness, Personality and Peer Relationships

The role of Attractiveness in Victimization

As discussed above, the relationship between attractiveness and overall victimization (i.e., by bullying and non-bullying aggression) is rooted in evolutionary theory. Such theory posits that reproductive success and fitness indicators are viewed as attractive as they indicate good mate value, and men and women alike are victimized when they are highly attractive (Buss, 1988). Now such a relationship is not only found in the men and women in the Environment of Evolutionary Adaptedness (EEA), but also in classrooms and lunchrooms and on the playground. The relationship between attractiveness and victimization has long been recorded in children and adolescents alike. However, what is starkly missing from the literature is a comparison of self-

reported and peer nominated measures of attractiveness and victimization. Research suggests that self-reported and peer nominated measures assess different constructs of attractiveness and victimization. However, the literature has not investigated such proposed discrepancies and favors self-report measures to assess the association between attractiveness and victimization.

Leenaars and colleagues (2008) found that girls who self-reported as being attractive were at a higher risk of victimization through the use of indirect aggression (e.g., rumors or social exclusion). As attractiveness is measured in women by physical appearance, such a relationship suggests that girls wish to tear down mating rivals (e.g., through rumors of promiscuity to have mates doubt their fidelity), making themselves appear more attractive (Buss, 1988; Vaillancourt et al., 2003). The relationship between attractiveness and indirect victimization is found among boys as well (Morales & Crick, 1999), suggesting that they too tear others down to increase their own attractiveness as perceived by others.

Further complicating the relationship between victimization and attractiveness, higher attractiveness is not the only variable putting children and adolescents at risk for victimization. One of the common reasons for victimization is lower attractiveness (Erling & Hwang, 2004). Children who do not look like their peers due to weight, disfigurement or disease are more commonly victimized than their average-looking peers (Magin et al., 2008). Such victimization fits within the evolutionary framework as those lacking characteristics of attractiveness would be easy targets for perpetrators to establish dominance and augment their social status (Knack et al., 2012; Rosen et al., 2011).

The role of Personality in Attractiveness

Lewandoski and colleagues (2007) conducted a study where participants were given photos of men and women and asked to rate them on attractiveness. Following such ratings, they

were given personality profiles to go along with each photo and were subsequently asked to rate the photos for attractiveness a second time. Positive personality characteristics such as being smart and optimistic were associated with a significant increase in attractiveness scores, whereas attributes such as somber and moody significantly lower scores of attractiveness (Lewandowski et al., 2007). Furthermore, personality traits can influence how we see ourselves. For example, in a study by Greitemeyer (2020), participants who reported higher scores of Extraversion in the FFM were more likely to rate themselves as being more attractive, even if the participants were not rated as attractive by external raters. It could also be that different-appearing individuals may have lower self-esteem, greater anger, or other individual differences that might relate to personality. A modest amount of research has been conducted to investigate the association between personality and attractiveness; however, the literature is starkly lacking in research examining and directly comparing how self-reported and peer nominated measures of attractiveness affect this relationship. As such, results from the Big Five and the HEXACO will be utilized to explore such associations.

Honesty-Humility is characterized by humility, modesty and sincerity (Ashton & Lee, 2007). In a study by Van Tongeren and colleagues (2014), people found potential partners with higher humility more attractive than those with low humility. Furthermore, low Honesty-Humility is strongly associated with narcissism (Kibeom Lee & Ashton, 2005), which is a strong predictor of overestimating one's attractiveness (Bleske-Rechek et al., 2008; Gabriel et al., 1994). Expressions of Emotionality tend to be linked to conveying social information relevant to establishing romantic relationships, and thus other-rated attractiveness (Ekman & Rosenberg, 2012; Keltner, 1995; Tracy & Matsumoto, 2008; Tracy & Robins, 2008). Further, higher Emotionality is associated with kin altruism as well as emotional attachment, thus making it

more likely that those high in Emotionality will bond with their offspring and display good parenting (Ashton & Lee, 2007). Characteristics that signal good parenting are found to increase others' perceptions of attractiveness as it is associated to increase chances of kin survival (Hamilton, 1964). Higher eXtraversion is associated with being sociable and lively (Ashton & Lee, 2007), which are traits people take notice of and are attracted to (Diener et al., 1995; Griffin & Langlois, 2006; Langlois et al., 2000). Further, eXtraversion is associated with positive self-regard and self-esteem (Lukaszewski & Roney, 2011; Rodriguez & Lukaszewski, 2020; von Borell et al., 2019) which are both linked with higher self-reported attractiveness (Mathes & Kahn, 1975; Salvia et al., 1975). Moreover, eXtraversion and attractiveness may be associated with one another as being attractive may build confidence and allow for increased sociability (Coleman, 1988).

Agreeableness is characterized as being tolerant, forgiving and having a tendency to avoid and diffuse conflict (Ashton & Lee, 2007). Different results have been identified in associations between the FFM Agreeableness and self-reported and peer nominated attractiveness. Ćurković & Franc (2010), as well as Langlois and colleagues (2000) have found no associations between Agreeableness and self-reperceived attractiveness. In contrast, Meier and colleagues (2010) found that higher Agreeableness is associated with higher peer ratings of attractiveness. Meier and colleagues posit that such association is present as agreeable people participate in behaviors that make them seem more pleasant and thus attractive (Meier et al., 2010). Agreeableness in the FFM encompasses kindness and cooperation, as well as modesty and straightforwardness (Ashton & Lee, 2008). Within the HEXACO, modesty and straightforwardness are classified within Honesty-Humility (Ashton & Lee, 2008), leading to the belief that different findings will be found between the FFM and the HEXACO Agreeableness.

Furthermore, the association between Agreeableness and attractiveness could be present as those who are unattractive are more defensive (Reed & Aspinwall, 1998).

Limited research has examined Conscientiousness' associations with attractiveness, and, similar to Agreeableness, different results have been identified for self-reported and peer nominated attractiveness. For example, Tartaglia & Rollero (2015) found a positive association between the Big Five Conscientiousness and others' perceptions of our attractiveness; in other words, those with higher Conscientiousness (i.e., organized, detail-oriented) were rated as more attractive. However, research focusing on eating disorder risk factors and prevention have found that higher FFM Conscientiousness is strongly associated with perfectionism as well as diligence, two characteristics that are commonly found in those with body dissatisfaction and eating disorder symptomatology (Balon, 2007; Buhlmann et al., 2008; Nigar & Naqvi, 2019). Such conflicting results paint two very different pictures; Conscientiousness affects our perceptions as well as other's perceptions of our attractiveness in converging ways.

Lastly, those high in Openness are characterized as being creative, open to new experiences and curious (Ashton & Lee, 2007). Some research has been done looking at Openness in the FFM and has found higher Openness to be positively associated with others ratings of attractiveness (Ćurković & Franc, 2010; Langlois et al., 2000). However, similar to Agreeableness, Openness in the FFM is different than in the HEXACO. The FFM Openness is associated with a pervasive collection of associated with imagination, whereas the HEXACO Openness is a dimension of learning, imagination and thinking (Ashton & Lee, 2008). It is thus unclear how the HEXACO Openness will be associated with self-reported and peer nominated attractiveness.

The role of Personality in Victimization

Various personality profiles have been identified as being associated with victimization (Book et al., 2012; Farrell & Volk, 2017). Those with higher Emotionality possess characteristics such as fearfulness, anxiety and dependence (Ashton & Lee, 2007; Vries et al., 2016), which in turn have been found to be associated with higher rates of victimization (Bond et al., 2001; Lopez & DuBois, 2005; Moore et al., 2017; Mynard & Joseph, 1997; Reijntjes et al., 2011). I predict that such a relationship is present as children and teens who present with emotional difficulties, such as fearfulness or anxiety, tend to be victimized at a higher rate when compared to those without emotional struggles (Bond et al., 2001; Lopez & DuBois, 2005; Moore et al., 2017; Mynard & Joseph, 1997; Reijntjes et al., 2011). eXtraversion tends to be associated with lower levels of victimization. eXtraversion is positively related to social skills, sociability and self-esteem (Ashton & Lee, 2007; Vries et al., 2016); such characteristics tend to be negatively associated with direct and indirect victimization (Cook et al., 2010; Hawker & Boulton, 2000; Mynard & Joseph, 1997; Pronk et al., 2021). Furthermore, those with higher levels of eXtraversion tend to have more extensive social networks that can lend support should they be victimized, leading them to be considered an undesirable target for victimization (Lukaszewski & Roney, 2011).

In various studies using Agreeableness from the Big Five, high levels of Agreeableness is associated with avoiding and diffusing conflict (Graziano et al., 1996), as well as possessing characteristics such as being personable and self-controlled that I expect to make them less attractive as a victim (Jensen-Campbell et al., 2007)). Research supports such notions and a negative relationship between Agreeableness and victimization has been found across various studies using the Big Five (Cawvey et al., 2018; Mulder & van Aken, 2014; Tani et al., 2003). I predict that such Big Five results will generalize to the HEXACO.

The Role of Attractiveness in the Personality-Victimization Relationship

From an evolutionary perspective, victimizing others can be used to attract potential mates (Buss, 1989) or deter potential rivals (Leenaars et al., 2008). As personality and attractiveness are both individual differences that effect mate selection (Bale & Archer, 2013; Eagly & Wood, 1999), it is thus crucial to consider how such traits work together to explain victimization. To my knowledge, no research has examined the indirect relationship of self-report personality with self-reported and peer nominated victimization through the pathway of self-reported and peer nominated attractiveness. This indirect association raises the question of whether personality filters through attractiveness to affect victimization. In other words, if personality influences (i.e., increases or decreases) perceptions of attractiveness, then personality may indirectly influence the potentially negative relationship between victimization and attractiveness (self or other rated). Furthermore, as outlined above, self-reported and peer nominated attractiveness and victimization tell two very different stories and I hypothesize they will be differentially related to one another.

Current Study

The literature examining personality and attractiveness is modest at best. It shows that personality dimensions affect others' perceptions of our attractiveness, and further that specific personality dimensions can influence our own perceptions of our attractiveness. However, what is needed in the literature is further research to compare the two constructs of attractiveness: self-reported and peer nominated. In contrast, the literature examining attractiveness and victimization is more thorough yet is still lacking in some respects. It highlights that attractiveness does play a role in victimization. However, research needs to investigate how

differing measures of victimization are differentially affected self-reported and peer nominated attractiveness.

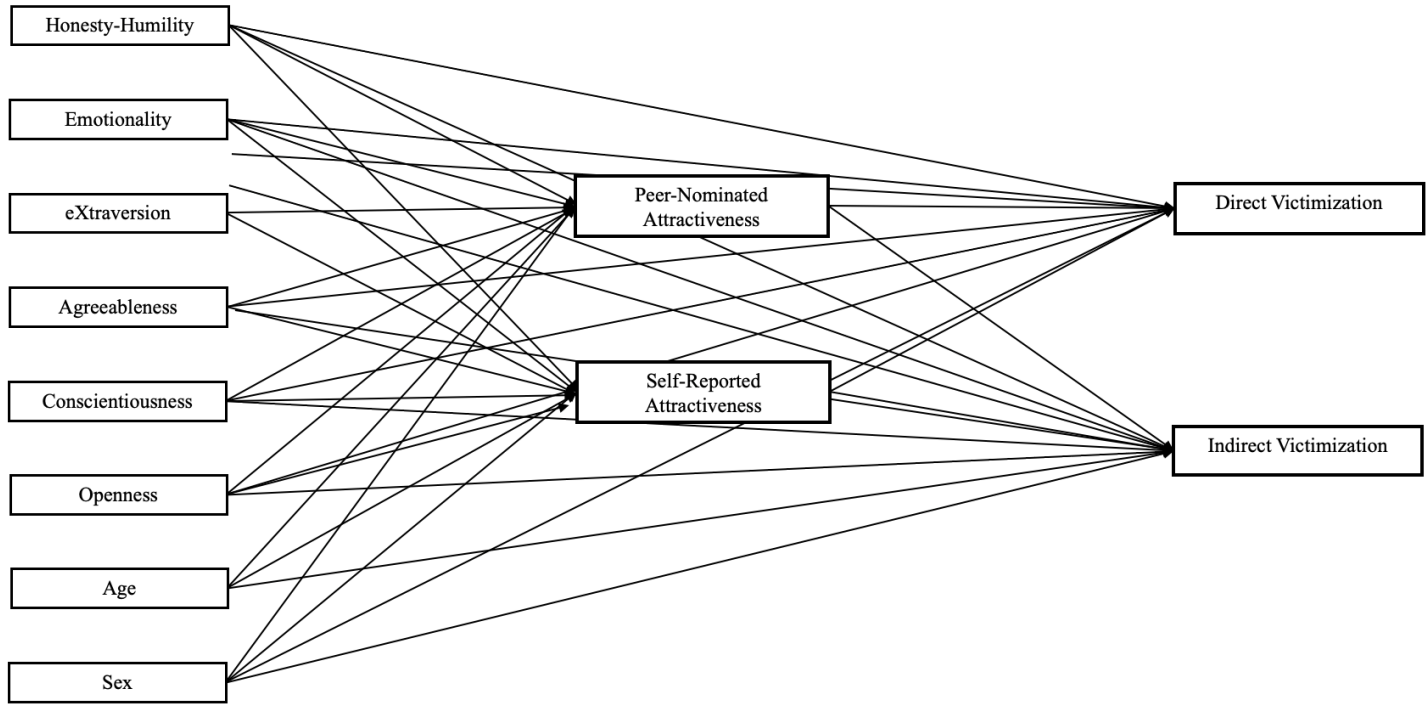
To my knowledge, there have been no previous studies examining the indirect relationship of personality to victimization through self-reported and peer nominated attractiveness. Further, most of the research directly examining differences in self-report and peer nominations has not examined attractiveness but focused on measures of bullying involvement (e.g., Branson & Cornell, 2009), given such this is an exploratory study. Due to the limited research examining self-reported and peer nominated attractiveness, the purpose of my thesis is to examine the direct and indirect associations between personality, attractiveness and victimization from an evolutionary perspective (Figure 1). Specifically, I will investigate the differences between self-reported and peer nominated attractiveness in their associations with personality and self-reported and peer nominated victimization. I will further be examining how such associations change depending on gender.

Hypotheses and Predictions

Five leading research questions will be explored throughout my thesis. As very little research has examined the association between self-reported and peer nominated victimization in this context, predictions differentiating self-reported and peer nominated victimization results are not made. My first research question examines how self-reported and peer nominated attractiveness differentially relate to direct and indirect victimization. As self-reported and peer nominated measures could be measuring different entities, I predict that peer nominated attractiveness will indicate higher mate value than self-reported attractiveness and thus be associated with higher levels of indirect victimization. I predict that those with fewer peer

Figure 1

Hypothesized model. Disturbances, errors and covariances have been removed for ease of presentation.



nominations of attractiveness will be at increased risk of direct victimization as being unattractive is a risk factor for victimization.

My second research question considers the association between personality and self-reported and peer nominated attractiveness. I predict that higher levels of Honesty-Humility will be associated with lower self-reported attractiveness as those high in Honesty-Humility tend to be modest in their self-appraisals. Further, I predict that higher levels of Emotionality will be associated with more peer nominations of attractiveness as expressions of Emotionality are positively associated with conveying social information relevant to romantic partner selection as well as attachment to kin. I predict that higher levels of eXtraversion will be associated with both higher levels of self-reported and peer nominated attractiveness scores. eXtroverted individuals are lively, sociable and confident in themselves, and others tend to rate them as more attractive. Lastly, I predict Conscientiousness to be negatively associated with self-reported attractiveness. Those high in Conscientiousness are perfectionistic; therefore, I predict they will judge their appearance more harshly and positively associated with peer nominations as peers are diligent about their appearance.

The third research question aims to examine the association between personality and victimization. This question aims to replicate past findings within the personality-victimization literature while further expanding the literature to encompass the relationship between the HEXACO personality inventory and direct and indirect victimization. Based on past findings, I predict that higher levels of Emotionality will be associated with higher levels of direct and indirect victimization. Such results are predicted as those with higher levels of Emotionality are fearful and anxious, traits that are commonly associated with higher levels of direct and indirect victimization. Furthermore, those with higher levels of Emotionality display increased kin-

altruism, which is attractive, thus adding to their ability to be a competitive mate and increasing their chances of indirect victimization. I further predict that higher levels of eXtraversion will be associated with lower levels of direct and indirect victimization as those with high eXtraversion tend to have superior social skills and self-esteem, lowering their chances of being victimized. Furthermore, those high in Agreeableness tend to avoid and defuse conflict, lowering their chances of victimization. I, therefore, predict that higher levels of Agreeableness will be associated with lower levels of direct and indirect victimization.

The fourth research question aims to investigate the indirect relationship between the HEXACO and direct and indirect victimization. I predict that lower levels of Honesty-Humility will be indirectly associated with higher levels of indirect victimization through higher levels of self-reported attractiveness. Such a result is predicted as lower levels of Honesty-Humility are associated with dominance and arrogance, thus resulting in higher levels of self-reported attractiveness which is expected to be a measure of confidence. Therefore, those who display dominance and confidence are more likely to be considered a competitive rival, thus leading to indirect victimization. I further predict that higher levels of Emotionality will be indirectly associated with higher levels of indirect victimization through the pathway of higher levels of peer nominations of attractiveness. Such a result is predicted as higher levels of Emotionality are associated with attractive characteristics (kin-altruism and establishing romantic relationships), which I hypothesize will be associated with a higher number of peer nominations of attractiveness, thus a higher mate value, and consequently instances of indirect victimization.

The fifth and final question this thesis aims to address is how the associations between personality, attractiveness and victimization may vary depending on gender. Based on gender differences concerning Emotionality, I predict that higher levels of Emotionality in boys will be

associated with lower peer nominations of attractiveness. In contrast, in girls, I predict that higher levels of Emotionality will be associated with a higher number of peer nominations. Furthermore, I predict that as boys age, self-reported attractiveness scores will rise as they move closer to the ideal figure for men, with puberty prompting increased muscle gain. At the same time, I predict that girls' self-reported attractiveness scores will decrease as they move further away from the ideal female figure due to weight gain associated with puberty. I predict this negative relationship will be present as the negative effects of weight gain may be more salient than the positive effects of breast development resulting in girls' self-reported attractiveness scores to decrease as they age. Further, as a result of breast development, adolescent girls may look and feel more awkward and embarrassed during the early stages of puberty than during either childhood or the end of puberty, resulting in lower self-report attractiveness scores. I further predict that as girls age, their number of peer nominations will increase as they develop secondary sex characteristics that indicate sexual attractiveness. Lastly, based on past literature looking at intrasexual competition in women as well as the characteristics of peer nomination, I predict that a higher peer nominated attractiveness will be associated with higher levels of indirect victimization.

Methods

Participants

A sample of 539 participants (246 boys and 278 girls) aged 10 to 14 years old ($M = 11.82$; $SD = 1.19$) were recruited from five elementary schools within the Niagara Catholic District School Board in Southern Ontario, Canada. Data was collected as part of the Brock Adolescent Relationships Study, a larger, longitudinal study on children and adolescence peer relationships. Data for this project were collected during the first wave of data collection in May

of 2019. Participants provided both parental consent and individual assent. Of these 539 participants, 7 participants were absent. Analyses were conducted on the remaining 532 participants. Within this sample, approximately 62.5% of participants identified as White, 11.5% identified as Mixed, 9.8% identified as Other, 8.2% identified as Asian, 2.6% identified as Black and .4% identified as Native Canadian.

Procedure

Parental consent, as well as student assent, was obtained prior to the commencement of the surveys. On the day of data collection, two Qualtrics-based surveys were distributed electronically on Samsung tablets. Participants began by completing the peer nomination survey where they were permitted to select participants who fit the description of each item. Participants who had received parental consent were listed in a roster as potential options for nomination. For all peer nomination questions there was no maximum number of nominations for such items, and students were permitted to select “No one” should they see fit. The peer nomination portion of the survey includes measures of peer-valued characteristics, friendship and dating, bullying and non-bullying aggression, and resource control strategies. Following the completion of the peer nomination survey, trained research assistants directed participants to the self-report survey. The self-report portion of the survey includes measures of demographics, attachment, personality, bullying and non-bullying aggression, and school climate. The survey was conducted during class time and took participants an average of an hour and a half to complete.

Measures

Participants completed both self-report and peer nominations measures. Self-report measures included a modified HEXACO Personality Inventory (47 items) (Appendix C) (Ashton & Lee, 2009; Kibeom Lee & Ashton, 2004), one question from a dating questionnaire (Appendix

D) was used to assess self-reported attractiveness, and peer nominated (Appendix F) and self-reported (Appendix G) measures were used to assess indirect and direct victimization. A peer nomination question from the Peer-Valued Characteristics subscale (Appendix E) (Knack et al., 2012; Vaillancourt & Hymel, 2006) was used to assess peer nominated attractiveness.

Attractiveness

Self-reported attractiveness was measured by having students respond on a 7-point Likert scale (a= Very untrue of me to g= Very true of me) the question, “I am good looking and attractive”. Peer nominated attractiveness was measured by the number of nominations received for the question, “Who is good looking or attractive?” (Knack et al., 2012; Vaillancourt & Hymel, 2006). In order to allow for comparisons across different class sizes, peer nominations were standardized across each grade in each school.

Peer Victimization Overall

Self-reported victimization was measured by having students answer the question “In the past few months how often have the following things have been done to you by someone who was less, equally or more popular or strong than you?”. Self-reported victimization was measured by creating a composite of items assessing victimization by those less powerful peers and victimization by equal or more powerful peers. The items following this statement assessed direct victimization ($\alpha = .93$; e.g., ‘Damaged or broke my things on purpose’) and used 12 items to measure direct victimization. Nine items were used to measure indirect victimization ($\alpha = .93$; e.g., ‘Spread negative rumours or gossip about me’). All questions were answered using a 5-point Likert scale (1= Never to 5= Very Often).

Peer nominated victimization was measured by having students nominate those who fit with the question “Thinking of the following actions...: Who is someone who is more, equally or

less popular or strong than you, who has done these things to you”. Peer nominated victimization was measured by creating a composite of items assessing victimization by those less powerful peers and victimization by equal or more powerful peers. Four were used to measure direct victimization which assessed actions such as hitting, kicking and threatening ($\alpha = .54$). Two items were used to measure indirect victimization which assessed actions such as spreading negative rumours and leaving someone out of a group ($\alpha = .40$). Peer nominations were standardized across each grade in each school.

Personality

This is a 47-item, self-report measure of the six major dimensions of personality adapted from the original 60-item HEXACO Personality Inventory (Ashton & Lee, 2009; Kibeom Lee & Ashton, 2004): Honesty-Humility (8 items, $\alpha = .70$; e.g., ‘I wouldn’t cheat a person, even if they were easy to trick or fool.’), Emotionality (8 items, $\alpha = .70$; e.g., ‘I feel strong emotions when someone close to me is going away for a long time.’), Extraversion (8 items, $\alpha = .67$; e.g., ‘In social situations, I’m usually the one who makes the first move.’), Agreeableness (8 items, $\alpha = .67$; e.g., ‘My attitude toward people who have treated me badly is “forgive and forget”.’), Conscientiousness (7 items, $\alpha = .55$; e.g., ‘People often call me a perfectionist (someone who needs everything to be perfect).’) and Openness (8 items, $\alpha = .59$; e.g., ‘I would enjoy creating a craft, singing a song, or painting a painting.’). Participants are asked to rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated higher levels of each personality dimension.

Plan of Analysis

To test the hypotheses for this study, MPlus version 8 (Muthén & Muthén, 2017) was used. Direct and indirect effect significance was determined by the confidence intervals that did

not cross over zero (Shrout & Bolger, 2002). The nonnormal distribution of the victimization variables was winsorized to correct for normality (view Preliminary Analyses for more information) and direct effects were estimated using the robust maximum likelihood (MLR). Maximum likelihood (ML) estimation with boot-strapped confidence intervals using 10,000 samples (95% bias corrected) was used to test for indirect effects. Models included all HEXACO personality dimensions to determine if they could indirectly predict self-reported and peer nominated direct and indirect perpetration and victimization through the pathway of self-reported and peer nominated attractiveness. In each model 2 sets of analyses were performed to explore direct and indirect effects. 44 direct paths and 48 indirect paths were conducted in each model. To my knowledge an analysis such as this has never been performed therefore a fully saturated model was conducted and fit indices were non informative (Howard, 2013).

Primary Path Analyses: Self-Report.

Firstly, all HEXACO personality dimensions were regressed onto the two measures of attractiveness (self-reported and peer nominated) as well as the two measures of self-reported victimization (direct and indirect). Furthermore, the two measures of attractiveness (self-reported and peer nominated) were regressed onto the two measures of self-reported victimization (direct and indirect). Such analyses lead to a total of 28 direct paths analyses. Secondly, mediation analyses were performed on each HEXACO personality dimension to each individual victimization behavior through the pathways of self-reported and peer nominated attractiveness, resulting in a total of 24 indirect path analyses.

Primary Path Analyses: Peer nomination.

The same process was conducted as in the Primary Path Analyses- Self-report section, however peer nominated victimization replaced self-reported victimization.

Multigroup Path Analyses.

In addition to the fully saturated path analyses, a constrained path analysis was conducted to test the hypothesis of how gender will affect the direct paths listed in the Primary Path Analyses- Self-report section. Gender differences were tested in each path, grouped by boy or girl. The multigroup approach compares two models. Model 1 allows all parameters to covary across all groups (boy; girl). Whereas Model 2 restricts parameter covariances equally across groups. Model 1 is then compared to Model 2 (Vandenberg & Lance, 2000). Gender differences are not present if Model 2's chi-square difference test indicates that its fit is significantly worse than Model 1's. If this is the case, Model 1 is retained. Gender differences are present and further tests are required if Model 2's chi-square difference test indicates that its fit is significantly better than Model 1's. Further tests take each parameter (correlations, means, regressions paths and variances) are equally constrain and are then compared in a series of nested models which are less constrained (Vandenberg & Lance, 2000). Models with greater and lesser constraints are compared; if a model with greater constraints is worse fitting there are gender differences, and the constraint is released. Whereas if a model with greater constraints is better fitting, there are no gender differences, and the constraint is retained. This process is carried out until all constraints have been tested and produces a selectively constrained model that allows for the identification of significant gender differences. The final model is then assessed using the standardized root-mean-square residual (SRMR) (with $CFI \geq .95$, $RMSEA/SRMR \leq .05$ indicating good fit; (Hu & Bentler, 1999) and the comparative fit index (CFI), the root-mean-square-error of approximation (RMSEA).

Results

Preliminary Analyses

Descriptive statistics of the independent, covariate, and dependent variables are presented in Table 1. Preliminary analyses were conducted using SPSS 26 software. Assumptions of normality were assessed through an examination of skewness and kurtosis. Consistent with the literature (Pellegrini & Long, 2002; Volk et al., 2017), self-reported and peer nominated direct and indirect perpetration and victimization were positively skewed and leptokurtic. It was determined using histograms that such variables were positively skewed due to extreme outliers. Variables were Winsorized to 3 standard deviations from the mean in order to preserve rank-order, but minimize impact (Tabachnick & Fidell, 2012) and resulted in relatively normal distributions (Field, 2013). It is suggested that the assumption of multicollinearity was met as predictors were not highly correlated with one another. Correlations are present in Table 2. Standardized residuals were plotted for all variables and revealed that the assumptions of

Table 1

Descriptive statistics for independent, covariate, and dependent variables

| Variable | M | SD | Range |
|--|-------|------|----------|
| Age | 11.82 | 1.19 | 10 - 14 |
| Sex | .53 | .50 | 0 - 1 |
| Honesty/Humility | 3.56 | .73 | 1.14 - 5 |
| Emotionality | 3.38 | .72 | 1 - 5 |
| eXtraversion | 3.27 | .65 | 1 - 5 |
| Agreeableness | 3.41 | .69 | 1 - 5 |
| Conscientiousness | 3.31 | .58 | 1.57 - 5 |
| Openness | 3.27 | .65 | 1.43 - 5 |
| Self-reported attractiveness | 4.41 | 1.73 | 0 - 7 |
| Peer nominated attractiveness | 4 | 3.55 | 0 - 19 |
| Self-reported Direct victimization | 1.54 | .69 | 1 - 5 |
| Self-reported Indirect victimization | 1.65 | .82 | 1 - 5 |
| Peer nomination Direct victimization | 3.01 | 2.50 | 0 - 11 |
| Peer nomination Indirect victimization | 1.87 | 1.57 | 0 - 8 |

homoscedasticity and linearity were met. Lastly, the variance inflation factor (VIF) for all predictors were less than 10 (Menard, 2010; Steinhurst & Myers, 1988) and their tolerance values were over .02.

Descriptive Statistics and Bivariate Correlations

Attractiveness

Participants reported a mean score of 4.41 ($SD = 1.73$) on the 7-point self-reported attractiveness scale, falling between “neither true nor untrue of me” and “somewhat true of me” with higher score indicating feeling more attractive. To compare rates of peer nominated attractiveness, raw nomination scores were transformed into proportional scores (Appendix H). Proportional scores are obtained by dividing the observed score for each participant by the number of nominators in the network, with the resulting quotient representing a proportion of the possible maximum (Velásquez et al., 2013). The mean number of nominations received was 4 ($Mdn = 3, SD=3.55$).

Victimization

In total, 34.8% ($N = 528$) reported engaging in self-reported direct victimization sometimes or more, 48.6% ($N = 523$) reported engaging in self-repot indirect victimization sometimes or more. To compare rates of peer nominated victimization, raw nomination scores were transformed into proportional scores (Appendix H). Proportional scores are obtained by dividing the observed score for each participant by the number of nominators in the network, with the resulting quotient representing a proportion of the possible maximum (Velásquez et al., 2013). In total, 83.8% ($N = 425$) of participants were nominated at least once as being a victim of direct victimization, 80.5% ($N = 425$) of participants were nominated at least once as being a

victim of indirect victimization. Overall, the statistics illustrate that victimization is highly prevalent in the lives of the students in this sample.

Personality

Personality was measured on 6 dimensions: Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness and Openness (Ashton & Lee, 2009; Kibeom Lee & Ashton, 2004). Participant scores were normally distributed with 3 being the most common score across all dimensions. A range from 3-3.99 was reported in 40.2% of Honesty-Humility scores, 51% of Emotionality scores, 50.6% of Extraversion scores, 50.4% of Agreeableness scores, 56.9% of Conscientiousness scores and 53.1% of Openness scores.

Correlations

Correlations between variables for both genders are shown in Table 2. Boys' correlations between variables are shown in Table 3, while girls' correlations between variables are shown in Table 4. Self-reported direct and indirect victimization were significantly positively correlated with one another. Self-reported direct victimization was significantly negatively correlated with Honesty-Humility, eXtraversion, Agreeableness, Conscientiousness and peer nominated attractiveness. Self-reported indirect victimization was significantly negatively correlated with eXtraversion and Agreeableness and significantly positively correlated with Emotionality. Peer nominated attractiveness was significantly negatively correlated with Openness and significantly positively correlated with Emotionality, eXtraversion, Conscientiousness. Lastly, self-reported attractiveness was significantly negatively correlated with Honesty-Humility and Emotionality and significantly positively correlated with eXtraversion and Conscientiousness. Peer nominated direct and indirect victimization were significantly positively correlated with one another. Peer nominated direct and indirect victimization were positively correlated with eXtraversion and

Table 2*Boys and Girls: Correlations between independent, covariate, and dependent variables*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-----------|--------|--------|--------|--------|--------|--------|-------|--------|--------|------|-------|-------|-------|----|
| 1 Age | 1 | | | | | | | | | | | | | |
| 2 Sex | -.04 | 1 | | | | | | | | | | | | |
| 3 H | -.16** | .21** | 1 | | | | | | | | | | | |
| 4 E | -.07 | .51** | .10* | 1 | | | | | | | | | | |
| 5 X | -.08 | -.15** | -.08 | -.07 | 1 | | | | | | | | | |
| 6 A | -.17** | .06 | .40** | .07 | .16** | 1 | | | | | | | | |
| 7 C | .04 | .12** | .13** | .12** | .22** | .26** | 1 | | | | | | | |
| 8 O | -.09* | .18** | .17** | .27** | .13** | .27** | .25** | 1 | | | | | | |
| 9 PNA | .02 | .24** | -.05 | .11* | .22** | .01 | .17** | -.10** | 1 | | | | | |
| 10 SRA | -.01 | .09* | -.18** | -.10* | .47** | .04 | .27** | .02 | .23** | 1 | | | | |
| 11 SRDVic | -.10* | -.23** | -.16** | -.002 | -.20** | -.17** | -.11* | -.02 | -.12* | -.03 | 1 | | | |
| 12 SRIVic | -.09 | -.01 | -.08 | .12** | -.27** | -.16** | -.06 | -.02 | -.09 | -.04 | .67** | 1 | | |
| 13 PNDVic | .02 | -.18** | -.02 | -.15** | .10* | -.03 | -.08 | -.01 | -.21** | .09 | .17** | .11* | 1 | |
| 14 PNIVic | .02 | -.11* | -.03 | -.11* | .06 | -.04 | -.03 | .03 | -.16* | .05 | .16** | .16** | .92** | 1 |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness, SRDVic = Self-reported Direct victimization, SRIVic = Self-reported Indirect victimization, PNDVic = Peer nominated Direct victimization, PNIVic = Peer nominated Indirect victimization, Sex was coded as 0 = boy, 1 = girl.

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Table 3*Boys: Correlations between independent, covariate, and dependent variables*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|-----------|--------|--------|-------|---------|-------|-------|-------|-------|-------|-------|------|-------|----|
| 1 Age | 1 | | | | | | | | | | | | |
| 2 H | -.14* | 1 | | | | | | | | | | | |
| 3 E | -.12 | .01 | 1 | | | | | | | | | | |
| 4 X | .02 | -.15* | -.03 | 1 | | | | | | | | | |
| 5 A | -.12 | .41** | .03 | -.01 | 1 | | | | | | | | |
| 6 C | -.03 | .10 | .07 | .21** | .17* | 1 | | | | | | | |
| 7 O | -.02 | .25* | .22** | -.001** | .25** | .19** | 1 | | | | | | |
| 8 PNA | -.15 | -.11 | -.17* | .34** | .01 | .19* | -.17* | 1 | | | | | |
| 9 SRA | .03 | -.30** | -.11 | .47** | -.06 | .17* | -.16* | .35** | 1 | | | | |
| 10 SRDVic | -.20** | -.10 | .10 | -.27** | -.14* | -.11 | .01 | -.11 | -.001 | 1 | | | |
| 11 SRIVic | -.17** | -.13* | -.13* | -.32** | -.12 | -.05 | -.02 | -.13 | -.05 | .75** | 1 | | |
| 12 PNDVic | .07 | .01 | -.08 | .11 | -.01 | -.09 | .01 | .12 | .09 | .19* | .18* | 1 | |
| 13 PNIVic | .05 | .07 | -.11 | .04 | .01 | -.08 | .05 | .05 | .05 | .13* | .13* | .16** | 1 |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness, SRDVic = Self-reported Direct victimization, SRIVic = Self-reported Indirect victimization, PNDVic = Peer nominated Direct victimization, PNIVic = Peer nominated Indirect victimization.

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

Table 4

Girls: Correlations between independent, covariate, and dependent variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|-----------|--------|--------|--------|--------|--------|-------|-------|--------|------|-------|------|-------|----|
| 1 Age | 1 | | | | | | | | | | | | |
| 2 H | -.16** | 1 | | | | | | | | | | | |
| 3 E | .03 | -.01 | 1 | | | | | | | | | | |
| 4 X | -.16** | .05 | .03 | 1 | | | | | | | | | |
| 5 A | -.19** | .40** | .05 | .29** | 1 | | | | | | | | |
| 6 C | .12 | .12 | .06 | .27** | .30** | 1 | | | | | | | |
| 7 O | -.13* | .03 | .20** | .29** | .29** | .26** | 1 | | | | | | |
| 8 PNA | .16* | -.09 | .11 | .21** | -.04 | .11 | -.14* | 1 | | | | | |
| 9 SRA | -.05 | -.04 | -.01 | .47** | .12 | .37** | .21** | .18** | 1 | | | | |
| 10 SRDVic | -.04 | -.17** | -.17** | -.20** | -.18** | -.07 | -.01 | .03 | -.11 | 1 | | | |
| 11 SRIVic | -.02 | -.06 | .13* | -.23** | -.21** | -.09 | -.06 | -.04 | -.04 | .59** | 1 | | |
| 12 PNDVic | -.04 | .04 | -.03 | .05 | -.04 | -.02 | .08 | -.23** | .06 | .15* | .18* | 1 | |
| 13 PNIVic | -.001 | .04 | -.01 | .04 | -.08 | .05 | .07 | -.16* | .04 | .19** | .17* | .91** | 1 |

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Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA =

Peer nominated attractiveness, SRA = Self-reported attractiveness, SRDVic = Self-reported Direct victimization, SRIVic = Self-reported Indirect victimization, PNDVic = Peer nominated Direct victimization, PNIVic = Peer nominated Indirect victimization.

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$

self-reported attractiveness. Peer nominated indirect victimization was positively correlated peer nominations of attractiveness. Peer nominated direct victimization was negatively correlated with Emotionality and Openness.

Primary Path Analyses

Attractiveness and Personality: Direct Effects

As predicted, there were several significant direct effects. As shown in Table 5, peer nominated attractiveness was negatively associated with Openness while self-reported attractiveness was negatively associated with Honesty-Humility. Both self-reported and peer nominated attractiveness were positively associated with eXtraversion, and Conscientiousness.

Self-reported Victimization: Direct Effects

As shown in Table 6, there were several significant direct effects. Self-reported attractiveness was positively associated with self-reported indirect victimization. Lower levels of Honesty-Humility, eXtraversion and Agreeableness were associated with higher levels of self-reported direct victimization, whereas lower levels of Emotionality were associated lower levels of self-reported direct victimization. Lower levels of eXtraversion and Agreeableness were associated with higher levels of self-reported indirect victimization, whereas lower levels of Emotionality were associated with lower levels of self-reported indirect victimization. Covariates were tested with each predictor variable. I found that as students age self-reported direct and indirect victimization decrease. Further, being a boy was associated with higher levels of self-reported direct victimization, as well as self-reported indirect victimization. Lastly, being a girl was positively associated with number of peer nominations of attractiveness.

Peer nomination Victimization: Direct Effects

Table 5*Primary Path Analyses Unstandardized and Standardized Direct and Total Effects: Personality and Attractiveness*

| Variable | Peer nominated attractiveness | | | | Self-reported attractiveness | | | |
|----------|-------------------------------|-----------|---------|---------------|------------------------------|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | .03 | .05 | .03 | [-.07, .13] | -.03 | .04 | -.02 | [-.10, .05] |
| Sex | .59 | .06 | .30*** | [.19, .41] | .08 | .04 | .02 | [-.07, .12] |
| H | -.08 | .05 | -.06 | [-.17, .05] | -.42 | .05 | -.18*** | [-.27, -.09] |
| E | .04 | .06 | .03 | [-.09, .14] | -.20 | .05 | -.08 | [-.18, .01] |
| X | .42 | .05 | .28*** | [.19, .38] | 1.08 | .04 | .41*** | [.33, .49] |
| A | .01 | .05 | .01 | [-.09, .10] | .01 | .05 | .01 | [-.09, .09] |
| C | .20 | .05 | .12* | [.02, .22] | .64 | .04 | .22*** | [.13, .30] |
| O | -.34 | .05 | -.22*** | [-.32, -.12] | -.06 | .05 | -.02 | [-.12, .07] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness,

O = Openness. Sex was coded as 0 = boy, 1 = girl.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6*Primary Path Analyses Unstandardized and Standardized Direct Effects: Self-reported Victimization*

| Variable | Self-reported Direct Victimization | | | | Self-reported Indirect Victimization | | | |
|----------|------------------------------------|-----------|---------|---------------|--------------------------------------|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> |
| Age | -.94 | .04 | -.16*** | [-.24, -.08] | -.73 | .04 | -.14*** | [-.22, -.06] |
| Sex | -4.47 | .05 | -.32*** | [-.42, -.22] | -1.34 | .05 | -.11*** | [-.20, -.01] |
| H | -1.04 | .04 | -.11* | [-.20, -.09] | -.55 | .05 | -.06 | [-.16, .04] |
| E | 1.32 | .05 | .14** | [.04, .23] | 1.39 | .05 | .16** | [.06, .25] |
| X | -3.03 | .05 | -.28*** | [-.38, -.18] | -3.10 | .05 | -.32*** | [-.43, -.22] |
| A | -1.22 | .04 | -.12** | [-.21, -.03] | -1.21 | .05 | -.13* | [-.23, -.04] |
| C | -.17 | .04 | -.01 | [-.10, .07] | .19 | .05 | .02 | [-.08, .12] |
| O | .78 | .05 | .07 | [-.03, .17] | .15 | .05 | .02 | [-.09, .12] |
| PNA | .03 | .05 | .00 | [-.10, .11] | -.26 | .05 | -.04 | [-.14, .06] |
| SRA | .29 | .05 | .07 | [-.03, .18] | .39 | .06 | .11* | [.005, .22] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness. Sex was coded as 0 = boy, 1 = girl.

* $p < .05$, ** $p < .01$, *** $p < .001$.

As shown in Table 7, results from the peer nomination model differed significantly from the self-reported victimization model. Higher levels of peer nominated direct victimization, and of peer nominated indirect victimization, were all associated with higher levels of peer nominated attractiveness. No associations were found between the HEXACO and peer nominated victimization.

Self-reported Victimization: Indirect effects

Results partially supported indirect effect predictions. There were several significant indirect effects from the HEXACO personality dimensions to self-reported victimization through the pathway of self-and peer reported attractiveness (see Fig. 2). Lower levels of Honesty-Humility had an indirect effect through higher levels of self-reported attractiveness on self-reported indirect victimization ($B = -.164, SE = .012, \beta = -.019, 95\% CI [-.048, -.01]$). Higher levels of Extraversion had an indirect effect through higher self-reported attractiveness on self-reported indirect victimization ($B = .425, SE = .024, \beta = .044, 95\% CI [.02, .091]$). Lastly, higher levels of Conscientiousness had an indirect effect through higher self-reported attractiveness on self-reported indirect victimization ($B = .252, SE = .013, \beta = .023, 95\% CI [.01, .05]$).

Peer nominated Victimization: Indirect effects

Similar to the direct effects, results from the peer nomination model differed from the self-reported victimization model. There were three significant indirect effects from the HEXACO personality dimensions to peer nominated victimization through the pathway of peer nominated attractiveness (see Fig. 3). Higher levels of eXtraversion were associated with lower levels of peer nominated direct victimization indirectly through higher levels of peer nominated attractiveness ($B = -.097, SE = .030, \beta = -.064, 95\% CI [-.12, -.01]$), whereas higher levels of Openness were associated with higher levels of peer nominated direct victimization indirectly

Table 7*Primary Path Analyses Unstandardized and Standardized Direct Effects: Peer nomination Victimization*

| Variable | Peer nomination Direct Victimization | | | | Peer nomination Indirect Victimization | | | |
|----------|--------------------------------------|-----------|---------|---------------|--|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> |
| Age | .03 | .06 | .03 | [-.07, .14] | .05 | .05 | .06 | [-.05, .17] |
| Sex | -.11 | .07 | -.06 | [-.20, .08] | .04 | .07 | .02 | [-.12, .16] |
| H | .06 | .05 | .04 | [-.06, .15] | .11 | .05 | .08 | [-.02, .18] |
| E | -.09 | .06 | -.06 | [-.17, .05] | -.14 | .06 | -.10 | [-.22, .02] |
| X | .20 | .07 | .13 | [-.01, .28] | .11 | .07 | -.07 | [-.07, .22] |
| A | -.08 | .06 | -.06 | [-.16, .05] | -.12 | .06 | -.08 | [-.19, .03] |
| C | -.11 | .06 | -.07 | [-.18, .05] | -.13 | .06 | -.08 | [-.20, .04] |
| O | .03 | .05 | .02 | [-.08, .12] | .07 | .05 | .05 | [-.05, .15] |
| PNA | -.24 | .09 | -.24** | [-.42, -.06] | -.19 | .09 | -.19* | [-.37, -.01] |
| SRA | .05 | .06 | .08 | [-.04, .21] | .06 | .06 | .10 | [.02, .22] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness. Sex was coded as 0 = boy, 1 = girl.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 2

Final path model showing significant indirect effects; Self-reported Victimization. All paths, disturbances, errors, and covariances were tested in the model; however, only significant indirect paths are indicated in diagram for ease of presentation.

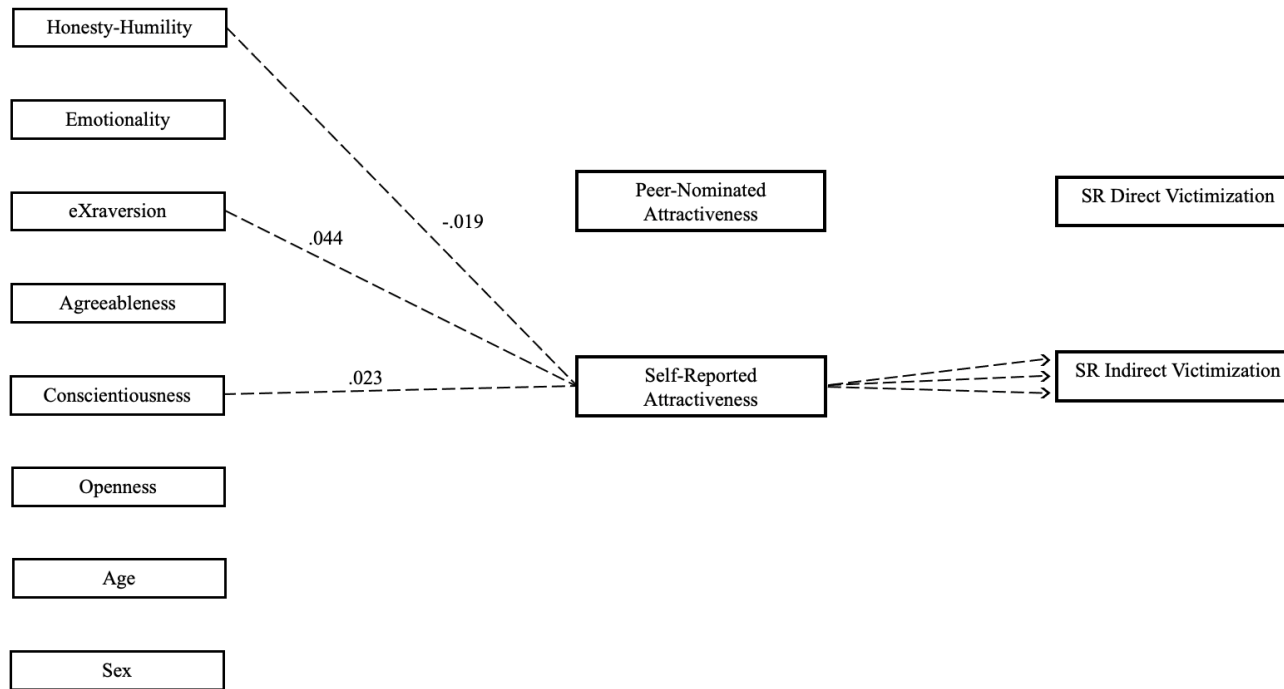
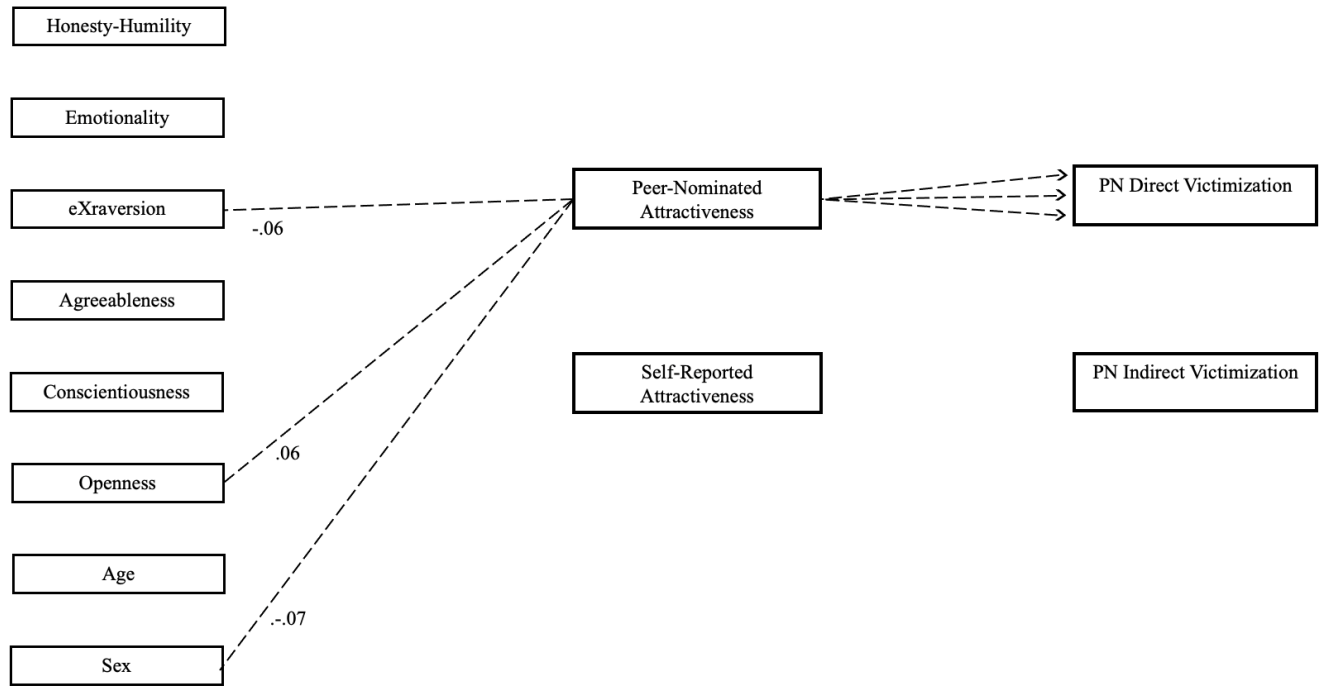


Figure 3

Final path model showing significant indirect effects; Peer nomination Victimization. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct and indirect paths are indicated in diagram for ease of presentation.



through lower levels of peer nominated attractiveness ($B = -.097, SE = .030, \beta = -.064, 95\% CI [-.12, -.01]$). Lastly, being a boy was found to be indirectly related to higher levels of peer nominated direct victimization through the pathway of lower peer nominated attractiveness ($B = -.146, SE = .035, \beta = -.074, 95\% CI [-.14, -.004]$).

Multigroup Path Analyses

Using self-report overall victimization, a fully saturated model (all paths allowed to vary across gender) was compared to a fully constrained model ($\Delta\chi^2 [\Delta df = 50] = 110.38, p < .001$). Results indicate gender differences as the chi-square difference test was significant. A series of models were examined. This process resulted in a final, partially constrained model that indicated good fit (CFI = 1.00, RMSEA = .00 [.00, .03], SRMR = .03). Using peer nominated overall victimization, a fully saturated model (all paths allowed to vary across gender) was compared to a fully constrained model ($\Delta\chi^2 [\Delta df = 50] = 87.67, p < .001$). Results indicate gender differences as the chi-square difference test was significant, however results were not meaningfully different across genders or from the self-report model. The multigroup path analysis for the peer nominated victimization model can be found in Appendices M, N, O and P.

Self-reported Victimization Direct Effects: Boys

As hypothesized, there were several significant direct effects for the boys of this sample (see Table 8, 9, 10, 11 and Fig. 4). Emotionality was negatively associated with number of attractiveness nominations. Openness was negatively associated with self-reported attractiveness whereas Conscientiousness was positively associated with self-reported attractiveness. eXtraversion and was negatively associated with self-reported direct victimization and self-reported attractiveness was positively associated with self-reported direct victimization. Honesty-

Table 8*Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Self-Report Attractiveness*

| Variable | Self-report attractiveness: Boys | | | | Self-reported attractiveness: Girls | | | |
|----------|-------------------------------------|-----------|---------|---------------|--|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | -.03 | .04 | -.02 | [-.10, .06] | -.03 | .04 | -.02 | [-.01, .06] |
| H | -.39 | .05 | -.17*** | [-.27, -.08] | -.39 | .04 | -.15*** | [-.23, -.07] |
| E | -.20 | .05 | -.08 | [-.17, .01] | -.20 | .04 | -.07 | [-.14, .01] |
| X | 1.06 | .04 | .40*** | [.30, .46] | 1.06 | .04 | .41*** | [.33, .50] |
| A | -.002 | .05 | -.001 | [-.09, .09] | -.002 | .05 | -.001 | [-.09, .08] |
| C | .35 | .06 | .12* | [.01, .24] | .82 | .06 | .27* | [.17, .38] |
| O | -.32 | .06 | -.12* | [-.24, -.01] | .14 | .06 | .05* | [-.06, .17] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 9*Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Peer Nominated Attractiveness*

| Variable | Peer nominated attractiveness: Boys | | | | Peer nominated attractiveness: Girls | | | |
|----------|--|-----------|---------|---------------|---|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | -0.15 | .07 | -.17* | [-.31, -.04] | .13 | .07 | .17* | [.05, .30] |
| H | -.08 | .05 | -.06 | [-.16, .04] | -.08 | .05 | -.06 | [-.16, .04] |
| E | -.21 | .07 | -.14* | [-.28, -.01] | .24 | .06 | .16* | [.03, .28] |
| X | .42 | .05 | .25*** | [.16, .34] | .42 | .06 | .31*** | [.21, .42] |
| A | .02 | .05 | .01 | [-.09, .11] | .02 | .06 | .01 | [-.01, .12] |
| C | .20 | .05 | .11* | [.02, .21] | .20 | .05 | .13* | [.02, .23] |
| O | -.32 | .05 | -.20*** | [-.29, -.11] | -.32 | .05 | -.23*** | [-.33, -.12] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10*Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Self-reported Direct Victimization*

| Variable | Self-reported Direct victimization: Boys | | | | Self-reported Direct victimization: Girls | | | |
|----------|---|-----------|---------|---------------|--|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> | <i>B</i> | <i>SE</i> | β | 95% <i>CI</i> |
| Age | -0.87 | .04 | -.13*** | [-.21, -.06] | -0.87 | .05 | -.18*** | [-.27, -.10] |
| H | -1.14 | 0.4 | -.11* | [-.19, -.03] | -1.14 | 0.5 | -.13* | [-.23, -.04] |
| E | 1.46 | .04 | .13** | [.05, .20] | 1.46 | .05 | .15*** | [.06, .24] |
| X | -4.48 | .06 | -.35*** | [-.47, -.23] | -1.69 | .07 | -.20** | [-.33, -.07] |
| A | -1.17 | .04 | -.12** | [-.19, -.02] | -1.17 | .05 | -.14* | [-.24, -.03] |
| C | -.05 | .04 | .004 | [-.07, .08] | .05 | .05 | .005 | [-.10, .11] |
| O | .50 | .04 | .04 | [-.04, .12] | .50 | .05 | .06 | [-.05, .16] |
| PNA | .11 | .05 | .01 | [-.08, .11] | .11 | .06 | .02 | [-.10, .13] |
| SRA | .57 | .06 | .12* | [.01, .23] | .08 | .06 | -.02 | [-.15, .10] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness, SR = Self-report. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 11*Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Self-reported Indirect Victimization*

| Variable | Self-reported Indirect victimization: Boys | | | | Self-reported Indirect victimization: Girls | | | |
|----------|---|-----------|---------|---------------|--|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | -0.69 | .04 | -.12** | [-.20, -.05] | -0.69 | .04 | -.14** | [-.22, -.05] |
| H | -1.28 | .05 | -.14** | [-.25, -.04] | -.12 | .06 | -.01 | [-.13, .10] |
| E | 1.41 | .04 | .14*** | [.06, .23] | 1.41 | .04 | .14*** | [.06, .22] |
| X | -4.16 | .06 | -.38*** | [-.50, -.26] | -2.29 | .06 | -.27*** | [-.40, -.14] |
| A | -1.18 | .05 | -.12* | [-.21, -.03] | -1.18 | .05 | -.14* | [-.23, -.04] |
| C | .37 | .04 | .03 | [-.05, .12] | .37 | .05 | .04 | [-.06, .13] |
| O | -.03 | .04 | -.003 | [-.09, .08] | -.34 | .05 | -.004 | [-.10, .09] |
| PNA | -.09 | .05 | -.01 | [-.12, .09] | -.09 | .05 | -.01 | [-.12, .09] |
| SRA | .28 | .05 | .07 | [-.02, .16] | .28 | .05 | .08 | [-.02, .19] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness, SR = Self-report. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4

Multigroup path model showing significant direct effects: Self-reported Victimization, Boys. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct paths are indicated in diagram for ease of presentation.
** $p < .05$, ** $p < .01$, *** $p < .001$.*

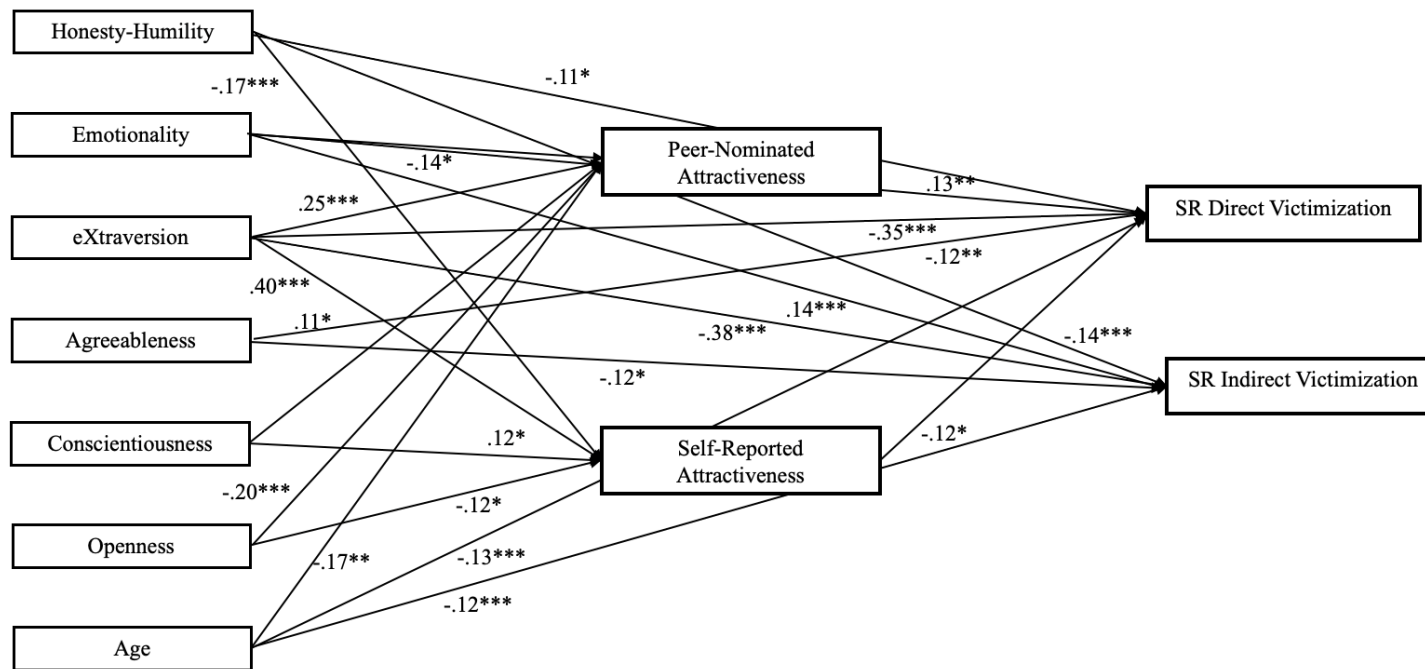
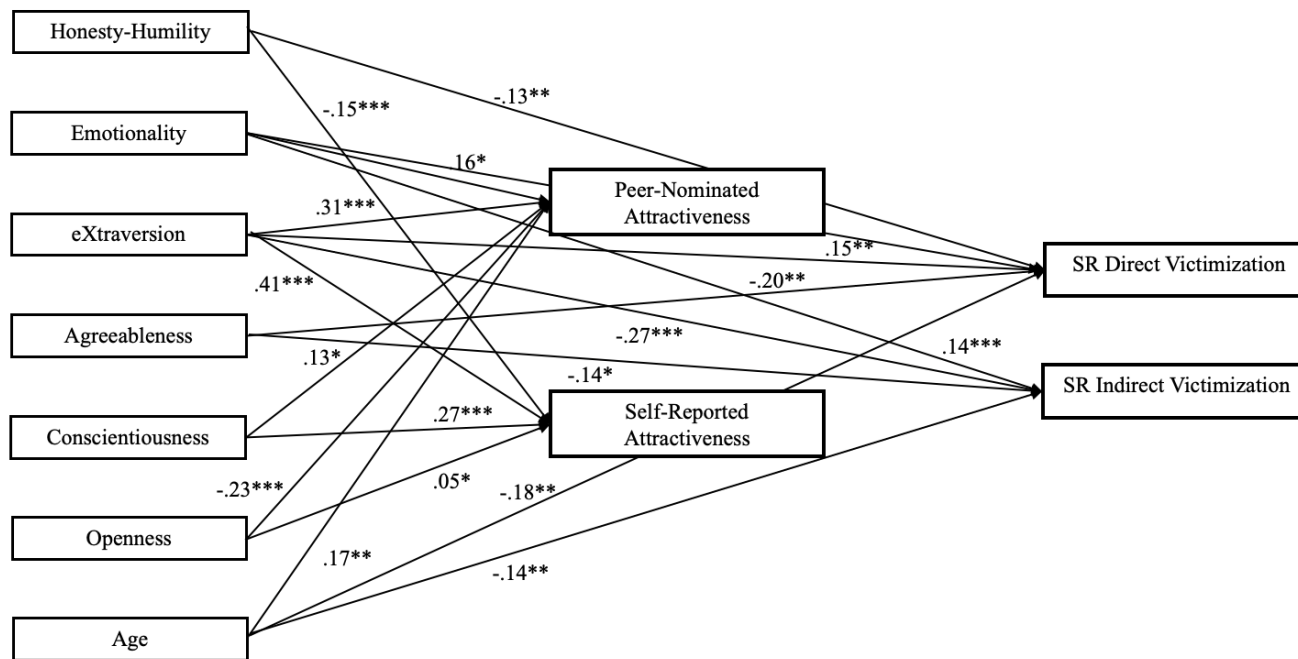


Figure 5

Multigroup path model showing significant direct effects: Self-reported Victimization, Girls. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct paths are indicated in diagram for ease of presentation.
p < .05, **p < .01, *p < .001.*



Humility and eXtraversion were negatively associated with self-reported indirect victimization. Age was negatively associated with peer nominations of attractiveness.

Self-reported Victimization Direct Effects: Girl

As hypothesized, there were several significant direct effects for the girls of this sample (see Table 8, 9, 10, 11 and Fig. 5). Higher Emotionality was positively associated with number of peer nominations of attractiveness. Conscientiousness was positively associated with self-reported attractiveness. eXtraversion was negatively associated with self-reported direct and indirect victimization. Age was positively associated with peer nominations of attractiveness.

Table 12,

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Predicted results.

| <i>Indirect associations</i> | | | | |
|-------------------------------|---|--|----|----|
| | Lower Honesty-Humility→ Higher SR→ Higher IV | Higher Emotionality→ High PN→ Higher IV | | |
| <i>Direct associations</i> | | | | |
| | SR | PN | DV | IV |
| Honesty-humility | - | | | |
| Emotionality | | + | + | + |
| | | + (girl) | | |
| | | - (boy) | | |
| eXtraversion | + | + | - | - |
| Agreeableness | | | - | - |
| Conscientiousness | - | | | |
| Self-report attractiveness | | | | + |
| Peer nominated attractiveness | | | - | + |
| Age | + | + | | |
| | - (girl) | | | |

Note. SR=Self-report attractiveness, PN=Peer nominated attractiveness, DV=Direct victimization, IV=Indirect victimization; Grey cells indicate that no significant relationship was hypothesized, green cells indicate supported findings, read cells indicate non-supported findings.

Discussion

My thesis aimed to investigate attractiveness's role in the relationship between personality and overall victimization and how such associations change depending on age and gender. To my knowledge, a study of this nature has yet to be performed; therefore, a fully saturated model was conducted, and many exploratory paths were analyzed. My results have generally replicated and expanded upon previous personality-victimization findings and have further progressed this area of literature by investigating the function of attractiveness in this relationship. My findings highlight that self-reported and peer nominated attractiveness scores are related to different personality profiles, that they affect self-reported and peer nominated victimization in distinctive and different ways and that they play a role in the relationship between personality and victimization.

Personality and Attractiveness: Direct effects

The relationship between the HEXACO Personality Inventory and self-reported and peer nominated attractiveness had yet to be explored prior to this study. Overall, results generally supported the predictions, however, there were some unexpected findings. First, the predicted relationship between Emotionality and peer nominated attractiveness was not supported by the findings of this study. Given the disparity between how genders express emotion and the differing cultural norm expectations for men and women (Buss, 2008; Cicone & Ruble, 1978; Rainville & Gallagher, 1990), these results will be discussed in greater depth in the multigroup model section that follows below.

Unexpectedly, Conscientiousness was positively associated with both self-reported and peer nominated attractiveness. I hypothesize that these positive relations may indicate that those with higher levels of Conscientiousness put more effort into their appearance, and those around

them are noticing that appearance. Those who are high in Conscientiousness tend to be appearance-oriented (Allen & Celestino, 2018), meaning they put a higher level of care and effort into their outfits and style. The present results suggest that being perfectionistic is associated not only with higher levels of self-perceptions of attractiveness but with peer ratings of attractiveness as well.

I did not make any predictions when considering the association between Openness and attractiveness. However, a negative association was found between Openness and peer nominated attractiveness. Those who are high in Openness tend to be less conforming. Although such expressions of high Openness may be considered cool and eccentric later in life when social norms are not as narrow, in childhood and adolescence, one of the key features of fitting in is conventionality (Asch, 2004; Eibl-Eibesfeldt, 1979; Salmivalli, 1998). Children and adolescents that stray outside of the norm may not be considered attractive by others and could in fact be subject to social ridicule and exclusion, being thus associated with a lower number of peer nominations.

Self-reported Victimization: Direct effects

Attractiveness and Victimization

Based on the self-reported and peer nominated attractiveness characteristics presented, I predicted that peer nominations of attractiveness would be associated with higher levels of self-report indirect victimization as characteristics of peer nominated attractiveness were associated with the evolutionary features of men and woman's attractiveness. My data did not support this prediction. Quite the opposite, as self-reported attractiveness was negatively associated with higher levels of self-report indirect victimization. These results are somewhat puzzling. As self-report attractiveness is associated with self-esteem and confidence (Leary & Baumeister, 2000),

it may be important to consider how these variables play a role in the evolutionary framework of attractiveness and victimization. In a study by Murphy and colleagues (2015), higher levels of confidence and self-esteem were found to be strong predictors of romantic attractiveness in both genders. Furthermore, such traits are found to be highly adaptive when pursuing a mate as they have the ability to drive away competitors and thus increase romantic success (Murphy et al., 2015). Based on Murphy and colleagues' findings, as well as my own data, self-report attractiveness may be a better measure of characteristics that make one a competitive sexual rival, thus leading to higher levels of indirect victimization. In other words, those with higher levels of self-reported attractiveness scores may have the ability to deter sexual competitors, allowing them the opportunity to select the best mates. Sexual competitors may recognize the advantage those with higher self-report attractiveness have and could wish to indirectly victimize them to decrease their overall mate value (Murphy et al., 2015).

Lastly, my prediction that a lower number of peer nominations of attractiveness would be associated with higher levels of direct victimization was not supported by my data. It is possible that lower numbers of peer nominations of attractiveness were not associated with higher levels of self-reported direct victimization as students who did not receive peer nominations of attractiveness are not unattractive but were not considered attractive enough to warrant a nomination, reflecting the limitations of a dichotomous nomination procedure. Therefore, 0 nominations may not exclusively symbolize unattractiveness but may include many children who were deemed to be only moderately above average in appearance.

Personality and Victimization

The personality-victimization relationship has been well established across much of the literature but as such results are not based on longitudinal data, bidirectional relationships are

possible. Generally, my findings replicated past studies. As the HEXACO was used on children and adolescents rather than adults, differences from the literature were expected. Surprisingly, a negative relationship was found between Honesty-Humility and self-reported direct victimization. Past research examining the association between the HEXACO and self-reported victimization has found no association between Honesty-Humility and self-reported victimization (e.g., Pronk et al., 2021). As previous research looking at self-reported victimization and the HEXACO had not categorized victimization into direct and indirect (Bollmer et al., 2006; Tani et al., 2003), it is conceivable that this relationship was previously overlooked. The association between lower levels of Honesty-Humility and higher levels of self-reported direct victimization could have gender implications. As boys are more likely to exhibit lower levels of Honesty-Humility (Kibeom Lee & Ashton, 2020), and are more likely to engage in direct bullying involvement overall (Lagerspetz et al., 1988), it stands to reason that such an association could be based on gender differences. This association will be further examined in the multigroup analysis.

Furthermore, many of my predictions were supported by the findings in this study. Higher levels of Emotionality were associated with higher levels of self-reported indirect victimization, whereas contrary to my prediction, lower Emotionality was associated with higher self-reported direct victimization. Such a finding could be explained by looking at the characteristics associated with low levels of Emotionality. Those low in Emotionality tend to have lower emotional reactivity (O'Connor et al., 2018). Those low in emotional reactivity are less capable of experiencing negative emotions (Spinrad et al., 2004), and low Emotionality is associated with greater tolerance for risk (Ashton & Lee, 2007); therefore, it is possible that these victims are involved in riskier direct conflicts rather than indirect conflict.

Consistent with my predictions, higher levels of eXtraversion and Agreeableness were associated with lower levels of self-reported direct and indirect victimization. Such findings highlight that outgoing and less reactive individuals are less likely to be targeted by their peers. In general, my findings demonstrate that prosocial self-reported HEXACO dimensions are associated with lower self-reported victimization, suggesting a potentially protective role for these dimensions. In addition to the HEXACO data, age and sex were found to be negatively associated with self-reported direct and indirect victimization, with younger boys experiencing more self-reported direct and indirect victimization. Such a relationship was not surprising as younger boys are at the highest risk of experiencing victimization (Volk et al., 2016).

Peer nomination Victimization: Direct effects

Attractiveness and Victimization

Peer nominated attractiveness was negatively associated with both direct and indirect peer nominated victimization. These data support my hypothesis that peer nominated attractiveness is an indicator of overall likeability (LaFontana & Cillessen, 2002). Students who are nominated as attractive may not be nominated exclusively for their good looks but also because they are nice and fair and a good friend. Students who possess such characteristics tend to be well-liked and in turn may be less likely to be victimized by their peers (Spriggs et al., 2007). In other words, if the class is viewing a student as possessing the characteristics that encompass peer nominated attractiveness, then those same characteristics may make them less likely to be peer nominated as a victim.

Furthermore, from an evolutionary perspective, it may be costly to victimize those who are well-liked (Dijkstra et al., 2008). Perpetrators can use bullying to increase their social status and flash their dominance (Buss, 1989; Hopcroft, 2006). However, if a student were to perpetrate

against a well-liked classmate, this may in fact lower their social status as others may turn their back on the perpetrator and side with the well-liked victim. Such a scenario would be socially costly for the perpetrator. Such findings paint an interesting and contrasting picture of how self-reported and peer nominated attractiveness differentially affect self-reported and peer nominated direct and indirect victimization.

Personality and Victimization

Contrary to the many personality-victimization findings found in the self-reported victimization model, no associations were found between personality and victimization in the peer nominated victimization model. This is a thought-provoking development as it emphasizes that when students see themselves as either high humility or highly extraverted, it affects how they view their direct and indirect victimization. For example, those who reported high levels of Honesty-Humility, self-reported lower levels of direct victimization. However, when analyzing peer nominated victimization, my results indicate that personality is not a significant predictor. This suggests that peer reports of victimization are not strongly related to self-perceptions of personality and that other variables must be driving peer nominated victimization. It could be that the social hierarchy of a peer group is a salient factor when identifying whom students victimize. For example, suppose a student is friends with a popular student or in their inner circle. People may be less likely to select them as a victim for fear of the popular student social power to retaliate. Whereas, if a student has few friends, then they may seem like an attractive target as they do not have a large number of friends to come to their defense. Further, perhaps peer reports of personality might be more appropriate, or it could be that different processes influence peer nominated victimization (e.g., social group dynamics) that are less dependent on individual personality differences.

Self-reported Victimization: Indirect effects

My indirect analyses revealed indirect relationships from Honesty-Humility, eXtraversion, and Conscientiousness to self-reported indirect victimization, through self-reported attractiveness. For all indirect effects, a positive relationship was found between self-reported attractiveness and self-reported indirect victimization. Based on my results, I hypothesized that self-reported attractiveness assesses not only levels of attractiveness (Greitemeyer, 2020), but also an individual's confidence and self-esteem (Buunk et al., 2002; Riggio et al., 2015). Such characteristics are strongly associated with attracting dating partners (Leenaars et al., 2008; Vaillancourt & Sharma, 2011), as well as indirect victimization (Lapierre & Dane, 2020; Leenaars et al., 2008). I therefore hypothesized that self-reported attractiveness is a better indicator of a competitive sexual rival, and indirect victimization is consequently used to devalue when competing for mates.

This association was found true across three dimensions of the HEXACO: Honesty-Humility, eXtraversion and Conscientiousness. Being low in Honesty-Humility, while high in eXtraversion and Conscientiousness present unique mating advantages. Those low in Honesty-Humility are characterized as being arrogant and grandiose (Ashton & Lee, 2007), higher levels of eXtraversion is related to sociability and liveliness (Ashton & Lee, 2007), while higher levels of Conscientiousness is positively related to an appearance orientation (Allen & Celestino, 2018). Such characteristics, in combination with higher levels of self-reported attractiveness, which encompasses confidence and self-esteem, result in a highly-skilled competitor for mates. In competitive environments, such as a classroom where the number of potential mates is limited (Duncan, 2004), possessing such advantages increases that chances of success in romantic relationships. However, possessing such characteristics that make for a skilled competitor could

come with higher levels of risk of indirect victimization (Lapierre & Dane, 2020; Leenaars et al., 2008), as other competitors may wish to lower the victim's mating value.

The indirect results of my self-report victimization model were limited to self-reported attractiveness mediating the indirect relationships between personality and self-reported indirect victimization. The indirect links between Honesty-Humility, eXtraversion and Conscientiousness through self-reported attractiveness to self-reported indirect victimization suggest that perceptions of attractiveness (perhaps more than peer nominations of attractiveness) are linked to self-reported indirect victimization. It seems that if students have these personality dimensions, it may lead to self-reported indirect victimization if they also endorse the notion that they are attractive. This would potentially make self-perceptions of attractiveness a viable target for bullying interventions by showing students prosocial strategies to gain the resources or relationships they desire (Ellis et al., 2015). Overall, such results indicate the importance of considering the individual differences that may affect bullying perpetration and victimization.

Peer nomination Victimization: Indirect effects

Three different indirect effects were found when utilizing peer nominated direct and indirect victimization. Whereas the self-reported model exclusively found positive associations between self-reported attractiveness and indirect victimization, the peer nomination model exclusively found negative associations between peer nominated attractiveness and direct victimization. As previously discussed, I hypothesize that peer nominated attractiveness measures likeability as well as attractiveness and such likeability will lend itself to less direct victimization as liked students tend to be less likely to be victimized (Spriggs et al., 2007). Higher levels of eXtraversion and lower levels of Openness were indirectly associated with lower levels of peer nominated direct victimization through the pathway of higher levels of peer

nominated attractiveness. Such personality dimensions reflect different kinds of social engagement. As noted above, Openness may be associated with conformity, so my data suggest the logical conclusion that outgoing individuals who conform with group norms may be less likely to be victimized.

Furthermore, an indirect effect based on gender was found in the peer nominated victimization model. Being a boy was associated with higher levels of peer nominated direct victimization indirectly through the pathway of lower numbers of peer nominated attractiveness. As discussed above, men's attractiveness is based quite heavily on the social and cognitive resources, as well as physical appearance (Buss, 1989), and studies have found that perpetration (which displays the perpetrators' resources and strength) may be used as in order to increase their attractiveness (Lee et al., 2017). Therefore, if boys are not being nominated as attractive, it is possible, they are seen as lacking in resources and physical appearance, thus leading them to be seen as an easy target for direct victimization, as someone may use them to increase their own attractiveness. I hypothesize that such a relationship is not present in girls as their attractiveness is based heavily on physical appearance and not resources (Buss & Schmitt, 1993). Thus, even if girls have lower numbers of peer nominations of attractiveness, they may use their resources to deter direct victimization.

Multigroup Path Analyses

Self-reported Victimization: Boys

To address the question regarding how such associations change depending on gender, a multigroup analysis was performed. For such analyses, it was predicted that there would be a negative association between Emotionality and peer nominated attractiveness as boys have been socialized to stifle their displays of emotions (Grills & Shields, 2004), and when they do display

higher levels of emotion, it is viewed as negative and unattractive by men and women (Cicone & Ruble, 1978; Rainville & Gallagher, 1990). My findings supported such predictions.

It was further predicted that as boys age, scores of self-reported attractiveness would increase, as within our 10-14-year-old sample, the older boys are beginning to reap the benefits of puberty such as broadening of shoulders, increased lean muscle mass, height and weight (Younger et al., 2012). Such physiological changes bring boys closer to the ideal figure that society has prescribed for men (Ackard et al., 2007; Heatherton & Baumeister, 1991), thus leading them to be perceived and feel more attractive. Such predictions were not supported by the findings in this study. Surprisingly, the association between age and peer nominations was found to be in the opposite direction than expected. Results indicate that as boys age, their number of peer nominations decrease. I expect that this is because as children age, it becomes less acceptable for boys to nominate other boys as attractive; therefore, being nominated predominantly by girls drops the overall number of nominations boys receive.

In addition to such predicted results, there were findings for boys that were unexpected. There was a significant positive association between Honesty-Humility and self-reported indirect victimization. In combination with such results found in the overall primary direct effects (higher levels of Honesty-Humility associated with lower levels of self-reported direct victimization), such results indicate that exclusively in boys, higher levels of Honesty-Humility are associated with lower levels of self-reported direct and indirect victimization. Such results could indicate that Honesty-Humility is more salient in boys in its effect to lower levels of self-reported victimization as humble boys could be less likely to engage in competition with other boys, leading to less self-reported victimization.

Furthermore, self-reported attractiveness was found to be negatively associated with self-reported direct victimization. Self-reported attractiveness is associated with confidence and self-esteem, which is, in turn, attractive to women and is romantically desirable (Murphy et al., 2015). Therefore, those with high scores of self-reported attractiveness may view themselves as good competitors for mates and are therefore possess attributes (e.g., confidence or actual traits) that help reduce direct victimized by others. Alternatively, it could be that lower levels of direct victimization make individuals feel more attractive and self-confident.

Lastly, I found that Openness was negatively associated with self-reported attractiveness. This could be due to boys having a stricter societal code they are expected to follow (Galambos et al., 1990; Massad, 1981). Due to such pressures, when boys violate societal norms they themselves may realize this and internalize the stereotypes they should be conforming to, thus lowering their perceptions of attractiveness (Asch, 2004; Rudman et al., 2012). Further, it is also possible that boys who think outside of the norm tend not to think about attractiveness as much or as confidently.

Self-reported Victimization: Girls

The multigroup girl analyses were predicted to yield highly contrasting results to the boys. I predicted that there would be a positive association between Emotionality and peer nominated attractiveness. My findings supported such prediction. I expect that this association is due to girls being socialized to display more emotionality than boys (Brody & Hall, 2008; Kring & Gordon, 1998; Zahn-Waxler, 2012), and such displays of emotionality are seen as attractive in girls and women (Vigil, 2009; Zebrowitz, 2004).

I further predicted that as girls age, scores of peer nominated attractiveness would increase as pubertal changes indicate reproductive capabilities (Singh & Young, 1995). My

results supported this hypothesis; increased age was positively associated with girls' number of peer nominations. I had further hypothesized that self-reported attractiveness would decrease as girls age as such physiological changes move girls further from the ideal thin womanly figure that society has prescribed, that the negative effects of weight gain are thought to be more salient than the positive effects of secondary sex characteristics development, and that adolescents' girls may look and feel more awkward and embarrassed during the early stages of puberty than during either childhood or the end of puberty, resulting in lower self-report attractiveness scores. (Ackard et al., 2007; Heatherton & Baumeister, 1991; Voelker et al., 2015). My results did not support this prediction. It is possible that being older was not associated with lower self-reported attractiveness as interventions to increase adolescent girls' self-esteem and self-efficacy are becoming more popular (e.g., Tirlea et al., 2013).

Results of this study beg the question: is attractiveness a valid concept? As is displayed through the many results of this study, attractiveness is a bewildering and highly subjective construct. The true variable of attractiveness may be concealed by layers upon layers of characteristics that could in fact change its outcome. However, when measuring such a variable it is imperative to consider that it may not be possible to assess attractiveness in a true form, as it may inevitably be shaped by the characteristics of which it is associated. Rating of attractiveness may change depending on the subject's personality, their behaviour, or their own self perceptions. Further, it is very possible that all above relationships are bidirectional further expanding the characteristics that may affect attractiveness' effects, and the affect attractiveness may have on various variables.

Implications

The findings of this study suggest several interesting theoretical and practical implications. Theoretically, this study has expanded upon past research to examine the association between not only the HEXACO Personality Inventory and overall victimization but self-reported and peer nominated direct and indirect victimization. Additionally, attractiveness was examined as a potential mediator for such relationships and its associations with personality and self-reported and peer nominated direct and indirect victimization. A potential pathway from personality through self-reported attractiveness to self-reported indirect victimization has been revealed that was not previously established in the literature. Further, links from gender, eXtraversion and Openness through peer nominated attractiveness to peer nominated direct victimization were found. Such links can potentially provide further detail to the relationship between personality and victimization. In addition, my results could inform the attractiveness-victimization relationship. Based on my results, I expect the association between attractiveness and self-reported indirect victimization to be centered on sexual competition, it is possible that indirect victimization is a more sophisticated branch of aggression, and it relates more to sexual competition than more direct forms of bullying involvement.

Practically, the results of this study could influence which students take part in victimization interventions. Previous interventions have broadly focused on those who are excluded or socially isolated or those with low self-confidence and self-esteem (Gaffney et al., 2019; Olweus, 1993). In doing so, these interventions are neglecting an entire category of students that are being victimized. This research could impact school intervention programs to highlight that there is more than one type of victim, and they are also in need of help. Results of this study could advance victim interventions to include not just those who are customarily regarded as victims but all students.

Secondly, this research makes a call for personality-specific bullying interventions. Most bullying interventions have only moderate success at reducing perpetration and victimization, and such success dwindles when students are surveyed over time (Gaffney et al., 2019). Therefore, schools may benefit from working with students' personality profiles rather than altering them or simply labeling them as maladjusted (Smokowski & Kopasz, 2005). For example, if students are provided with prosocial opportunities to gain the resources or relationships they desire, this may lower their overall use of antisocial tactics against individuals they view as threats or competitors (Ellis et al., 2015; Farrell & Dane, 2020).

Lastly, my findings highlight that continued research is needed to further investigate the relationships between victimization and individual characteristics. Such studies should aim to further inform teachers, students and policy makers alike to increase their knowledge and recognize that victimization is a highly complex behavior and multifaceted individual characteristics such as personality and attractiveness play a role in its development and execution.

Limitations

Measurement of Attractiveness

A limitation was presented in the measurement of attractiveness. The peer nomination and self-reported measures of attractiveness assessed attractiveness levels; however, they were not parallel in content or structure. For example, peer nominated attractiveness was assessed by having students nominate who in their network they thought was attractive or good-looking. Whereas self-report attractiveness was assessed by having students report on a scale of 1-7 how true or untrue they felt the statement "I am good looking and attractive" was. The differing nature of these measurements has the potential to influence my findings, leading them not to be

based solely on the data and analyses but be influenced by the divergent questioning styles. Although the measures of attractiveness are not parallel in nature, this study has nevertheless contributed to the sparse peer nomination and self-reported attractiveness literature. Research should be conducted using parallel measurement styles to further disentangle the differences between peer nomination and self-reported attractiveness.

HEXACO Alpha's

A further limitation of this study was the low Cronbach alphas for two dimensions of the HEXACO: Conscientiousness ($\alpha = .55$) and Openness ($\alpha = .59$). The alphas for all other dimensions of the personality inventory can be classified as ranging from reasonable to good (0.67–0.87) (Taber, 2018). A low alpha could indicate that our measures of Conscientiousness and Openness may be subject to unreliable internal consistency, which may suggest findings from these two dimensions to be inconclusive (Cronbach, 1951). Personality data was collected using a revised and condensed version of the 60-item HEXACO as at the time, a child and adolescent-specific HEXACO had not yet been created. From each dimension of the HEXACO, specific statements were removed as the measure was created for adults and has aspects that contain content too advanced for children's level of understanding (Sergi et al., 2020). Even after the removal of certain statements, participants in my sample did need further clarifications on some of the questions, suggesting that age 10 may be the lowest age range for self-reported personality scales. When I subdivided my sample into younger (grades 5 and 6) and older (grades 7 and 8) children and adolescents, on average, reliabilities were considerably better for older participants, suggesting that some of the younger participants may have had more difficulty with the instrument. Future research should replicate this study using the newly created HEXACO-Middle School Inventory (Sergi et al., 2020).

Intrasexual vs. General Aggression

A further limitation to my study would be that I did not analyze within-sex vs. between-sex victimization. The lack of such analyses hinders my ability to directly comment on the victimization as being intrasexual competition as opposed to more general aggression. Further, in order to draw conclusions relating to intrasexual competition I would further need to measure participants intentionality behind their perpetration. Future research should incorporate such variables and analyses in order to answer these questions.

Measurement of Victimization

A further limitation was the measurement of victimization. Victimization was collected through a general measure where the intent behind student's perpetration was not specified. The framework of this study suggests that all perpetration was carried out with the intent to reduce another's attractiveness or move up the social hierarchy. However, as intent was not specified in this study, it is probable that such data does encompass other perpetration utilities such as reactive or disorganized. Future research should aim to collect victimization data that can be specified to perpetration with the intent to reduce another's attractiveness or move up the social hierarchy.

Gender

Further limiting the results of this study was the measurement of gender. As data was collected in elementary school children from the ages of 10 to 14 there were limits put in place by the school board as well as Brock University Ethics that did not allow for an expansive look at gender across the spectrum. Students' only options when self-reporting their gender were "Boy", "Girl", "Other" and "Prefer not to say". Students were not given the opportunity to

identify as transgender, gender queer, gender fluid... etc. Putting such restrictions in place does limit this study's ability to extrapolate its results to different gender identities.

Cross-sectional Design

Finally, data was analyzed cross-sectionally, which prevented developmental, causal or directional conclusions from being drawn. Longitudinal research would allow for the investigation of how such relationships change over time as personality (Helson et al., 2002; Leung, 2019), others and self-perceived attractiveness (Ebner et al., 2018) and victimization (Volk et al., 2006) have been found to change across childhood and adolescence. Further, due to the nature of this design, I was unable to determine if personality and peer nominated and self-reported attractiveness are influencing perpetration and victimization, or vice versa. A longitudinal design needs to be conducted to determine which variables are predecessors or outcomes and how relationships change across development.

Future Directions

Findings relating to peer nominated and self-reported attractiveness present many opportunities for future studies. Future research should aim to further tease apart the association between self-perceived attractiveness, confidence and self-esteem. These variables are separate and distinct entities (Feingold, 1992) yet, are closely linked with one another across age and gender (Harter, 1993; Pliner et al., 1990). Distinguishing the causal and directional relationships between such variables is difficult to determine. Many of the studies investigating such associations are correlational and thus unable to draw causal conclusions (e.g., Leary & Baumeister, 2000). Of the limited number of studies that do state causal findings, there are conflicting results. A study by Brown and colleagues (2001) concluded that self-esteem drives perceptions of attractiveness, whereas a study by Bale & Archer (2013) determined that self-

perceived attractiveness determines self-esteem and confidence. Finding the causal relationships between attractiveness, confidence and self-esteem could have further implications for this study's findings and many others.

Beyond the scope of this thesis, future research could benefit from further exploring the discrepancies among self-reported and peer nominated victimization. The few studies that have directly compared self-reported and peer nominated victimization have reported generally low similarities in the two scores (e.g., Cole et al., 2006; Pellegrini & Bartini, 2000), calling into question the validity and accuracy of these measures. Research utilizing a more detailed set of analyses while incorporating further covariates such as school and classroom climate, attitudes towards aggressive behavior, and many more could help to further tease apart the limitations that come with measuring victimization.

Conclusion

This study aimed to look at the differences among self-reported and peer nominated measures in the indirect relationship between personality and attractiveness and overall victimization. I found that self-reported and peer nominated attractiveness have differing associations among HEXACO personality dimensions and self-reported and peer nominated victimization. Further, I found that self-reported attractiveness could mediate the relationship between personality and self-reported indirect victimization, while peer nominated attractiveness could mediate the relationship between personality and peer nominated direct victimization. These findings clearly illustrate the differences among self-reported and peer nominated measures of attractiveness and victimization, something the literature had yet to explore. Nevertheless, this study raises questions relating to how to assess and measure attractiveness and

victimization. Based on the conclusions drawn throughout this study, interventions could aim to target and include not just those who are customarily regarded as victims but all students.

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Appendices

Appendix A Parental Consent Form

Principal Investigator:

Dr. Anthony Volk, Professor

Department of Child and Youth Studies, Brock

U.

905-688-5550 xt. 5368

tvolk@brocku.ca

Your son/daughter will be invited to participate in a study that involves research into adolescent relationships. This research is funded by a research grant ranked as the top application by the federal government, and it has been designed with the input and support of the Niagara Catholic School Board to meet the needs of their students. The purpose of our study is to understand how children and adolescents can learn to use prosocial strategies, such as cooperation and leadership skills, instead of strategies like bullying, to achieve key social and personal goals.

Our previous research has shown that adolescents achieve benefits like popularity and social influence from both prosocial behaviour and coercive strategies like bullying. The current study is designed to better understand the individual and social factors that allow adolescents to see the greater benefits of being kind, cooperative and respectful with one another, rather than exploiting power to achieve short-term goals at the expense of healthy relationships. This research also supports understanding and identifying potential improvements to positive school climate.

WHAT'S INVOLVED

As a participant, your son/daughter will be asked to fill out questionnaires about themselves, their peers (e.g., friendships), school (e.g., classroom harmony), parents (e.g., levels of support), and basic demographic information (e.g., age). We use a broad range of measures because we think adolescent choices can be complicated, so we need to see the whole picture. For the same reason, we also ask the adolescents to rate their relationships with other people in their classes (e.g., Who is your friend? Who bullies you?). This peer data is incredibly valuable information as it allows us to paint a detailed picture of both individuals and the group dynamics in each classroom. Taken together, this information will help us to better understand how adolescents can be encouraged to choose cooperative and respectful behaviour over bullying, to achieve personal goals while maintaining health relationships. Participation will take approximately 60 minutes of their time as they answer questions on tablets we provide. We require both a one-time consent from the parent and along with assent prior to each of the two data collections from your son/daughter (who will see a similar form). We will visit each class twice this year. Though we will for ask for parental consent each year, we plan to follow up on these students for another 3 years after this year, by matching student names to confidential ID numbers as explained below. If consent is not granted in a given year, we will still have access to previous years' data unless you request we remove your adolescent from the study.

POTENTIAL BENEFITS AND RISKS

Possible benefits of participation include learning more about adolescent relationships, potentially earning prizes of up to \$200 in value, helping their class raise money, and helping to inform important anti-bullying research.-We do not believe that there are any risks associated with this research that are greater than any that your son/daughter would encounter in everyday experiences. If they find any part of this study to be stressful, they may contact the researcher, the Brock University Ethics board, or simply stop participating. We also tell your son/daughter that "[they] may also freely discuss the study with parents or friends if [they] need to, although we would ask that [they] try not to talk to someone before [they] complete the study on [their] own (e.g., don't share answers until both have completed the study). We do not ask any specific questions regarding specific incidents, so there are no issues of personal or legal liability for any of your son/daughter's answers.

This applies to both their answers as well as any answers their classmates provide about them. Those data will be completely confidential (see below).

We are offering a prize pool for each school based on the number of completed parental consent forms. Your child will be eligible for the draw for this prize pool (including things like gift cards, tablets, etc., worth a minimum of \$300 in total) if they return a signed consent form (regardless of whether you say yes or no). We are also offering \$5 for each returned consent form to build a fund that each classroom can spend as they see fit (e.g., spend on anti-bullying speaker or an appropriate class trip). This amount increases to \$10 per returned consent form if more than 85% of the parental consent forms are received. Again, positive consent is not required for any of these benefits, as we just want to ensure that you have had the chance to read these forms and are aware of the opportunity for your son/daughter to participate in our study.

CONFIDENTIALITY

Participants in this study will be identified only by a unique ID number that is tied to a master list kept by Dr. Volk. You, or they, may request the withdrawal of their data from the study within 5 years of their participation. Nothing that they report will be shared with peers or school staff. Furthermore, we will not publish any information about the study that will identify the responses of your son or daughter, or responses of children in their classroom.

As a parent, you will have to provide your consent in order for your son/daughter to participate in the study. Your consent will allow us to use their answers in our research, but it will not entitle you to have access to their survey responses. Although we encourage you to discuss the study and the issue of bullying with your children, it is very important for the participants in our study to know that their answers are completely confidential. We have found in the past that when adolescents have complete confidentiality, the vast majority are actually extremely honest about their positive and negative choices and behaviour. We also provide contact numbers for your adolescents to talk to professionals confidentially, if they have any concerns.

Data collected during this study will be stored on a secure computer. Data will be kept for five years after the completion of the study, after which time the data will be deleted or shredded. Access to this data will be restricted to Dr. Volk and his collaborators. Parents, friends, participants, and teachers will not have access to any individual data, although they may have access to the overall study results.

VOLUNTARY PARTICIPATION

Your adolescent's participation is voluntary. They need not participate, even if you give parental consent. There are no organizational or personal consequences for not participating. If they do not return a parental consent form (positive or negative), they will not be entered into the prize draw, nor will they contribute money toward the class fundraiser. If you wish to withdraw your child from the study, or they wish to quit, simply contact the researchers. Children who do not participate will read materials about peer relationships.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available by late Spring or Early Summer on Dr. Volk's research web page (<http://www.brocku.ca/vrbaby/research.html>) and through your school.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions or concerns about this study, please contact the study coordinator, Dr. Volk, using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University #BLANK. It has also been approved by the NCDSB Ethics Board, and, because we are collaborating with Dr. Wendy Craig, a national expert on bullying, by the Queen's University's Ethics Board. If you have any comments or concerns about the study ethics, or your adolescent's

rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

If you have any concerns about your adolescent participating as a bully, or being a victim of bullying, please feel free to discuss the matter with other parents, teachers, friends, and/or any trusted individuals. For advice on how to talk to your adolescent or other individuals about bullying, we recommend www.bullying.org, <http://www.lfcc.on.ca/bully.htm>, and the Niagara Youth Connection (905-641-2118 ext. 5592). You may also feel free to contact me, Dr. Anthony Volk, at tvolk@brocku.ca (905-688-5550 ext. 5368) with any related questions or concerns.

Thank you for your help in this project! Please keep this form for your records.

CONSENT FORM FOR PARENT/GUARDIAN

PLEASE CHECK ON OF THE LINES BELOW

I agree that my son/daughter may participate in this study. _____

I *DO NOT* agree that my son/daughter may participate in this study. _____

I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time and request that my son/daughter's data be removed from the study by contacting the researchers.

Name: _____

Signature: _____ Date: _____

Please return this form regardless of whether you have provided consent or not. A returned form allows your son/daughter to participate in the draw and classroom funding regardless of whether or not you give positive consent.

Appendix B
Adolescent Consent Form

Principal Investigator:
Dr. Anthony Volk, Professor
Department of Child and Youth Studies, Brock
U.
905-688-5550 xt. 5368
tvolk@brocku.ca

Your son/daughter will be invited to participate in a study that involves research into adolescent relationships. This research is funded by a research grant ranked as the top application by the federal government, and it has been designed with the input and support of the Niagara Catholic School Board to meet the needs of their students. The purpose of our study is to understand how children and adolescents can learn to use prosocial strategies, such as cooperation and leadership skills, instead of strategies like bullying, to achieve key social and personal goals.

Our previous research has shown that adolescents achieve benefits like popularity and social influence from both prosocial behaviour and coercive strategies like bullying. The current study is designed to better understand the individual and social factors that allow adolescents to see the greater benefits of being kind, cooperative and respectful with one another, rather than exploiting power to achieve short-term goals at the expense of healthy relationships. This research also supports understanding and identifying potential improvements to positive school climate.

WHAT'S INVOLVED

As a participant, your son/daughter will be asked to fill out questionnaires about themselves, their peers (e.g., friendships), school (e.g., classroom harmony), parents (e.g., levels of support), and basic demographic information (e.g., age). We use a broad range of measures because we think adolescent choices can be complicated, so we need to see the whole picture. For the same reason, we also ask the adolescents to rate their relationships with other people in their classes (e.g., Who is your friend? Who bullies you?). This peer data is incredibly valuable information as it allows us to paint a detailed picture of both individuals and the group dynamics in each classroom. Taken together, this information will help us to better understand how adolescents can be encouraged to choose cooperative and respectful behaviour over bullying, to achieve personal goals while maintaining health relationships. Participation will take approximately 60 minutes of their time as they answer questions on tablets we provide. We require both a one-time consent from the parent and along with assent prior to each of the two data collections from your son/daughter (who will see a similar form). We will visit each class twice this year. Though we will for ask for parental consent each year, we plan to follow up on these students for another 3 years after this year, by matching student names to confidential ID numbers as explained below. If consent is not granted in a given year, we will still have access to previous years' data unless you request we remove your adolescent from the study.

POTENTIAL BENEFITS AND RISKS

Possible benefits of participation include learning more about adolescent relationships, potentially earning prizes of up to \$200 in value, helping their class raise money, and helping to inform important anti-bullying research. We do not believe that there are any risks associated with this research that are greater than any that your son/daughter would encounter in everyday experiences. If they find any part of this study to be stressful, they may contact the researcher, the Brock University Ethics board, or simply stop participating. We also tell your son/daughter that "[they] may also freely discuss the study with parents or friends if [they] need to, although we would ask that [they] try not to talk to someone before [they] complete the study on [their] own (e.g., don't share answers until both have completed the study). We do not ask any specific questions regarding specific incidents, so there are no issues of personal or legal liability for any of your son/daughter's answers. This applies to both their answers as well as any answers their classmates provide about them. Those data will be completely confidential (see below).

We are offering a prize pool for each school based on the number of completed parental consent forms. Your child will be eligible for the draw for this prize pool (including things like gift cards, tablets, etc., worth a minimum of \$300 in total) if they return a signed consent form (regardless of whether you say yes or no). We are also offering \$5 for each returned consent form to build a fund that each classroom can spend as they see fit (e.g., spend on anti-bullying speaker or an appropriate class trip). This amount increases to \$10 per returned consent form if more than 85% of the parental consent forms are received. Again, positive consent is not required for any of these benefits, as we just want to ensure that you have had the chance to read these forms and are aware of the opportunity for your son/daughter to participate in our study.

CONFIDENTIALITY

Participants in this study will be identified only by a unique ID number that is tied to a master list kept by Dr. Volk. You, or they, may request the withdrawal of their data from the study within 5 years of their participation. Nothing that they report will be shared with peers or school staff. Furthermore, we will not publish any information about the study that will identify the responses of your son or daughter, or responses of children in their classroom.

As a parent, you will have to provide your consent in order for your son/daughter to participate in the study. Your consent will allow us to use their answers in our research, but it will not entitle you to have access to their survey responses. Although we encourage you to discuss the study and the issue of bullying with your children, it is very important for the participants in our study to know that their answers are completely confidential. We have found in the past that when adolescents have complete confidentiality, the vast majority are actually extremely honest about their positive and negative choices and behaviour. We also provide contact numbers for your adolescents to talk to professionals confidentially, if they have any concerns.

Data collected during this study will be stored on a secure computer. Data will be kept for five years after the completion of the study, after which time the data will be deleted or shredded. Access to this data will be restricted to Dr. Volk and his collaborators. Parents, friends, participants, and teachers will not have access to any individual data, although they may have access to the overall study results.

VOLUNTARY PARTICIPATION

Your adolescent's participation is voluntary. They need not participate, even if you give parental consent. There are no organizational or personal consequences for not participating. If they do not return a parental consent form (positive or negative), they will not be entered into the prize draw, nor will they contribute money toward the class fundraiser. If you wish to withdraw your child from the study, or they wish to quit, simply contact the researchers. Children who do not participate will read materials about peer relationships.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available by late Spring or Early Summer on Dr. Volk's research web page (<http://www.brocku.ca/vrbaby/research.html>) and through your school.

CONTACT INFORMATION AND ETHICS CLEARANCE

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If you have any concerns about your adolescent participating as a bully, or being a victim of bullying, please feel free to discuss the matter with other parents, teachers, friends, and/or any trusted individuals. For advice on how to talk to your adolescent or other individuals about bullying, we recommend www.bullying.org, <http://www.lfcc.on.ca/bully.htm>, and the Niagara Youth Connection (905-641-2118 ext. 5592). You may also feel free to contact me, Dr. Anthony Volk, at tvolk@brocku.ca (905-688-5550 ext. 5368) with any related questions or concerns.

Thank you for your help in this project! Please keep this form for your records.

CONSENT FORM FOR PARENT/GUARDIAN

PLEASE CHECK ON OF THE LINES BELOW

I agree that my son/daughter may participate in this study. _____

I *DO NOT* agree that my son/daughter may participate in this study. _____

I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time and request that my son/daughter's data be removed from the study by contacting the researchers.

Name: _____

Signature: _____ Date: _____

Please return this form regardless of whether you have provided consent or not. A returned form allows your son/daughter to participate in the draw and classroom funding regardless of whether or not you give positive consent.

Appendix C
HEXACO Personality Inventory

1. I would be quite bored by a visit to a nature museum.
2. I plan ahead and organize things, to avoid scrambling at the last minute.
3. I hold a grudge against people who have done me wrong.
4. I feel reasonably satisfied with myself overall.
5. I say extra nice things to people when I want something from them.
6. I'm interested in learning about how things work.
7. I often push myself very hard when trying to achieve a goal.
8. People sometimes tell me that I criticize others too much.
9. I sometimes can't help worrying about little things.
10. I would be willing to steal a hundred dollars if I knew that I could never get caught.
11. I would enjoy creating a craft, singing a song, or painting a painting.
12. When working on something, I don't pay much attention to small details.
13. People sometimes tell me that I'm too stubborn.
14. I prefer working with others instead of working alone.
15. I need someone to comfort me when I suffer from a painful experience.
16. Having a lot of money or things is not especially important to me.
17. I make decisions based on the feeling of the moment rather than on careful thought.
18. People think of me as someone who has a quick temper.
19. On most days, I feel cheerful and hopeful.
20. I feel sad myself when I see other people crying.
21. I think that I deserve more respect than most people my age.
22. My attitude toward people who have treated me badly is "forgive and forget".
23. I feel that I am an unpopular person.
24. When it comes to physical danger, I am very fearful.
25. I've never really enjoyed looking up things up on Wikipedia.
26. I do only the minimum amount of work needed to get by.
27. I tend to be forgiving of other people.
28. In social situations, I'm usually the one who makes the first move.
29. I worry a lot less than most people do. I wouldn't cheat a person, even if they were easy to trick or fool.
30. People have often told me that I have a good imagination.
31. The first thing that I always do in a new place is to make friends.
32. I would get a lot of pleasure from owning really expensive and cool stuff.
33. I like people who have different views than most people.
34. I make a lot of mistakes because I don't think before I act.
35. I feel strong emotions when someone close to me is going away for a long time.
36. I want people to know that I am an important or popular person.
37. I don't think of myself as the artistic or creative type.
38. People often call me a perfectionist (someone who needs everything to be perfect).
39. I rarely say anything negative about people, even when they make a lot of mistakes.
40. I sometimes feel that I am a worthless person.
41. Even in an emergency I wouldn't feel like panicking.
42. I find it boring to discuss new ideas.

43. When people tell me that I'm wrong, my first reaction is to argue with them.
44. When I'm in a group of people, I'm often the one who speaks for the group.
45. Even if most people get upset or sad about a movie, I don't.
46. I'd be tempted to steal candy from a store, if I were sure I could get away with it.

Appendix D
Dating questionnaire

Instructions: Dating is going out or spending time with girls (boys) you like, love, or have a crush on. Boys and girls can spend time together in many ways. Answer the questions below, to describe the types of ways you spend time together with girls (boys) after school and on weekends.

1. How often do you go to activities or events (e.g., parties, movies, sports events), after school or on weekends, with both boys and girls?

1. a) Never
2. b) Hardly Ever
3. c) Sometimes
4. d) Quite a Bit
5. e) Very Often

2. Do you have a girlfriend/boyfriend right now? a) Yes

b) No

3. How many girlfriends/boyfriends have you dated? _____

4. I am good-looking and attractive

1. a) Very untrue of me
2. b) Untrue of me
3. c) Somewhat untrue of me
4. d) Neither true nor untrue of me
5. e) Somewhat true of me
6. f) True of me
7. g) Very true of me

Appendix E
Peer-valued Characteristics

Instructions:

Check the boxes beside the names of students in your grade who fit the descriptions in each question. Choose as many students as you wish, as long as they match the description.

For example, if a question asks “who is really nice?”, check the boxes beside the names of the student in your grade who you think are really nice. The names of the students in your grade with permission to participate in the study are listed on the left-hand side.

Choose all that apply.

1. Who is good looking or attractive?
2. Who can make people laugh?
3. Who is tough?
4. Who does well at school-work?
5. Who is good at sports?

Appendix F
Bullying Involvement: Self-report

Integrated Measure of Bullying and Non-Bullying Aggression

Direct Aggression (Verbal and Physical)

1) In the PAST FEW MONTHS, how often have **YOU DONE** the following, against someone who was **LESS** popular or strong than you?

Response Scale: Never, Hardly Ever, Sometimes, Fairly Often, Very Often

1. a) Damaged or broken someone's things on purpose
2. b) Hit, kicked, or shoved someone
3. c) Used physical force against someone
4. d) Threatened someone in person
5. e) Made fun of someone in a hurtful way to their face
6. f) Put others down or said mean things to them in person

2) In the PAST FEW MONTHS, how often have **YOU DONE** the following, against someone who was **EQUALLY or MORE** popular or strong than you?

the PAST FEW MONTHS, how often have **YOU DONE** the following, against someone

Response Scale: Never, Hardly Ever, Sometimes, Fairly Often, Very Often

- a) Damaged or broken someone's things on purpose
- b) Hit, kicked, or shoved someone
- c) Used physical force against someone
- d) Threatened someone in person
- e) Made fun of someone in a hurtful way to their face
- f) Put others down or said mean things to them in person

Relational Aggression

3) In the PAST FEW MONTHS, how often have **YOU DONE** the following, against someone who was **LESS** popular or strong than you?

Response Scale: Never, Hardly Ever, Sometimes, Fairly Often, Very Often

- a) Spread negative rumours or gossip about someone while talking to others
- b) Kept someone out of my group of friends
- c) Ignored or stopped talking to someone
- d) Left someone out or excluded someone from a group activity

4) In the PAST FEW MONTHS, how often have **YOU DONE** the following, against someone who was **EQUALLY or MORE** popular or strong than you?

Response Scale: Never, Hardly Ever, Sometimes, Fairly Often, Very Often

- a) Spread negative rumours or gossip about someone while talking to others
- b) Kept someone out of my group of friends
- c) Ignored or stopped talking to someone
- d) Left someone out or excluded someone from a group activity

5) In the PAST FEW MONTHS, how often have you spread rumours about someone, or left someone out, **WHEN THEY WERE NOT SURE WHO HAD DONE IT TO THEM?**

1. a) Never
2. b) Hardly Ever
3. c) Sometimes
4. d) Fairly Often
5. e) Very Often

Appendix G
Bullying Involvement: Peer Nomination

Integrated Measure of Bullying and Non-Bullying Aggression (Peer nomination version)

Physical and Verbal Victimization

Thinking of the following actions: Hitting, kicking, shoving, using physical force, Threatening or saying mean things

1. Who is someone who is MORE popular or stronger than you, who has DONE THESE THINGS TO YOU?
2. Who is someone who is EQUALLY OR LESS popular or stronger than you, who has DONE THESE THINGS TO YOU?

Physical and Verbal Aggression

Thinking of the following actions: Hitting, kicking, shoving, using physical force, Threatening or saying mean things

3. Who is someone LESS popular or strong than you, who YOU HAVE DONE THESE THINGS TO?
4. Who is someone who is EQUALLY OR MORE popular or strong than you, who YOU HAVE DONE THESE THINGS TO?

Relational Victimization

Thinking of the following actions: Spreading negative rumours, leaving someone out of a group or activity

5. Who is someone who is EQUALLY OR MORE popular or strong than you, who has DONE THESE THINGS TO YOU?
6. Who is someone LESS popular or strong than you, who has DONE THESE THINGS TO YOU?

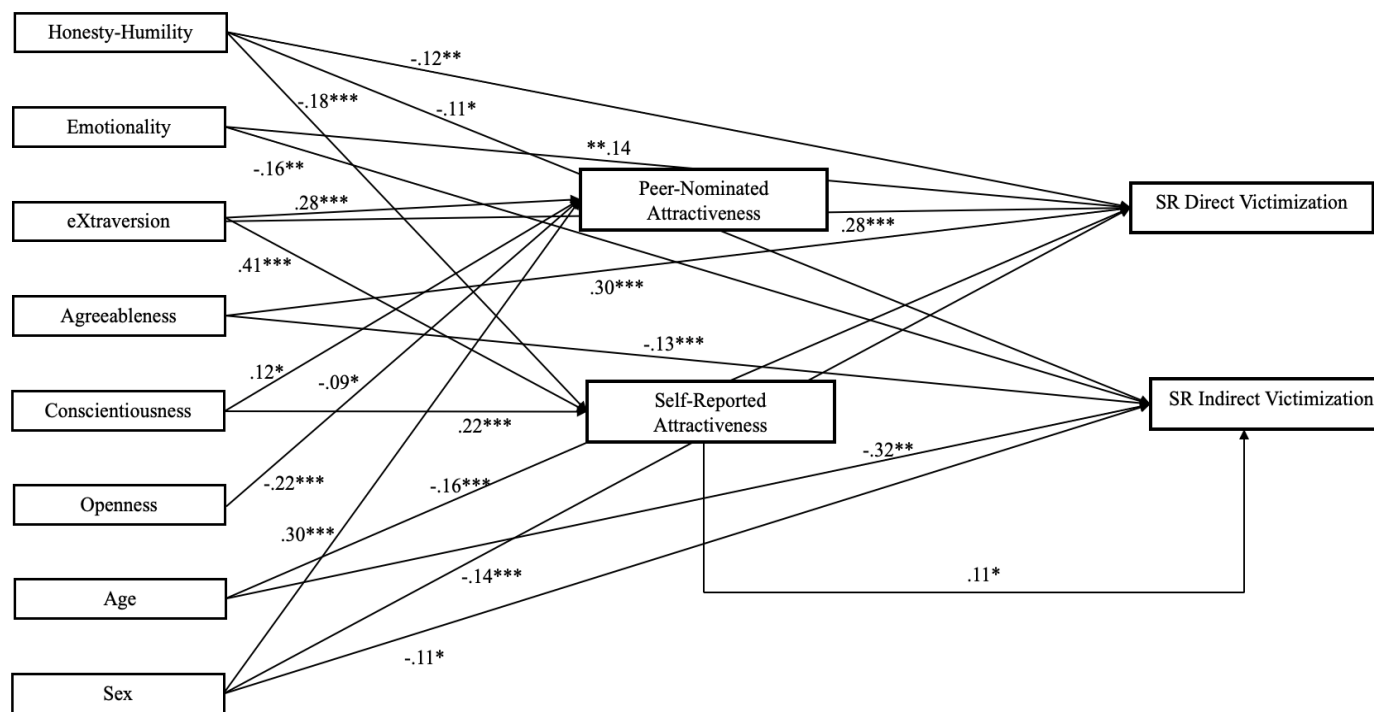
Appendix H

Descriptive statistics: Proportional Scores for Peer Nominated Variables

| Variable | M | SD | Range |
|--|------|-----|--------------|
| Peer nominated attractiveness | 0 | .98 | -2.42 – 2.96 |
| Peer nomination Direct victimization | .003 | .99 | -1.73 – 7.30 |
| Peer nomination Indirect victimization | .003 | .98 | -1.34 – 7.28 |

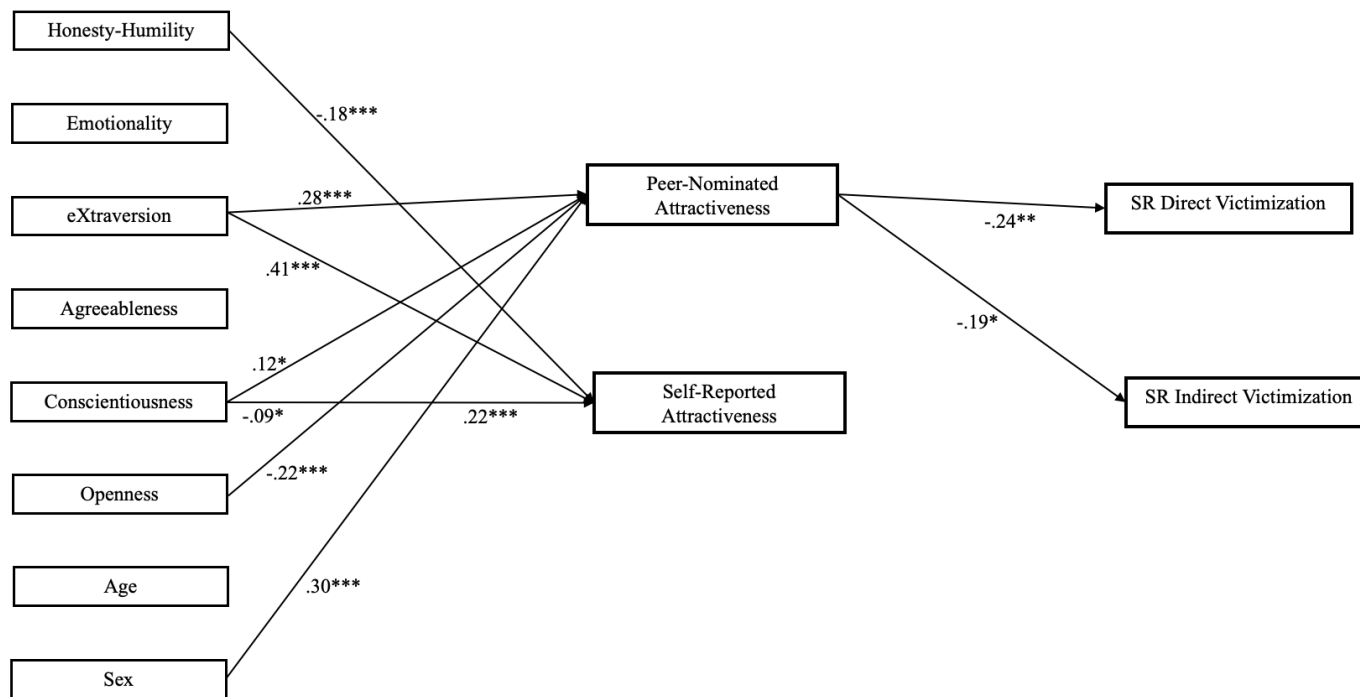
Appendices I

Final path model showing significant direct effects: Self-report Victimization. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct and indirect paths are indicated in diagram for ease of presentation. Standardized direct path coefficients are presented; See in text for confidence intervals. Gender coded as 0 = Boy, 1 = Girl.
 * $p < .05$, ** $p < .01$, *** $p < .001$.



Appendix J

Final path model showing significant direct effects: Peer Nominated Victimization. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct and indirect paths are indicated in diagram for ease of presentation. Standardized direct path coefficients are presented; See in text for confidence intervals. Gender coded as 0 = Boy, 1 = Girl.
 * $p < .05$, ** $p < .01$, *** $p < .001$.



Appendix K
*Indirect Effects of Attractiveness Subtypes from Personality Dimensions to Self-reported
Victimization*

| | B | SE | β | 95% CI |
|--|-------|------|---------|--------------|
| Effects from personality dimensions to direct victimization via peer-nominated attractiveness | | | | |
| Honesty-humility | -.002 | .004 | .000 | [-.01, .01] |
| Emotionality | .001 | .004 | .000 | [-.01, .01] |
| eXtraversion | .013 | .016 | .001 | [-.03, .03] |
| Agreeableness | .000 | .003 | .000 | [-.01, .01] |
| Conscientiousness | .006 | .007 | .001 | [-.01, .02] |
| Openness | -.010 | .013 | -.001 | [-.03, .02] |
| Effects from personality dimensions to indirect victimization via peer-nominated attractiveness | | | | |
| Honesty-humility | .021 | .005 | .002 | [-.01, .02] |
| Emotionality | -.010 | .004 | -.001 | [-.02, .01] |
| eXtraversion | -.112 | .015 | -.012 | [-.05, .02] |
| Agreeableness | -.003 | .003 | .000 | [-.01, .01] |
| Conscientiousness | -.053 | .007 | -.005 | [-.02, .01] |
| Effects from personality dimensions to direct victimization via self-reported attractiveness | | | | |
| Honesty-humility | -.119 | .010 | -.012 | [-.04, .01] |
| Emotionality | -.058 | .006 | -.006 | [-.03, .00] |
| eXtraversion | .307 | .022 | .029 | [-.02, 0.7] |
| Agreeableness | .004 | .004 | .000 | [-.01, .01] |
| Conscientiousness | .182 | .012 | .015 | [-.01, .04] |
| Openness | -.018 | .004 | -.002 | [-.02, .00] |
| Effects from personality dimensions to indirect victimization via self-reported attractiveness | | | | |
| Honesty-humility | -.164 | .012 | -.019* | [-.05, -.01] |
| Emotionality | -.080 | .008 | -.009 | [-.03, .00] |
| eXtraversion | .425 | .024 | .044* | [.02, .091] |
| Agreeableness | .005 | .006 | .001 | [-.01, .02] |
| Conscientiousness | .252 | .013 | .023* | [.01, .05] |
| Openness | -.025 | .006 | -.003 | [-.02, .01] |

Appendix L

*Indirect Effects of Attractiveness Subtypes from Personality Dimensions to Peer-nomination
Victimization*

| | B | SE | β | 95% CI |
|---|-------|------|---------|---------------|
| Effects from personality dimensions to direct victimization via peer-nominated attractiveness | | | | |
| Honesty-humility | .024 | .016 | .018 | [-.01, .05] |
| Emotionality | -.011 | .015 | -.008 | [-.04, .02] |
| eXtraversion | -.097 | .030 | -.064* | [-.12, -.01] |
| Agreeableness | -.003 | .013 | -.002 | [-.03, .02] |
| Conscientiousness | -.053 | .018 | -.032 | [-.07, .004] |
| Openness | .085 | .028 | .056* | [-.001, .11] |
| Age | -.004 | .013 | -.004 | [-.03, .02] |
| Sex | -.146 | .035 | -.074* | [-.14, -.004] |
| Effects from personality dimensions to indirect victimization via peer-nominated attractiveness | | | | |
| Honesty-humility | .019 | .014 | .014 | [-.01, .04] |
| Emotionality | -.009 | .013 | -.007 | [-.03, .02] |
| eXtraversion | -.078 | .029 | -.052 | [-.11, .01] |
| Agreeableness | -.002 | .011 | -.002 | [-.02, .02] |
| Conscientiousness | -.043 | .017 | -.025 | [-.06, .01] |
| Openness | .069 | .027 | .045 | [-.0, .10] |
| Age | -.003 | .011 | -.003 | [-.03, .02] |
| Sex | -.117 | .034 | -.059 | [-.13, .01] |
| Effects from personality dimensions to direct victimization via self-reported attractiveness | | | | |
| Honesty-humility | -.020 | .012 | -.015 | [-.04, .01] |
| Emotionality | -.009 | .007 | -.007 | [-.02, .01] |
| eXtraversion | .051 | .026 | .034 | [-.02, .09] |
| Agreeableness | .001 | .005 | .000 | [-.01, .01] |
| Conscientiousness | .031 | .015 | .018 | [-.01, .05] |
| Openness | -.003 | .005 | -.002 | [-.01, .01] |
| Age | -.002 | .004 | -.002 | [-.11, .01] |
| Sex | .004 | .006 | .002 | [-.01, .01] |

| Effects from personality dimensions to indirect victimization via self-reported attractiveness | | | | |
|--|-------|------|-------|-------------|
| Honesty-humility | -.024 | .012 | -.018 | [-.04, .01] |
| Emotionality | -.012 | .008 | -.008 | [-.02, .01] |
| eXtraversion | .063 | .026 | .042 | [-.01, .09] |
| Agreeableness | .001 | .006 | .000 | [-.01, .01] |
| Conscientiousness | .038 | .015 | .022 | [-.01, .05] |
| Openness | -.004 | .006 | -.002 | [-.01, .01] |
| Age | -.002 | .005 | -.002 | [-.01, .01] |
| Sex | .005 | .006 | .002 | [-.01, .02] |

Appendix M

Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Peer Nominated Direct Victimization

| Variable | Peer nominated Direct victimization: Boys | | | | Peer nominated Direct victimization: Girls | | | |
|----------|--|-----------|---------|---------------|---|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | .03 | .05 | .03 | [-.06, .12] | .03 | .06 | .04 | [-.07, .15] |
| H | .06 | 0.5 | .04 | [-.06, .15] | .06 | .06 | .05 | [-.07, .17] |
| E | -.07 | .05 | -.04 | [-.14, .06] | -.07 | .06 | -.04 | [-.15, .06] |
| X | .22 | .05 | .12* | [.01, .23] | .16 | .07 | .13 | [-.02, .27] |
| A | -.09 | .05 | -.06 | [-.16, .04] | -.09 | .06 | -.07 | [-.20, .05] |
| C | -.09 | .05 | -.05 | [-.14, .05] | -.09 | .06 | -.06 | [-.18, .07] |
| O | .02 | .05 | .01 | [-.09, .11] | .02 | .07 | .02 | [-.11, .15] |
| PNA | -.26 | .11 | -.24* | [-.45, -.03] | -.31 | .13 | -.33** | [-.58, -.08] |
| SRA | .05 | .05 | .08 | [-.03, .18] | .05 | .07 | .10 | [-.04, .24] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer-nominated attractiveness, SRA = Self-reported attractiveness, SR = Self-report. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix N

Multigroup Path Analysis Unstandardized and Standardized Direct Effects: Peer Nominated Indirect Victimization

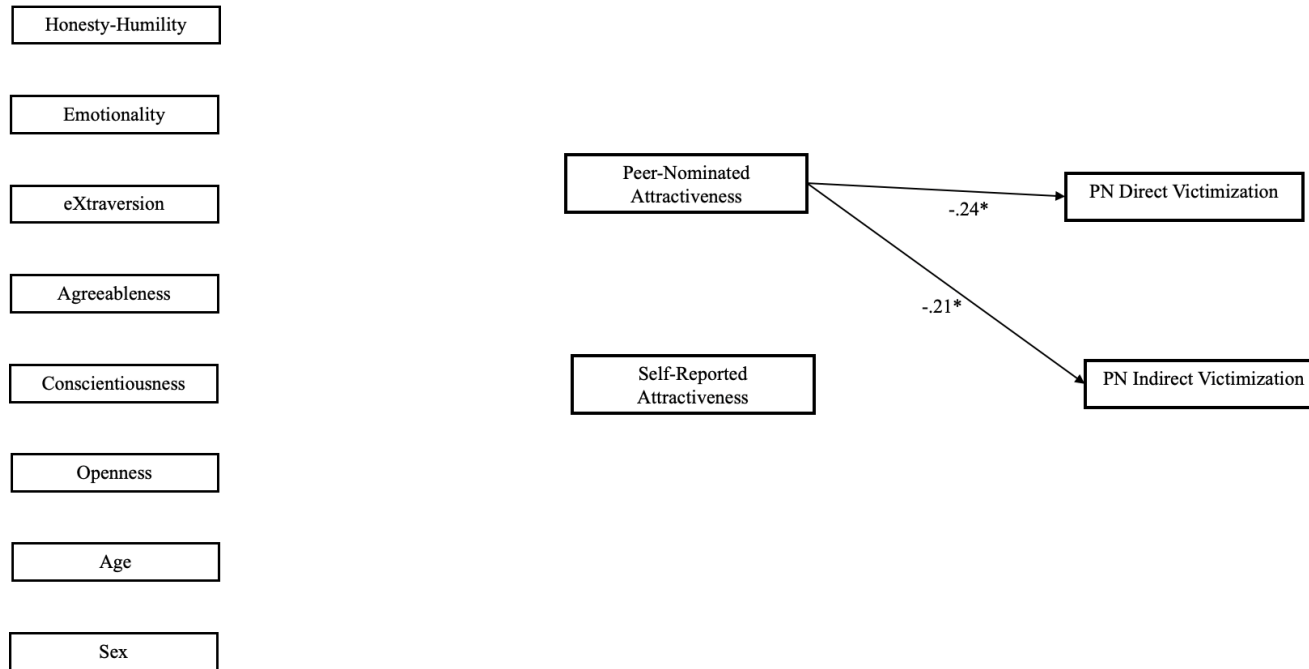
| Variable | Peer Nominated Indirect victimization: Boys | | | | Peer Nominated Indirect victimization: Girls | | | |
|----------|--|-----------|---------|---------------|---|-----------|---------|---------------|
| | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> | <i>B</i> | <i>SE</i> | β | <i>95% CI</i> |
| Age | .05 | .04 | .06 | [-.03, .15] | .05 | .04 | .07 | [-.04, .18] |
| H | .11 | .08 | .07 | [-.03, .18] | .11 | .08 | .08 | [-.04, .20] |
| E | -.13 | .09 | -.08 | [-.18, .02] | -.14 | .08 | -.08 | [-.19, .02] |
| X | .09 | .09 | .05 | [-.05, .15] | .09 | .09 | .07 | [-.08, .21] |
| A | -.14 | .09 | -.09 | [-.19, .01] | -.14 | .09 | -.11 | [-.23, .02] |
| C | -.11 | .10 | -.06 | [-.16, .14] | -.11 | .10 | -.07 | [-.19, .05] |
| O | .07 | .09 | .04 | [-.06, .14] | .07 | .09 | .05 | [-.08, .18] |
| PNA | -.23 | .11 | -.21* | [-.42, -.01] | -.23 | .11 | -.24 | [-.48, .002] |
| SRA | .06 | .04 | .09 | [-.01, .20] | .06 | .04 | .12 | [-.02, .26] |

Note: H = Honesty/humility, E = Emotionality, X = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness, PNA = Peer nominated attractiveness, SRA = Self-reported attractiveness, SR = Self-report. The blue cells highlight the differences found among boys' and girls' direct effects.

* $p < .05$, ** $p < .01$, *** $p < .001$

Appendix O

Multigroup path model showing significant direct effects: Peer nominated Victimization, Boys. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct paths are indicated in diagram for ease of presentation.
* $p < .05$, ** $p < .01$, *** $p < .001$.



Appendix P

Multigroup path model showing significant direct effects: Peer nominated Victimization, Girls. All paths, disturbances, errors, and covariances were tested in the model; however, only significant direct paths are indicated in diagram for ease of presentation.
* $p < .05$, ** $p < .01$, *** $p < .001$.

