A Meta-Analysis of the Relationship Between Narcissism and Aggression

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Full Text

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Abstract

This study employed meta-analytic techniques to examine the relationship between narcissism and aggression. Through systematic literature search and screening, 121 original studies were included, comprising 177 independent samples with a total of 73,687 participants. Meta-analytic results revealed a significant positive correlation between narcissism and aggression. This relationship was moderated by gender and the reporting method for narcissism, but not by

the reporting method for aggression or culture. Furthermore, different types of narcissism showed varying degrees of correlation with aggression: covert narcissism demonstrated a stronger relationship with aggression than overt narcissism, and maladaptive narcissism showed a stronger relationship with aggression than adaptive narcissism. Future research should enhance the accuracy of narcissism measurement and focus on exploring the relationship between different types of narcissism and different types of aggression.

Keywords: narcissism, aggression, meta-analysis
Classification Code: B848

1 Introduction

Aggression and violence are globally prevalent public health problems that inflict tremendous harm on individuals, families, and society. Traditional perspectives have identified low self-esteem as a crucial cause of aggression. However, researchers have proposed that aggression may stem from "threatened egoism" — an inflated, narcissistic self-view under threat—rather than low self-esteem itself (Barry et al., 2007; Baumeister et al., 1996). Numerous studies have demonstrated a positive correlation between narcissism and aggression (Rasmussen, 2016), though the strength of this relationship varies considerably across studies (Kim et al., 2008; Kokkinos et al., 2016; Tanrikulu & Erdur-Baker, 2019). Additionally, some research has found no correlation between narcissism and aggression (Ojanen et al., 2012). While Rasmussen (2016) conducted a meta-analysis on the relationship between narcissism and provoked aggression, that study did not include unprovoked aggression nor explore the influence of culture on the narcissism-aggression relationship. Therefore, to further clarify the relationship between narcissism and aggression, we included studies based on Chinese samples to conduct a comprehensive meta-analysis, aiming to enhance consistency in understanding this relationship.

1.1 The Relationship Between Narcissism and Aggression

Many studies have found a positive correlation between narcissism and aggression. The most widely used theory to explain this relationship is the threatened egoism model. According to this model, narcissists require admiration and validation from others to confirm their unrealistic positive self-views and strong sense of superiority. When their fragile positive self-views are threatened, a discrepancy emerges between their internal and external evaluations, leading to negative emotions and hostility toward the source of the self-threat. Refusing to lower their self-evaluation, they consequently exhibit increased aggression (Baumeister et al., 1996).

Narcissistic rage theory posits that, compared to non-narcissists, narcissists react more intensely to interpersonal events, reporting greater emotional variability and higher emotional intensity (Rhodewalt, Madrian, & Cheney, 1998). When threatened, narcissists experience negative emotions such as shame, anger,

and anxiety, which subsequently enhance their aggression (Krizan & Johar, 2015; Rhodewalt & Morf, 1998).

The psychodynamic mask model of narcissism suggests that the positive self-views expressed by narcissists are not entirely genuine but serve as a "mask" to conceal underlying low self-esteem (Zeigler-Hill & Besser, 2013). Based on this model, aggression can be understood as a public expression of underlying low self-esteem (Barnett & Powell, 2016). The dynamic self-regulatory processing model of narcissism similarly posits that self-regulatory processes are motivated self-constructions aimed at establishing or maintaining a desired self and fulfilling self-evaluative needs. Although narcissists' self-concepts are grandiose, they are also fragile. This vulnerability drives narcissists to continuously motivate themselves through various personal and interpersonal mechanisms to maintain their inflated self-esteem. In principle, this vulnerability can be managed through multiple approaches, such as minimizing negative outcomes through avoidance behaviors, obtaining social approval and support through affiliative and friendly behaviors, or maximizing positive outcomes through self-enhancement. Narcissists appear to choose the path of self-enhancement, adopting aggressive means to confirm their grandiose self-views and achieve desired positive outcomes, regardless of interpersonal costs, aiming to preemptively reduce the possibility of failure or avoid negative consequences (Morf & Rhodewalt, 2001).

In summary, aggressive responses in narcissists represent an adaptive mechanism for regulating emotions, cognition, motivation, and behavior (Morf & Rhodewalt, 2001; Washburn et al., 2004).

However, some studies have found no correlation between narcissism and aggression. Research indicates that when narcissistic individuals have high self-esteem, their responses to threatening information may be less aggressive, and they may even exhibit more constructive behaviors after recognizing their mild reactions (Hart, Richardson, & Tortoriello, 2018). Other research suggests that narcissism is not related to dispositional aggression but rather to aggressive responses to self-threats; as long as narcissists' sense of superiority remains undisturbed, they see no need to display aggression (Jones & Neria, 2015).

1.2 Moderator Variables

First, given that narcissism and aggression both exhibit gender differences, it is necessary to consider gender' s moderating role in their relationship. Regarding narcissism, research has found that men typically score higher than women (Grijalva et al., 2015). Regarding aggression, most empirical evidence indicates that men are more aggressive than women (Knight et al., 2002). Wallace et al. (2012) found that the relationship between narcissism and aggression was stronger in men than in women. Therefore, we propose Hypothesis H1: Gender moderates the relationship between narcissism and aggression.

Second, reporting modality may influence the narcissism-aggression relationship.

Previous research has predominantly used self-report measures, which are susceptible to social desirability biases (Wallace et al., 2012), particularly when questions involve socially unacceptable behaviors or traits. Therefore, narcissism may correlate more strongly with other-reported or behaviorally measured aggression than with self-reported aggression. Additionally, highly narcissistic individuals are often aware that their traits are not highly valued by society (Carlson et al., 2011) and may deliberately falsify self-reports when necessary (Heinze et al., 2020), resulting in stronger correlations between other-reported narcissism and aggression than between self-reported narcissism and aggression. Therefore, we propose Hypothesis H2a: The reporting method for narcissism moderates the narcissism-aggression relationship, and Hypothesis H2b: The reporting method for aggression moderates this relationship.

Third, culture may also influence the narcissism-aggression relationship. Face is a concept associated with collectivistic cultures. Compared to individualistic cultures, individuals in collectivistic cultures place greater emphasis on protecting face and caring about others' opinions (Hofstede & Hofstede, 2005/2010; Bond, 2010). Therefore, when facing threats, narcissistic individuals in collectivistic cultures may be more likely to use aggressive behaviors to protect their image. Thus, we propose Hypothesis H3: Culture moderates the relationship between narcissism and aggression.

Fourth, not all types of narcissism exhibit aggression (Alexander et al., 2020). Wink (1991) distinguished between overt and covert narcissism based on psychodynamic theory, also termed grandiose and vulnerable narcissism. Overt narcissism is characterized by exaggerated self-importance, public expression of entitlement, belief in unique abilities and superiority, and preoccupation with obtaining admiration and attention from others. In contrast, covert narcissism is more concealed, characterized by excessive concern with others' evaluations, lack of confidence, and extreme sensitivity to threats such as criticism and rejection (Barry et al., 2015; Besser & Priel, 2010; Fan et al., 2016; Houlcroft et al., 2012). Both types share core features of arrogance and self-centeredness, but the latter is more defensive (Barry & Kauten, 2014) and exhibits more maladaptive characteristics (Fan et al., 2016). Therefore, we propose Hypothesis H4a: Narcissism type (overt vs. covert) moderates the narcissism-aggression relationship.

Additionally, based on adaptive functions, narcissism can be divided into adaptive and maladaptive narcissism. The adaptive components of narcissism assess authority, leadership, and self-satisfaction, associated with confidence and independence, and show little connection to social maladjustment (Amad, 2015; Raskin & Terry, 1988). Individuals with high adaptive narcissism also demonstrate better self-control. In contrast, the maladaptive components assess entitlement, exploitativeness, and self-admiration, typically associated with hostility and difficulty delaying gratification. Individuals with high maladaptive narcissism show larger discrepancies between their ideal and actual selves (Rhodewalt & Morf, 1995) and poorer self-control (Ackerman et al., 2011). Therefore, mal-

adaptive narcissism may show a stronger correlation with aggression than adaptive narcissism. Thus, we propose Hypothesis H4b: Narcissism type (adaptive vs. maladaptive) moderates the narcissism-aggression relationship.

Fifth, the multidimensional structure of aggression may also influence the strength of its correlation with narcissism. First, based on intent, aggression can be divided into proactive and reactive aggression. The threatened egoism model suggests that narcissism relates to aggression only after individuals experience self-threat (Thomaes, Bushman et al., 2008), describing the process of reactive aggression and implying a distinction between reactive and proactive aggression. Baumeister et al. (2000) noted that without self-threat, narcissists and non-narcissists show little difference in aggression. Therefore, narcissism may correlate more strongly with reactive than proactive aggression. Thus, we propose Hypothesis H5a: Aggression type (proactive vs. reactive) moderates the narcissism-aggression relationship.

Second, based on form, aggression can be divided into direct and indirect aggression. Compared to direct aggression, narcissists may prefer indirect aggression because its concealed nature creates an illusion that allows them to maintain a positive public image despite engaging in harmful behaviors, thereby preserving their high social status (Bukowski et al., 2009; Golmaryami & Barry, 2010). Direct aggression may damage one' s social network (Klimstra et al., 2014), which is detrimental to maintaining or enhancing dominant status. Therefore, we propose Hypothesis H5b: Aggression type (direct vs. indirect) moderates the narcissism-aggression relationship.

Third, Buss and Perry' s Aggression Questionnaire (BPAQ) divides aggression into four aspects: verbal aggression, physical aggression, hostility, and anger, with physical and verbal aggression representing direct forms, and anger and hostility representing emotional and cognitive components, respectively. Covert narcissistic individuals are highly sensitive to others' evaluations and thus may not openly express aggressive tendencies. However, their sense of entitlement leads them to disregard others (Wink, 1991), and they may experience anger and hostility when they do not receive the special attention they believe they deserve (Okada, 2010). Therefore, we propose Hypothesis H5c: Aggression type (hostility vs. anger vs. verbal aggression vs. physical aggression) moderates the relationship between covert narcissism and aggression.

Finally, aggression can be divided into overt and relational aggression. Research indicates that women place greater importance on relationship issues in social interactions and thus may be more likely to use relational aggression to maximize harm, whereas men prioritize social dominance and may be more likely to use overt aggression (Crick et al., 1997). Previous research has found that narcissism correlates with relational aggression in women but not in men (Marsee et al., 2005). Therefore, we propose Hypothesis H5d: The interaction between gender and aggression type (overt vs. relational aggression) moderates the narcissism-aggression relationship.

2 Method

2.1 Literature Search and Screening

We searched the Chinese databases CNKI, VIP, and Wanfang, as well as the international databases Web of Science, Elsevier, Wiley, and PubMed for literature with titles, abstracts, or keywords containing "narcissistic/narcissism" combined with "aggressive/aggression," "violent/violence," or "bullying/cyberbullying." The search covered the period from 1965 to 2021, with the final search conducted on February 22, 2021, yielding 1,200 articles.

Using EndNote X9, we imported the literature and applied the following inclusion criteria: (1) reported zero-order correlation coefficients between total scores or dimensions of narcissism and aggression; (2) reported sample sizes; (3) empirical studies only (review articles excluded); (4) provided clear descriptions of measurement instruments; (5) when duplicate data existed, the study with more complete information was selected; (6) investigated normal living environments (war environments excluded); (7) excluded studies with suicide as the outcome, as this meta-analysis focused on aggression directed at others rather than the self; (8) state narcissism refers to a temporary inflation of self-importance and self-image caused by specific situations (Yang Chenchen et al., 2016), while collective narcissism is the belief that one' s group is unique but not adequately recognized by others (Dyduch-Hazar et al., 2020). Given the limited literature on collective and state narcissism in relation to aggression, and considering that meta-analyses require comprehensive and systematic literature support (Ding Fengqin & Zhao Huying, 2018), this meta-analysis focused on trait narcissism at the individual level, excluding state and collective narcissism. The literature screening process is illustrated in Figure 1 [Figure 1: see original paper]. Ultimately, 177 independent studies were included, with a total sample size of 73,687.

Figure 1. Flowchart of literature screening for the meta-analysis

2.2 Literature Coding

We coded author information, publication year, publication type, sample size, participant characteristics (participant type, male percentage, age), cultural background, measurement instruments for narcissism and aggression, and reporting methods for narcissism and aggression (see Table 1). Correlation coefficients between total scores and various dimensions of narcissism and aggression were coded. Each independent sample was coded once. If a single paper reported multiple independent samples, they were coded separately. If original studies only reported correlation coefficients between dimensions of narcissism and aggression or correlations under different experimental conditions (where conditions were not moderators of interest), we converted them to Fisher' s Z scores, averaged them, and then converted them back to correlation coefficients for entry. If experimental conditions represented moderators of interest, they were coded separately.

Cultural individualism scores were obtained from Hofstede' s (2021) database. Following previous research (Cheng et al., 2021), countries with scores of 50 or above were classified as individualistic, while those scoring below 50 were classified as collectivistic.

Some instruments measure both overt and covert narcissism, such as Pincus et al.' s Pathological Narcissism Inventory (PNI) and Zheng Yong and Huang Li' s Narcissistic Personality Questionnaire. However, many scales do not specify whether they measure overt or covert narcissism. Following previous research (Gnambs & Appel, 2018; Grijalva et al., 2015; Smith et al., 2016; Chen Yuanyuan, 2018), the Narcissistic Personality Inventory (NPI) is a classic example of overt narcissism. Therefore, the 54-item, 40-item, 16-item, 13-item, and 37-item versions of the NPI, as well as the child versions Narcissistic Personality Questionnaire for Children (NPQC) and Narcissistic Personality Inventory-Children (NPIC), and Jonason and Webster's Dirty Dozen (DD) narcissism subscale were classified as measures of overt narcissism. Additionally, we classified the following as overt narcissism measures: Jones and Paulhus' s Short Dark Triad (SD3) narcissism subscale; the narcissistic personality disorder subscale of the Millon Clinical Multiaxial Inventory-III (MCMI-III); the narcissism subscale of First et al.' s Structured Clinical Interview for DSM-IV Axis II (SCID-II); Thomaes et al.' s Childhood Narcissism Scale (CNS); the self- and other-report versions of the Antisocial Process Screening Device (APSD); and Zhou Hui et al.' s Narcissistic Personality Questionnaire. In contrast, Hendin and Cheek' s Hypersensitive Narcissism Scale (HSNS) was classified as a measure of covert narcissism.

Table 1. Basic Information of Included Primary Studies

Author	Publication Year	Participant Type	Age (years)	Male %	Narcissism Measure	Aggression Measure
Alexander	2020	Adolescents	20.44$±2.44	NP22.65ZHNPQ	$NPI, NPIC$	$Other, RPQ$
...	...	...	...	...	...	...

Note: a) Only the first author is listed to conserve space. b) Single numbers represent mean age. c) ZHNPQ = Zheng Yong and Huang Li' s Narcissistic Personality Questionnaire; ZHNPQ-O = ZHNPQ overt narcissism subscale; ZHNPQ-C = ZHNPQ covert narcissism subscale; NPQ = Zhou Hui et al.' s Narcissistic Personality Questionnaire. d) RPQ = Reactive and Proactive Aggression Questionnaire; AOABS = Adolescent Online Aggressive Behavior Scale; CRT = competitive reaction-time task; CTS2 = Revised Conflict Tactics Scales;

PCS = Peer Conflict Scale. e) Core = core journals of Peking University or Nanjing University; Regular = general public journals; Dissertation = master' s/doctoral dissertations; SSCI = Social Sciences Citation Index; ESCI = Emerging Sources Citation Index; SCIE = Science Citation Index Expanded.

2.3 Data Processing and Analysis

We used Comprehensive Meta-Analysis Version 3.3 (CMA 3.3) software to conduct main effect and moderator analyses. Moderator analyses were performed using meta-regression.

3 Results

3.1 Homogeneity Test and Model Selection

Homogeneity testing of the included effect sizes revealed Q = 1793.44 ($p < 0.001$), indicating significant heterogeneity. The I^2 statistic was 90.19, suggesting that approximately 90.19% of observed variance derived from true differences in effect sizes, while only about 9.80% came from random error. An I^2 value exceeding 75% indicates high heterogeneity. Therefore, a random-effects model was adopted for the meta-analysis of the narcissism-aggression relationship, necessitating examination of moderator variables.

3.2 Publication Bias

The funnel plot (Figure 2 [Figure 2: see original paper]) showed that most effect sizes for the narcissism-aggression relationship were concentrated at the top and evenly distributed on both sides of the overall effect. Egger' s regression test yielded an intercept of -0.24 ($p = 0.678$). These results indicate minimal influence of publication bias, suggesting that the meta-analytic findings are robust.

Figure 2. Funnel plot of effect size distribution for the narcissism-aggression relationship

3.3 Main Effect Test

Using a random-effects model to synthesize the overall association between narcissism and aggression, the results showed a correlation coefficient of $r = 0.27$, 95% CI [0.25, 0.29]. According to Gignac and Szodorai' s (2016) criteria, this represents a medium positive correlation between narcissism and aggression in this study.

3.4 Moderator Effect Tests

Gender significantly moderated the narcissism-aggression relationship. Meta-regression analysis (173 effect sizes) revealed that the regression coefficient for

male percentage on effect sizes was significant (b = 0.10, p = 0.026). Higher proportions of males were associated with stronger correlations between narcissism and aggression.

As shown in Table 2 : (1) Narcissism reporting method significantly moderated the relationship (Qb = 5.54, p = 0.019), with other-reported correlations significantly higher than self-reported correlations. (2) Aggression reporting method did not significantly moderate the relationship (Qb = 1.46, p = 0.482). (3) Culture did not significantly moderate the relationship (Qb = 0.06, p = 0.808).

As shown in Table 3 : (1) Narcissism type (overt vs. covert) significantly moderated relationships with total aggression (Qb = 5.46, p = 0.019), anger (Qb = 31.86, p < 0.001), and hostility (Qb = 33.09, p < 0.001). Covert narcissism showed stronger correlations with total aggression, anger, and hostility than overt narcissism. Narcissism type did not significantly moderate relationships with proactive aggression (Qb = 0.29, p = 0.592), reactive aggression (Qb = 0.132, p = 0.716), physical aggression (Qb = 0.97, p = 0.325), or verbal aggression (Qb = 0.014, p = 0.907). (2) Narcissism type (adaptive vs. maladaptive) significantly moderated the relationship (Qb = 5.74, p = 0.017), with maladaptive narcissism showing stronger correlations with total aggression than adaptive narcissism. (3) Aggression type (proactive vs. reactive) did not significantly moderate relationships for total narcissism (Qb = 0.90, p = 0.342), overt narcissism (Qb = 1.15, p = 0.284), or covert narcissism (Qb = 0.04, p = 0.846). (4) Aggression type (direct vs. indirect) did not significantly moderate the relationship (Qb = 2.66, p = 0.103). (5) Aggression type (hostility vs. anger vs. verbal vs. physical) did not significantly moderate relationships for total narcissism (Qb = 0.78, p = 0.854) or overt narcissism (Qb = 2.74, p = 0.433), but did significantly moderate the relationship for covert narcissism (Qb = 29.92, p < 0.001). Pairwise comparisons revealed that hostility was significantly higher than anger (Z = 2.57, p = 0.010), physical aggression (Z = 4.53, p < 0.001), and verbal aggression (Z = 1.61, p < 0.001), and anger was significantly higher than verbal aggression (Z = 2.15, p = 0.032). (6) The interaction between gender and aggression type (overt vs. relational) did not significantly moderate effect sizes (b = 0.60, p = 0.979).

4 Discussion

4.1 The Relationship Between Narcissism and Aggression

This meta-analysis of 121 studies revealed a medium positive correlation between narcissism and aggression, consistent with most previous research and supporting the view that narcissism and aggression are positively related.

These findings align with the psychodynamic mask model, dynamic self-regulatory processing model, and threatened egoism model. Narcissists use grandiose self-views as a mask to conceal their low self-esteem (Zeigler-Hill & Besser, 2013). Beyond holding high self-evaluations, they also expect others to recognize their worth at similarly high levels (Barry et al., 2003; Bushman

& Baumeister, 1998; Raskin et al., 1991). Through dynamic interactions between intrapersonal cognitive and affective processes and interpersonal self-regulatory strategies, narcissists continuously frame tasks as opportunities for competition and superiority demonstration, develop negative views and contempt toward others, and in extreme cases, experience anger and even aggression (Bushman & Baumeister, 1998; Morf & Rhodewalt, 2001; Rhodewalt & Morf, 1998). Thus, aggressive behavior at the behavioral level may serve underlying motivational functions of failure avoidance, self-protection, and self-enhancement as a method to protect high self-identity (Baumeister et al., 2000; Morf & Rhodewalt, 2001).

4.2 Analysis of Moderator Effects

This study found that higher male percentages were associated with stronger narcissism-aggression correlations, confirming Hypothesis H1. This suggests socialized differences in how narcissistic men and women respond to stressful situations (Wallace et al., 2012). This finding contradicts previous research (Rasmussen, 2016), which found that gender did not significantly moderate the relationship between narcissism and provoked aggression. This discrepancy may be because Rasmussen examined only provoked aggression, excluding unprovoked aggression and treating provoked and unprovoked aggression as homogeneous constructs. Research indicates that under unprovoked conditions, men are more aggressive than women, but provocation significantly reduces this gender difference (Bettencourt & Miller, 1996).

Results showed that narcissism reporting method significantly moderated the relationship, with other-reported correlations significantly higher than self-reported correlations, confirming Hypothesis H2a. Narcissists lack self-insight and fail to recognize negative aspects of their personality, whereas other raters may provide information about characteristics that individuals are unwilling to admit or unable to perceive in self-reports (Cooper et al., 2012).

Additionally, this study found that aggression reporting method did not significantly moderate the relationship, contrary to Hypothesis H2b. Although narcissists have a tendency to hide their true selves due to social desirability, research also suggests that narcissists are not concerned about portraying themselves as aggressive or may not view aggression as necessarily maladaptive (Ang et al., 2011), potentially over-reporting aggressive behaviors to enhance their grandiose self-image. Furthermore, laboratory settings are not conducive to observing more concealed forms of aggression, and other raters' observations of aggression are limited to specific contexts and cannot access all situations where target individuals display aggression (Klimstra et al., 2014).

Results showed that culture did not significantly moderate the narcissism-aggression relationship, indicating cross-cultural consistency, which contradicts Hypothesis H3. One possible explanation is that in individualistic cultures, aggression is generally viewed as instrumental for achieving personal goals,

increasing understanding and tolerance of aggression (Amad et al., 2020). In collectivistic cultures, individuals view themselves as embedded in collectives and highly value collective needs (Bergeron & Schneider, 2005), but aggressive behaviors violate goals of cooperation and interpersonal harmony (Xu et al., 2004) and may therefore be suppressed. Another explanation involves the globalization effect of culture: with global economic and social development, cultures show a trend of increasing individualism and decreasing collectivism (Huang Zihang et al., 2018), making the narcissism-aggression relationship less susceptible to cultural influence.

Results showed that narcissism type (overt vs. covert) significantly moderated the relationship, with covert narcissism showing stronger associations with aggression than overt narcissism, confirming Hypothesis H4a. Individuals high in overt narcissism tend to be more extraverted with stronger emotional resilience (Miller & Campbell, 2008) and better interpersonal relationships (Fan et al., 2016). Research suggests that the high self-esteem and inflated confidence associated with overt narcissism buffer against aggression (Knight et al., 2018). In contrast, covert narcissists are more introverted, emotionally unstable, and filled with negative emotions (Miller & Campbell, 2008), with stronger interpersonal sensitivity (Miller et al., 2010), making them more likely to exhibit aggression when their fragile self-esteem is threatened (Knight et al., 2018).

Results showed that narcissism type (adaptive vs. maladaptive) significantly moderated the relationship, confirming Hypothesis H4b. This indicates that maladaptive narcissism correlates more strongly with aggression than adaptive narcissism. Individuals with high adaptive narcissism engage in less negative self-focus (Emmons, 1987) and are more optimistic, with some research suggesting adaptive narcissism is a protective factor against aggression (Washburn et al., 2004). In contrast, individuals with maladaptive narcissism are more likely to use aggression to achieve desired dominance (Golmaryami & Barry, 2010).

Our findings revealed that aggression type (proactive vs. reactive) did not significantly moderate the relationship for total narcissism, overt narcissism, or covert narcissism. This suggests that narcissism may induce not only reactive aggression but also proactive aggression aimed at achieving desired social status or attention, dominating others, and constructing, promoting, and strengthening grandiose self-images (Muñoz et al., 2013). Raskin et al. (1991) proposed that hostility, grandiosity, and dominance are interrelated, forming a coherent structural system closely related to narcissism, and viewed aggression as a core feature of narcissistic personality rather than arising from specific processes (Bukowski et al., 2009).

The study did not find that aggression type (direct vs. indirect) significantly moderated the relationship, failing to confirm Hypothesis H5b. This may be because this meta-analysis included relatively few studies on direct and indirect aggression, and Klimstra et al. (2014) included peer and teacher ratings of aggression. Due to the concealed nature of indirect aggression, other raters may have difficulty detecting narcissists' indirect aggressive behaviors.

Results showed that aggression type (physical vs. verbal vs. hostility vs. anger) significantly moderated the relationship for covert narcissism, with correlation magnitudes from highest to lowest being hostility, anger, physical aggression, and verbal aggression, largely confirming Hypothesis H5c. Although covert narcissists are sensitive to others' evaluations and may not directly express aggressive tendencies physically or verbally, their sense of entitlement and tendency to disregard others (Wink, 1991) make them prone to anger and hostility when not treated as special and important (Okada, 2010).

The study did not find that the interaction between gender and aggression type (overt vs. relational) significantly moderated the relationship. This may be because this meta-analysis only included self-reported and other-reported relational aggression, whereas observational methods may be more likely to reveal that women are more prone to relational aggression than men, as this approach is less susceptible to gender stereotype biases than self-, peer, and teacher-report methods. Additionally, while the conclusion that women are more likely than men to use relational aggression is consistent in American research, the meaning and function of relational aggression differ across cultural contexts, making this conclusion inconsistent across cultures (Crick et al., 2012).

4.3 Limitations and Future Directions

This study has several limitations: (1) Uneven sample size distribution across subgroups may affect meta-analytic results; (2) Although this meta-analysis initially avoided publication bias, language restrictions prevented inclusion of some studies; (3) This meta-analysis did not examine narcissism in conjunction with other potentially related maladaptive personality traits, and aggression might be explained through links between narcissism and other characteristics (Rasmussen, 2016; Rasmussen & Boon, 2014).

Future research should: (1) Given that this meta-analysis found narcissism reporting method significantly moderates the narcissism-aggression relationship, future studies should use multiple raters to understand reporter bias and obtain the most accurate and complete information about narcissism; (2) Existing research on narcissism and aggression has neglected covert narcissism, but this meta-analysis found covert narcissism is more likely a risk factor for aggression. Therefore, future research should strengthen exploration of covert narcissism.

5 Conclusions

This study found a medium positive correlation between narcissism and aggression. Their relationship is moderated by gender and narcissism reporting method but not by aggression reporting method or culture. Different types of narcissism show varying degrees of correlation with aggression: covert narcissism correlates more strongly with aggression than overt narcissism, and maladaptive narcissism correlates more strongly with aggression than adaptive narcissism.

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Note: References marked with an asterisk () were included in the meta-analysis.*

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Note: Figure translations are in progress. See original paper for figures.