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Relational aggression, big five and hostile attribution bias in adolescents

Constantinos M. Kokkinos*, Kyriaki Karagianni, Ioanna Voulgaridou

Department of Primary Education, School of Education Sciences, Democritus University of Thrace, Greece

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ABSTRACT

The study examined two plausible models of the interplay between hostile attribution bias (HAB) for relational provocations, personality traits (big five), and the two distinct functions of relational aggression (RA) in a sample of 347 Greek adolescents (193 female participants; $M = 13.1$, $SD = 1.20$). In the first model the mediating role of HAB in the association between personality and RA was investigated. The moderating effects of personality in the association between HAB and RA were also explored. Results of the mediation analyses revealed that HAB partially mediated the relationship between low extraversion, conscientiousness, agreeableness, openness, high neuroticism, and both proactive and reactive RA. Moderation analyses indicated that low conscientiousness adolescents were more likely to engage in reactive RA when they make more hostile attributions for relational provocations. The findings emphasize the crucial role of personality and social-cognitive factors in understanding RA and are discussed in terms of their practical implications.

Over the recent years there has been an increasing interest in understanding nonphysical and manipulative forms of aggression, including relational aggression (RA; damaging or intent of harming others mainly via the purposeful manipulation or threat of interpersonal relationships, social exclusion, gossiping or rumor spreading; Card, Stucky, Sawalani, & Little, 2008; Crick & Grotpeter, 1995). This aggressive form could be either proactive (i.e., unprovoked, goal-oriented, related to resource control, gaining in popularity and social status) or reactive RA (i.e., displayed in response to threats, related to negative affect; Crapanzano, Frick, & Terranova, 2010; Marsee, Weems, & Taylor, 2008; Marsee & Frick, 2007; Voulgaridou & Kokkinos, 2015). It could also be direct/confrontational (e.g., excluding a peer) or non-direct/non-confrontational (e.g., spreading rumors) (Archer & Coyne, 2005; Voulgaridou & Kokkinos, 2015).

The study of aggressive behavior is guided by several theoretical perspectives that emphasize different aspects ranging from the social context to biological predispositions. The General Aggression Model (GAM), proposed by Anderson and Bushman (2002), is the result of endeavors to integrate existing theories of aggression, such as the Social Learning Theory (Bandura, 1977); Berkowitz (1993) and the Social Interaction Theory of Tedeschi and Felson (1994). According to the GAM, personal (e.g., personality traits, beliefs, gender, attitudes) and situational factors (e.g., frustration, provocation) could influence aggression through their impact on an individual's internal state (i.e., aggressive thoughts, angry feelings and physiological arousal) (Anderson & Bushman, 2002). Repeated interaction with aggression-related stimuli (both real and fictitious) and situations, and subsequent positively reinforced aggressive behavior, is likely to increase one's aggressive personality through several learned outcomes (e.g., aggressive beliefs, attitudes, and related emotions). Using the GAM as a theoretical framework, this study examines a mediation model of personal and social-cognitive constructs to inform our understanding of RA in adolescence, a period of development where the use of more complex and sophisticated aggressive tactics is evident (Crick, Murray-Close, & Woods, 2006; Voulgaridou & Kokkinos, 2015; Yoon, Barton, & Taiariol, 2004).

Although mediating relations between personality and cognitive factors are possible, some researchers have found evidence that personality and cognition might also interact to predict behavior outcomes (e.g., Fite, Goodnight, Bates, Dodge, & Pettit, 2008; Koolen, Poorthuis, & van Aken, 2012; Meece, Mize, Bates, Dodge, & Pettit, 2007). Following this contention, the present study integrates two theoretical models, the relational vulnerability model (Crick, Murray-Close, & Woods, 2004) and the Integrative Cognitive Model (ICM; Wilkowski & Robinson, 2010), in order to explicate the possible moderating role of personality (five factor model; FFM) in the relationship between social-cognitive factors (i.e., hostile attribution bias; HAB) and RA.

Empirical evidence provides explanations for the individual factors (e.g., personality, cognition) which are implicated in the manifestation of RA (e.g., Dane & Marini, 2014; Kokkinos, Voulgaridou, & Markos, 2016; Miller, Zeichner, & Wilson, 2012; Tackett, Kushner, Herzhoff, Smack, & Reardon, 2014). A useful contribution to the study of the social-cognitive correlates of relationally

* Corresponding author at: Department of Primary Education, School of Education Sciences, Democritus University of Thrace, N. Hili, GR 68100, Alexandroupolis, Greece.
E-mail address: kkokkino@eled.duth.gr (C.M. Kokkinos).

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aggressive behavior (Mathieson et al., 2011; Nelson & Coyne, 2009) is made by the Social Information Processing (SIP) Model (Crick & Dodge, 1994), which refers to the encoding and interpretion of a social situation, setting goals and detecting the ways to achieve them and then evaluating, selecting and applying a response. Hostile attribution bias (i.e., the tendency to attribute hostile intent to others' actions even if their real purpose is benign or the circumstances are ambiguous), which relates to the interpretation of social stimuli in the SIP model, was found to be associated to aggression (Dodge et al., 2015; Helfritz-Sinville & Stanford, 2014; Nelson, Mitchell, & Yang, 2008). In terms of RA, empirical evidence is inconclusive (Godleski & Ostrov, 2010; Mathieson et al., 2011; Ostrov & Godleski, 2013) with a number of studies suggesting that relationally aggressive early adolescents demonstrate higher levels of HAB for relational provocations (Crick, 1995; Crick, Grotpeter, & Bigbee, 2002; Ostrov & Godleski, 2013; Yeung & Leadbeater, 2007). Other studies, however, with primary school children did not confirm this association or even support a negative link (Crain, Finch, & Foster, 2005; Mikami, Lee, Hinshaw, & Mullin, 2008; Nelson et al., 2008). A possible explanation for the lack of an association between HAB and RA may be that some children use proactive instead of reactive RA, which seems more likely to be linked to HAB (Mathieson et al., 2011). Although recent evidence with emerging adults (Bailey & Ostrov, 2008) has shown that HAB for relational provocations is associated only with reactive RA (Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2010), these findings were not confirmed for adolescents (Kunimatsu, 2010; Marsee & Frick, 2007).

Adolescent personality – particularly traits reflecting tendencies toward negative emotions (e.g., neuroticism) and poor self-regulatory control (e.g., low trait agreeableness and conscientiousness) – has been strongly associated with aggressive behaviors, including RA (e.g., Tackett, Daoud, De Bolle, & Burt, 2013; Tackett et al., 2014). However, the examination of the links between personality and RA using different personality constructs, such as the FFM has only recently received empirical investigation (e.g., Burt, Donnellan, & Tackett, 2012; Burton, Hafetz, & Henninger, 2007; Gleason, Jensen-Campbell, & South Richardson, 2004;Miller et al., 2012 ; Tackett et al., 2014). The FFM is the most contemporary and widely accepted comprehensive model of personality structure that describes personality as a set of five broad trait dimensions or domains (DeYoung, Quilty, & Peterson, 2007), that is Agreeableness (A; the tendency to care about others' needs and the readiness to keep positive interpersonal relationships), Conscientiousness (C; trustworthiness/reliability, accuracy and commitment fulfillment), Neuroticism/Emotional Instability (N/EI; negative thoughts, feelings of anxiety, depression and anger), Extraversion (E; levels of energy, excitement, assertiveness, self-confidence), and Openness to Experience (O; creativity, imagination, intellect and depicts the levels of social and cultural interest).

Regarding the relationship between RA and FFM traits, it has been found that children and adolescents who tend to engage in such behaviors are more likely to show lower A, C (Gleason et al., 2004; Tackett et al., 2013; Tackett et al., 2014), and in some cases O (Tackett et al., 2014). It seems also that from these traits, A may have stronger predictive utility compared to the other FFM traits (Tackett et al., 2014), while the connections of RA with C (Miller et al., 2012; Tackett et al., 2014) and O (e.g., Gleason et al., 2004; Miller et al., 2012) in children, adolescents or emerging adults are not always confirmed. It has also been indicated that A is negatively linked to both proactive and reactive aggression (Koolen et al., 2012; Miller et al., 2012; Seibert, Miller, Pryor, Reidy, & Zeichner, 2010). Regarding C, a negative association only with reactive aggression has been confirmed, suggesting that it is related to the lack of behavioral reactivity regulation in case of experiencing frustration (Koolen et al., 2012); nevertheless, other studies did not evidence such differences (Miller & Lynam, 2006; Miller et al., 2012). Similarly, a facet of O (i.e., openness to actions) was found to be significantly correlated with reactive aggression (Miller & Lynam, 2006).

As far as N is concerned, high levels of this trait and its facets (i.e., negative affect and fear) are linked to RA and mainly to its reactive function among children, adolescents, and adults (Bettencourt, Talley, Benjamin, & Valentine, 2006; Burt et al., 2012; Burton et al., 2007; Seibert et al., 2010; Tackett et al., 2013; Tackett et al., 2014). Moreover, anxiety and anger (N facets) are significantly associated more with reactive than proactive RA (Marsee & Frick, 2007; Marsee et al., 2008).

Finally, the relationship between E and RA has not been confirmed in children, adolescents (e.g., Gleason et al., 2004; Tackett et al., 2013), and emerging adults (Burton et al., 2007; Miller et al., 2012). However, some facets of E, such as sociability and shyness were found to be positively linked to RA (Tackett et al., 2014). It has also been found that E, as well as its facet assertiveness, is more strongly, positively related to proactive aggression (Miller & Lynam, 2006; Ramirez, 2009).

Relational aggression has been also related to personality pathology (e.g., callous unemotional traits, borderline personality characteristics) in middle childhood and early adolescence (Crick, Murray-Close, & Woods, 2005; Kokkinos et al., 2016; Marsee & Frick, 2007). Additionally, research with emerging adults has shown associations among borderline personality symptoms and RA (Ostrov & Houston, 2008; Werner & Crick, 1999). In terms of the RA functions (i.e., proactive and reactive), Ostrov and Houston (2008) revealed that both were associated with borderline personality even after controlling for physical aggression and gender. Additionally, Crick et al. (2005) showed that both RA and HAB for relational provocations were predictive of borderline personality in middle childhood. It seems also that borderline personality and HAB may have some conceptual links, since hostile world view (which may appear in children lacking social information skills; Nelson, Coyne, Swanson, Hart, & Olsen, 2014) is an indicator of borderline personality (Crick et al., 2005; Ostrov & Houston, 2008). Moreover, it has been empirically supported that the FFM could be viewed as a dimensional model of personality disorder symptomatology (Lynam & Widiger, 2001). Thus, it is suggested that borderline personality disorder includes facets of high N, impulsivity, low C, low A, and interpersonal antagonism (Miller et al., 2010). Hence, the previous literature referring to personality pathology could provide further support for a possible association among some big five traits (i.e., A, N, C), HAB for relational provocations and RA. Altogether, the existing literature shows evidence for robust associations between social-cognition, personality and RA, but the potential interactive contributions of cognitive factors and personality to the explanation of RA have not yet been empirically investigated, therefore pointing to the purpose of this study.

1. FFM and RA: the mediating role of HAB

Prior research has mainly demonstrated direct links of HAB (e.g., Ostrov & Godleski, 2013) and FFM traits (e.g., Tackett et al., 2014) with RA. It has been argued that someone's personality might contribute to more biased interpretations, which in turn could lead to aggressive behaviors (Bettencourt et al., 2006; Miller, Lynam, & Jones, 2008). In an endeavor to understand aggressive behavior based on the GAM, recently published studies (Barlett & Anderson, 2012; Cavalcanti & Pimentel, 2016) showed that FFM traits were directly and indirectly related to aggression, through aggressive attitudes. Specifically, Barlett and Anderson (2012) suggested that in case of facing hostile provocations, individuals characterized by certain personality traits (e.g., low A), are more likely to display HAB, as well as form hostile patterns of social information processing, and thus be led to aggressive behavior. Depending on certain FFM traits, the GAM would suggest that these traits are related to aggressive behavior because they may either enhance or inhibit the development and chronic accessibility of aggressive emotions and attitudes (Barlett & Anderson, 2012; Cavalcanti & Pimentel, 2016). Thus, based on the GAM, the present study examined a mediation model with five personality factors as predictors of RA and HAB as the mediator.