

## The Importance of Being Empathic

Jayde Walker

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### Abstract

This study investigated factors underlying the expression of prosocial behaviour, and relational and overt aggression. University students completed assessments of self-reported and physiological empathy, and of affective and cognitive theory of mind (TOM). They also rated themselves and peers on four dimensions of social behaviour (overt aggression, relational aggression, prosocial behaviour, and victimisation). The relationship between empathy and TOM was important in the prediction of overt aggression. Poor TOM skills were associated with aggression only in individuals who also had low levels of empathy for others. Thus, empathy was a significant moderator of TOM in the prediction of overt aggression.

Aggression is typically defined as behaviour that is intended to injure another individual (Lagerspetz & Björkvist, 1994). Aggression is usually thought to involve a physical component, and research conducted over the past three decades has concluded that boys exhibit more aggression than girls, and that this difference persists throughout life. However, Crick, and Grotpeter (1995) suggested that the forms of aggression studied in past research are more salient for males than for females and earlier studies may not have observed the forms of aggression typically displayed by females.

Crick and Grotpeter (1995) suggested that when children aggress against their peers, they do so in ways that damage the goals of their gender group. They proposed a finer distinction: *overt aggression* includes both physical and verbal aggression that is experienced directly by the targeted individual, whereas *relational aggression* includes any behaviour that is intended to harm another's friendships. When both of these sets of behaviours have been included in studies of aggression, the differences in levels of aggressive behaviour displayed by males and females has not been as marked as when only overtly aggressive behaviours have been the focus of study.

Other researchers have explained the differing behaviours associated with overt physical, overt verbal, and relational aggression not only as different aggressive strategies, but also as the progression through three different developmental phases. Aggression is generally considered unacceptable in our society, and it is reasonable to expect that as individuals learn of this they will adopt less recognisable forms of aggression (Björkvist, Österman, & Kaukianen, 1992). The progression of aggressive behaviour typically begins with physical aggression in both boys and girls, and is thought to reflect their immature language and poor impulse control. Verbal aggression follows, and finally, indirect aggression is displayed (Rhys & Bear, 1997).

Diverse developmental theories have been proposed to account for the presence and stability of aggressive behaviour in children and adolescents, including biological theories (e.g. DiLalla, 2004; Moffit, 1993), environmental factors, parenting styles, and social-information processing (e.g. Crick, Grotpeter, & Bigbee, 2002). Few studies have investigated the different factors that underlie the differential expression of aggression, such as empathy and social intelligence.

Loudin, Loukas, and Robinson (2003) adopted a social-information processing model in their study of the role of empathy in the display of relational aggression among college students. The study suggested that individuals who show low levels of empathic concern may not experience the negative emotions associated with inflicting harm on others, hence they may be likely to use relational aggression.

Theory of mind (TOM) has also been shown to be an important predictor of social behaviour. Although traditionally viewed as an indicator of positive social adjustment, Kaukianen et al. (1999) suggested that TOM may be used for aggressive purposes. However, a lack of TOM may be an important variable in the display of aggression. Kaukianen et al. attempted to resolve this issue, and proposed that TOM may be a neutral tool that can be used for prosocial or antisocial purposes, and that situational demands and elements of one's personality determine how an individual will use their TOM. Therefore, TOM might play a greater role in the expression of some forms of aggression than others.

The aim of this study was to investigate factors that might predict expression of relational and overt aggression. It was predicted that TOM ability and level of empathy would differentially predict university students' social behaviour. It was hypothesised that prosocial behaviour would be predicted by a good understanding of others' intentions, beliefs, and feelings, in conjunction with high levels of empathy for others. It was hypothesised that relational aggression would be predicted by a good TOM and low levels of empathy for others. Overt aggression was expected to be predicted by both low levels of empathy and a poor understanding of TOM.

## Method

### *Participants*

There were 76 participants in total (54 females and 22 males) who ranged in age from 18 years to 26 years 8 months, from a diverse range of cultural backgrounds.

### *Materials and measures*

#### 1. Peer ratings of social behaviour.

Four different character descriptions were presented to participants one by one on a computer screen. These descriptions were of a prosocial person, a relationally aggressive person, an overtly aggressive person, and a victimised person. Participants were presented with four choices ("a lot", "somewhat", "not much", and "not at all") and used the computer mouse to select how much the named person was similar to the description used.

#### 2. Measures of empathy.

a. *The Interpersonal Reactivity Index* (IRI; Davis, 1980) is a 28-item self-report multi-dimensional measure of empathy. High scores indicate a high level of empathy. Emotional empathy is assessed by the subscales Empathic Concern and Personal Distress. Cognitive empathy is assessed by the subscales Fantasy and Perspective Taking.

b. A physiological measure of empathy was also used. A series of seven video clips was presented to participants. The video clips were taken from the movie *The Pianist* and reflected happiness, sadness, fear, and anger. Participants' heart rates were recorded during the video presentation. Time codes were transmitted from the presentation computer to the trace.

3. Measures of TOM.

- a. *Emotion Vignettes.* (Sullivan & Ruffman, 2004). Participants watched 26 video clips and selected which of two words best described what the character in each clip was thinking or feeling. The clips were taken from various television programmes, news clips, and movies. For 3 seconds before the clip appeared on the screen, two mental state terms were presented on the screen. These terms remained on the screen while the clip was played. The foil words were mental state terms that were judged to be plausible but less accurate labels for the mental states exhibited in the clips.
- b. *Strange Stories.* (Happe, 1994). Six short stories were read to each participant by the experimenter. Each story described a situation where the characters say things they do not literally mean. The participants answered three information questions regarding what had happened in the story. If participants answered the information questions correctly, they were then asked about the main characters' beliefs or intentions. Understanding of the characters' beliefs and intentions were coded as incorrect, correct physical, correct mental, or best correct mental.

*Procedure*

Required tasks were described to participants. The tasks were then presented. The order of tasks was counterbalanced. After completion, participants were debriefed and given the opportunity to discuss the study.

**Results**

For each participant the frequency of peer ratings in the category "a lot like this description" was calculated for prosocial behaviour, relationally aggressive behaviour, overtly aggressive behaviour, and victimisation. Thus, higher numbers reflect a higher number of peer nominations in that extreme category.

A self-report empathy rating was calculated for each participant by summing the Likert-scale values across all items in the IRI.

Physiological empathy scores were calculated for each participant, and were based on the task-related change in heart rate during the two video clips portraying sadness. This was calculated as task-related heart rate minus baseline heart rate. A higher positive value indicates greater empathy, while a lower negative value indicates greater distress.

Participants were given an affective TOM score based on the total number of correct responses to the 26 trials of the Emotion Vignettes. Participants were also given a cognitive TOM score based on their mean score over the six Strange Stories.

Correlations were calculated between the mean frequencies of peer ratings of social behaviour, empathy, and TOM measures. The frequency with which participants were nominated by their peers as being

overtly aggressive was found to be negatively correlated with IRI and Emotion Vignette scores. People rated as more overtly aggressive were more likely to have lower self-rated empathy and lower cognitive TOM than their less overtly aggressive peers. People rated as being overtly aggressive were more likely to show a decrease in heart rate relative to baseline when shown a sad video clip.

Four interaction terms were created (IRI x strange stories, IRI x emotion vignettes, physiological empathy x strange stories, and physiological empathy x emotion vignettes) to test whether empathy might moderate the impact of TOM on social behaviour. There were no strong predictions as to which measure of TOM might interact with empathy. Two significant correlations between peer ratings and the interactions were found, and both involved peer ratings of overt aggression. The interaction between self-rated empathy and affective TOM was significant as was the correlation between peer ratings of overt aggression and the interaction between the physiological measure of empathy and affective TOM.

Two multiple regression analyses on peer ratings of overt aggression were

conducted. The continuous variable was categorised into three groups: low scores one standard deviation below the mean, high scores one standard deviation above the mean, and medium scores within one standard deviation of the mean. Figure 1 shows the relationship between affective TOM and peer overt aggression ratings changes as a function of empathy. Whereas those with high empathy show a moderate positive relationship between affective TOM and overt aggression, those with low empathy show a strong negative relationship between these two factors. Simple slope calculations showed that only the slope for participants with low empathy was significantly different from zero (slope = -0.306,  $t = -3.463$ ,  $p < .001$ ).

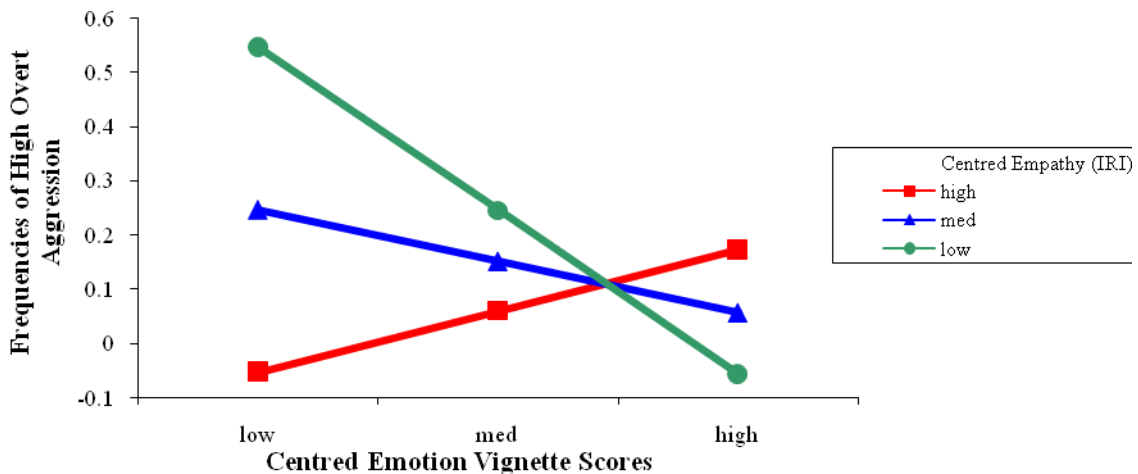


Figure 1. Moderation of affective TOM by self-rated empathy on overt aggression ratings.

The second multiple regression on peer ratings of overt aggression included physiological empathy, affective TOM, and the interaction term between these two variables. As with the earlier regression, the linear combination of these

terms was significantly related to peer ratings of overt aggression. Only the interaction term significantly contributed to this equation,  $b = .161$ ,  $\beta = .350$ ,  $t = 2.982$ ,  $p < .01$  (depicted in Figure 2).

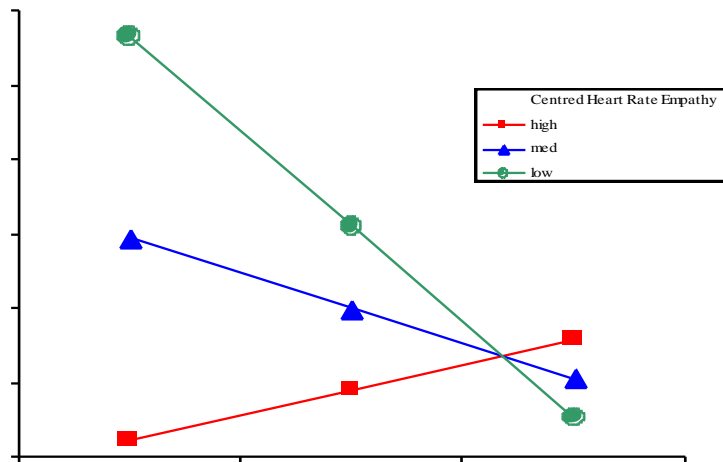


Figure 2. The moderation of affective TOM by physiological empathy on frequencies of high overt aggression ratings.

Simple slope analyses showed that only those individuals who scored low on the physiological measure of empathy had a slope that was significantly different from zero (slope = -0.255,  $t = -3.606$ ,  $p < .001$ ). As is shown in the figure, lower affective TOM was related to higher ratings of overt aggression, but only for participants low in empathy.

### Discussion

The main research question was whether the influence of TOM on social behaviour is moderated by empathy. The present study showed that the pattern of moderation did exist, but only for overt aggression. Peer-rated overt aggression was also associated with physiological empathy. This is consistent with the hypothesis that overt aggression would be associated with low empathy for others and low TOM skills.

Two significant correlations between peer ratings of social behaviour and the interactions of affective TOM and empathy were found, and both of these

involved overt aggression. The interaction between self-rated empathy (the IRI) and affective TOM (the emotion vignettes) was significant. Whereas those with high empathy show a moderate positive relationship between affective TOM and overt aggression, those with low empathy show a strong negative relationship between these two factors. There was also a significant positive correlation between the physiological measure of empathy and affective TOM. Lower affective TOM was related to higher ratings of overt aggression for participants low in empathy. Those who have little empathy for others are unlikely to care about harming them and may be more likely to view the use of aggressive strategies as suitable to meet their own needs and desires. If the individual with little empathy for others also has a poor understanding of others' mental states, he or she may not have the requisite skills to manipulate others in a covert aggressive manner, and therefore aggress against others in terms of overt verbal and/or physical behaviour.

These results suggest some avenues for intervention to decrease aggressive behaviour, in particular, increasing empathy, if this is the primary moderator of the expression of aggressive behaviour. Miller and Eisenberg (1988) reported that the effects of empathy training programmes on aggressive behaviour have been inconsistent. Merely teaching TOM skills in isolation is insufficient as a means to decrease aggressive behaviour, as this provides individuals with the skills to manipulate others more effectively. People should be taught about the impact of their behaviours on others. Consistent with this, some researchers have indicated that teaching affective empathy has positive effects on aggressive behaviour (e.g. Feshbach & Feshbach 1982, 1983, cited in Eisenberg & Mussen, 1989).

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