Moral self and moral emotion expectancies as predictors of anti- and prosocial behaviour in adolescence: A case for mediation?

Megan Johnston and Tobias Krettenauer

Wilfrid Laurier University, Waterloo, Ontario, Canada

Previous research has linked (im)moral behaviour with both moral emotion expectancies and the self-importance of moral values, indicating that these two factors influence moral decision making and action. Disentangling the relationship between moral emotion expectancies and self-importance of moral values as predictors of adolescents' anti- and prosocial behaviour was the primary goal of this research. Two hundred five participants (mean age = 14.83 years) completed a semi-structured interview assessing moral emotion expectancies in hypothetical situations and a written questionnaire measuring self-reported prosocial and antisocial behaviour and the self-importance of moral values. Moral emotion expectancies were found to mediate the relationship between the self-importance of moral values and self-reported levels of antisocial behaviour. When predicting levels of prosocial engagement, however, scores of moral value self-importance were the primary variable associated with prosocial behaviour whereas moral emotion expectancies were not involved in this relationship. In addition, a moderating effect of age was found when predicting antisocial behaviour by moral emotion expectancies. Overall, the study confirms and significantly extends previous research on the relationship between adolescents’ moral self, moral emotion expectancies and anti- versus prosocial behaviour.

Keywords: Moral development; Moral emotions; Prosocial behaviour; Antisocial behaviour; Adolescence.
What factors influence adolescents’ decisions regarding whether or not to act morally? A significant body of literature links moral emotions and moral behaviour, indicating that moral emotion expectancies significantly contribute to moral action (see Malti & Krettenauer, 2009, for an overview). A separate line of research suggests that the self-importance of moral values represents an influential factor for moral decision making and behaviour (e.g., Hardy & Carlo, 2005). Finally, there is evidence that the self-importance of moral values and moral emotions are systematically linked (Krettenauer & Johnston, 2009; Nunner-Winkler, Meyer-Nikele, & Wohlrab, 2007). Do these factors contribute to moral decision making independently or do they depend on each other? Disentangling the relationship between moral emotion expectancies and self-importance of moral values as predictors of anti- and prosocial behaviour is the primary goal of the research presented in this paper.

Moral emotion expectancies and (im)moral action

Tangney, Stuewig, and Mashek (2007) argued that moral emotions are related to behaviour in two ways: as consequential emotions following actual behaviour and as anticipatory emotions when evaluating behavioural alternatives. Consequential emotions following actual behaviour do not necessarily affect decision making, whereas the emotions individuals anticipate likely inform their decisions to act. In line with this idea, research with children has demonstrated an association between moral emotion expectancies (i.e., the anticipation of moral emotions such as guilt and pride) and moral behaviour (Malti & Krettenauer, 2009). The connection between moral emotion expectancies and (im)moral behaviour has been also documented in research with adolescent samples. Lochman and Dodge (1994) as well as Arsenio, Gold, and Adams (2004) found that non-aggressive versus aggressive boys were more likely to indicate that they would feel happy in social situations which typically evoke negative self-evaluative emotions. These studies examining the relationship between moral emotion expectancies and behaviour compared selected groups of aggressive adolescents with non-aggressive peers. Very few studies have extended this research by investigating moral emotion expectancies in a community sample of adolescents. Krettenauer and Eichler (2006) found that moral emotion expectancies as assessed in hypothetical scenarios substantially predicted adolescents’ self-reported delinquent behaviour in a sample of non-referred teenagers. However, findings of this study have not been replicated so far.

While the connection between moral emotion expectancies and antisocial behaviour has been studied repeatedly, less attention has been given to the association between moral emotion expectancies and prosocial behaviour. Malti, Gummerum, and Buchmann (2007) as well as Malti, Gummerum, Keller, and Buchmann (2009) analyzed relationships between moral
emotion attributions (taken as an indicator of moral motivation in these studies) and prosocial behaviour in childhood. They found that moral emotion expectancies together with sympathy predicted prosocial behaviour in children.

**The moral self and (im)moral action**

A separate line of research has examined the association between the *moral self* and moral behaviour. The moral self can be conceptualized as the values and beliefs that become integrated into the self and are represented in an individual’s self-view. It is assumed that this moral self serves as a regulator of moral conduct (Blasi, 1995; Emde, Biringen, Clyman, & Oppenheim, 1991; Kochanska, 2002). In order to maintain self-consistency, moral behaviour may be shaped by the self-view that individuals have of themselves. Based on a review of several models of early and middle childhood, Harter (1998) found consensus in the belief that the self increasingly acts as a guide; roles and values become internalized as personal standards of conduct which regulate behaviour. This association continues to develop as adolescents form moral identities (Hart, 2005).

The importance of moral values to the self has been shown to relate in particular to prosocial engagement. Hart, Yates, Fegley, and Wilson (1995) demonstrated that individuals deeply committed to the care of others were more likely to use moral goals and moral personality traits when asked to describe themselves, as compared to a matched group of peers. Aquino and Reed (2002) demonstrated that a measure of self-importance of moral characteristics to an individual’s identity was related to several behavioural outcomes, including self-reported levels of volunteerism. Hardy (2006) demonstrated that an individual’s prosocial identity positively predicted his or her overall prosocial behaviour (see also Hardy & Carlo, 2005, for a review of the theory and research linking the moral self to moral behaviour).

Thus, research demonstrates a connection between the moral self (i.e., the self-importance of moral values) and measures of moral action. However, the majority of this evidence comes from research involving measures of prosocial behaviour. So far there is only one published study that documented a relationship between self-importance of moral values and antisocial behaviour (Barriga, Morrison, Liao, & Gibbs, 2001). The findings reported in that study have not been replicated so far.

**Moral emotions and the moral self**

Research demonstrates associations between moral emotion expectancies and antisocial action, on the one hand, and between the moral self and prosocial action, on the other. Theoretically, it also seems plausible that a
relationship between moral emotions or emotion expectancies and the moral self exists (see Krettenauer, Malti, & Sokol, 2008). In general, emotions serve as signals demarking those aspects of the person–environment relationship that are especially important and worth acting upon. Emotions thus indicate self-relevance. Correspondingly, Tracy and Robins (2004) argued that self-conscious emotions are elicited through appraisals of identity–goal relevance. According to Tracy and Robins, standards, rules and goals need to be considered relevant to one’s identity in order to elicit self-evaluative emotions. In line with this assumption, Krettenauer and Johnston (2009) found a substantial correlation between the self-importance of moral values and negatively charged moral emotion expectancies in a sample of adolescents. In a similar vein, Nunner-Winkler and colleagues (2007) reported a significant correlation between self-importance of moral values and moral emotion attributions as a measure of moral motivation. Thus, there is direct empirical evidence for a systematic relation between the self-importance of moral values and moral emotion expectancies.

The present research

The present study aimed at a variety of interrelated goals. First, the study was meant to replicate important findings on the relationship between moral emotion expectancies, moral self and (im)moral behaviour that have been documented repeatedly in the past. As described before, a systematic relationship was found between adolescents’ moral emotion expectancies and antisocial behaviour, with lack of moral emotion expectancies in adolescents shown to be associated with higher levels of antisocial behaviour. At the same time, research bore out a systematic relation between the self-importance of moral values and prosocial action. The more important moral values are for individuals’ self-concepts the more often they engage in prosocial activities. However, research on emotion expectancies and antisocial behaviour, as well as research on self-importance of moral values and prosocial action, was mostly based on highly selected groups of adolescents (e.g., clinically referred delinquent boys or groups of volunteers nominated because of outstanding prosocial engagement). It is essential to replicate findings from these highly selected samples in non-selected groups of adolescents in order to determine the generalizability of previous findings to the general adolescent population. This was the first goal of the present study.

The second goal was to extend previous research by investigating relationships between moral emotion expectancies, the self-importance of moral values and (im)moral action that have been largely neglected so far. As described before, research on the relation between moral emotion expectancies and adolescents’ prosocial behaviour is missing. As well, the
relationship between self-importance of moral values and antisocial behaviour has been addressed very rarely so far. Both relationships were investigated in the context of the present study. Theoretically, it was expected that moral emotion expectancies would predict adolescents’ prosocial behaviour to the same extent that they predict antisocial behaviour. Self-importance of moral values, in turn, should be related to prosocial as well as antisocial behaviour.

The third, theoretically most important goal of the study was to consider moral emotion expectancies and the self-importance of moral values simultaneously as predictors of (im)moral action. This has not been done in any study so far. It can be assumed that moral emotion expectancies are related to (im)moral action and, at the same time, to the self-importance of moral values. Moral emotion expectancies and self-importance of moral values, therefore, might overlap as predictors of (im)moral action. More specifically, the expectancy of moral emotions can be seen as one process through which the self-importance of moral values regulates action. As self-evaluative emotions serve to inform individuals about the compatibility of their behaviour with their identity goals they have the potential to regulate future behaviour (Blasi, 1999; Carver & Scheier, 1998). Thus, moral emotion expectancies may function as a mediator through which the self-importance of moral values exerts an influence on behaviour. This mediating relationship was investigated in the present study for both antisocial and prosocial behaviour.

In addition to these analyses, this study explored the potentially moderating role of age in the proposed relationships between moral self, moral emotion expectancies and behaviour. Thus, it was investigated whether these relationships were consistent over time or whether they changed in the course of adolescent development. It is plausible to assume that the relationship between moral emotion expectancies and behaviour becomes stronger with age since older individuals may be better able to give reliable reports of their emotion expectancies in particular when it comes to reporting mixed emotions. In a similar vein, moral self scores might become more predictive of (im)moral behaviour with age as the moral self is generally assumed to consolidate over the course of adolescent development (e.g., Arnold, 1993; Damon, 1996).

METHOD

Participants

Participants included 205 adolescents from grades 7 (n = 48, 10 males), 9 (n = 53, 19 males), and 11 (n = 54, 18 males), in addition to a sample of first-year university students (n = 50, 14 males). The participants ranged in
age from 11.33 to 19.08 years ($M = 14.83$, $SD = 2.21$). The majority of participants were Caucasian ($n = 156$; 76.1%). High-school participants were obtained from consenting schools in Southern Ontario, Canada, and were paid $15 for their involvement in the study. The university students were recruited through first-year psychology courses at a mid-size university in Southern Ontario and these participants received class credit as well as monetary compensation ($15) for their participation. After providing informed consent, participants were required to complete a written questionnaire as well as an interview with trained interviewers.

**Measures**

*Interview*

The interview consisted of 18 vignettes describing everyday situations in which a moral obligation is either regarded or disregarded (nine of each type). The situations described moral conflicts that people are typically faced with in their everyday life (e.g., deciding whether or not to help someone who is hurt, wanting to steal a desirable item that one cannot afford). They involved the moral norms of property, honesty and not physically harming others. Following each vignette, participants were asked to indicate how they would feel in this situation by predicting their overall emotional experience in each situation using a 7-point Likert-type scale ranging from $1 = \text{very bad}$ to $7 = \text{very good}$ with $4 = \text{neutral (OK)}$ as the midpoint of the scale.

An overall score representing the participant’s overall strength of moral emotion expectancies was obtained separately for scenarios in which a moral norm is regarded and for scenarios in which a moral norm is disregarded. The score was calculated by summing scale ratings (ranging from 1 to 7) across all norm-regarded vignettes and the norm-disregarded vignettes, respectively. Cronbach’s alpha for the overall ratings given in response to norm-disregarded scenarios was .77, while the reliability for norm-regarded scenarios was .75. The same 7-point scale ($\text{very bad}$ to $\text{very good}$) was used for norm-regarded and norm-disregarded scenarios. Thus, a score of 36 represents a mean rating of $\text{neutral/OK}$ on both scales. Overall ratings for disregarded scenarios ranged from 10 to 46 ($M = 21.73$, $SD = 6.04$) and overall ratings for regarded scenarios ranged from 31 to 62 ($M = 49.05$, $SD = 5.95$).

*Questionnaire*

*Self-reported antisocial and prosocial behaviour.* Self-reported antisocial and prosocial behaviour was assessed by listing 29 different activities and
asking participants to indicate how often they engaged in each of these behaviours in the last year (0 = never did this, 1 = did this once or twice, 2 = did this a few times, or 3 = did this several times). Items assessing antisocial behaviour were compiled from a variety of antisocial behaviour scales (e.g., Overbeek, Vollebergh, Meeus, Engels, & Luijpers, 2001; Raaijmakers, Engels, & Van Hoof, 2005). For the present study, items were chosen based on their representativeness for the previously mentioned scales and also their applicability to the age group of present participants. The items range from minor delinquent acts, such as fare dodging, to more violent offenses, such as assault. The 20 antisocial items were found to have a Cronbach’s alpha of .78. The sum score of the antisocial items ranged from 0 to 38 ($M = 5.76$, $SD = 5.87$).

Items from the Youth Inventory of Involvement scale (Pancer, Pratt, Hunsberger, & Alisat, 2007) were used to assess prosocial behaviour. The validity of the full scale has been previously demonstrated and the scale has excellent internal consistency (Cronbach’s alpha from .88 to .90; Pancer et al., 2007). In order to obtain a measure of prosocial behaviour those nine items which related to helping behaviour were used in the context of the present study. As demonstrated by Pancer et al. (2007) these items form a reliable subscale of the Youth Inventory of Involvement. In the context of the present study this subscale had a Cronbach’s alpha of .74. Scores on the nine prosocial items ranged from 0 to 26 ($M = 14.36$, $SD = 5.18$).

**Self-importance of moral values.** The questionnaire also included the Good-Self Assessment (Barriga et al., 2001) originally developed by Arnold (1993) as an interview procedure. This scale measures the centrality of moral characteristics to an individual’s self-concept. The measure consists of 16 questions, which ask the participant: “How important is it to you that you are . . .?” Eight questions end with a moral characteristic (e.g., honest, fair, caring, dependable) while the other eight end with a non-moral but socially desirable characteristic (e.g., outgoing, funny, clever).

For each item, participants were required to select between a range of responses to state how central the characteristic in question was to their sense of self (from 1 = not important to me to 5 = extremely important to me). Summed scores of the eight moral items ranged from 17 to 40 ($M = 31.43$, $SD = 4.58$). Cronbach’s alpha for the eight moral items was .80. An overall score representing the centrality of moral values to the self was derived by using the standardized residuals from a regression predicting the centrality of moral characteristics from the centrality of non-moral characteristics. Thus, more positive scores represent a greater centrality of

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1 Items of the scale are available from the corresponding author upon request.
moral values after taking into account the centrality of non-moral but other socially desirable characteristics to that individual.

*Social desirability response bias.* Additionally, the questionnaire included a well-validated measure of socially desirable response biases developed by Stöber (2001). This scale was designed for younger age groups and has been validated in a North-American cultural context (Blake, Valdiserri, Neuendorf, & Nemeth, 2006).

**RESULTS**

To explore the relationships among the variables under study first bivariate correlations were calculated. Next, regression analyses were run with moral emotion expectancies and moral self-scores as predictors of self-reported antisocial and prosocial behaviour. Finally, it was tested whether moral emotion expectancies mediate the association between the moral self and behaviour.

**Correlational analyses**

Correlational analyses were used with the two emotion expectancy variables and the standardized residual score representing the self-importance of moral values to determine the extent to which is associated with the emotions they anticipate in moral situations. Moral emotion expectancies in disregarded scenarios and regarded scenarios were both substantially correlated with the present measure of the moral self (see Table 1). When correlating the two behavioural self-report measures with the overall emotion ratings, it was found that the overall ratings for disregarded scenarios were associated with antisocial behaviour scores but not prosocial behaviour scores, and overall ratings for regarded scenarios were correlated with prosocial behaviour scores but not with antisocial behaviour scores. Both types of self-reported moral behaviour were correlated with the self-importance of moral values scores. The self-importance of moral values score was found to correlate with both self-reported antisocial behaviour and self-reported prosocial behaviour. Thus, individuals who rated moral values as more important to their self-concept relative to non-moral values reported significantly more engagement in prosocial activities and significantly less engagement in antisocial activities.

**Regression analyses**

The first regression examined self-reported antisocial behaviour as the dependent variable and included overall emotion ratings for disregarded
scenarios, overall emotion ratings for regarded scenarios, and the self-importance of moral values as the predictors. This model was significant, $F(3, 190) = 9.34, p < .001$, with $R^2 = .13$ (see Table 2a). In this model, the only significant predictor was the overall emotion ratings for disregarded scenarios. Thus, self-reported antisocial activities were significantly predicted by the overall emotions expected in situations where a moral norm is transgressed, but was not significantly predicted by the self-importance of moral values or by emotions expected in situations where a moral norm is followed.

To ensure that the effect of emotion expectancies on antisocial behaviour could not be explained by social desirability response bias, age or gender, this regression was run a second time with emotion ratings for disregarded scenarios as the predictor and age, gender, and social desirability as controls to determine whether the emotion ratings continued to be a significant predictor of antisocial behaviour when controlling for these three other variables. In this case, all three control variables contributed significantly to the model (see Table 2b), $F(4, 192) = 18.32, p < .001$, $R^2 = .28$. Importantly, overall

### TABLE 1

Correlations among moral behavior, moral self, and emotion variables

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Overall Emotions</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prosocial</td>
<td>Antisocial</td>
<td>Regarded</td>
<td>Disregarded</td>
</tr>
<tr>
<td><strong>Behavior</strong></td>
<td>1</td>
<td>.005</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Emotions</strong></td>
<td>.162*</td>
<td>−.028</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Regarded</td>
<td>−.124</td>
<td>.335**</td>
<td>−.266**</td>
<td>1</td>
</tr>
<tr>
<td>Disregarded</td>
<td>.246**</td>
<td>−.217**</td>
<td>.298**</td>
<td>−.462**</td>
</tr>
<tr>
<td>Moral self</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: $N = 200$, *$p < .05$; **$p < .01$.

### TABLE 2

Regressions predicting self-reported antisocial behavior

<table>
<thead>
<tr>
<th>Predictors/controls</th>
<th>Standardized beta</th>
<th>$t$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Emotion ratings (regarded)</td>
<td>.101</td>
<td>1.406</td>
<td>.161</td>
</tr>
<tr>
<td>Emotion ratings (disregarded)</td>
<td>.317</td>
<td>4.082</td>
<td>.000</td>
</tr>
<tr>
<td>Moral self score</td>
<td>−.101</td>
<td>−1.288</td>
<td>.199</td>
</tr>
<tr>
<td>(b) Age</td>
<td>.151</td>
<td>2.419</td>
<td>.016</td>
</tr>
<tr>
<td>Gender (0 = male, 1 = female)</td>
<td>−.126</td>
<td>−2.018</td>
<td>.045</td>
</tr>
<tr>
<td>Social desirability</td>
<td>−.316</td>
<td>−4.956</td>
<td>.000</td>
</tr>
<tr>
<td>Emotion ratings (disregarded)</td>
<td>.260</td>
<td>4.159</td>
<td>.000</td>
</tr>
</tbody>
</table>
emotion ratings in disregarded scenarios remained a significant predictor of self-reported antisocial behaviour.

The second regression examined self-reported prosocial behaviour as the dependent variable and included the overall emotion ratings for disregarded scenarios, overall emotion ratings for regarded scenarios as well as the self-importance of moral values scores as predictors. This model was significant, $F(3, 191) = 4.29, p = .006$, with $R^2 = .07$ (see Table 3a). The only predictor in the model that was significant, however, was the self-importance of moral values. Thus, the moral self predicted self-reported prosocial activities whereas the moral emotion variables did not contribute independently to the model. Similar to the regression involving antisocial behaviour, the regression was run a second time with the self-importance of moral values as predictor and age, gender, and social desirability as controls. The score representing participants’ moral self remained significant in predicting self-reported prosocial behaviour, while none of the control variables contributed significantly to the model (see Table 3b), $F(4, 197) = 3.89, p = .005; R^2 = .07$.

**Age as a moderator.** Age-related change in the associations between moral self scores, moral emotion expectancies and self-reported behaviour was investigated for those relationships that were borne out to be significant in the previous regression analyses. Thus, it was tested whether moral emotion expectancies differentially predict antisocial behaviour depending on participants’ age. In the second step, it was analyzed whether self-importance of moral values becomes more predictive of prosocial behaviour with increasing age.

Centred variables of age and emotion expectancies in disregarded scenarios were used to calculate an interaction term. When all three variables (age, emotion expectancies and interaction) were included in a regression predicting self-reported antisocial behaviour, this interaction term was significant, $\beta = .187, t(192) = 2.90, p = .004$, with an overall $R^2$ of

**TABLE 3**

Regressions predicting self-reported prosocial behavior

<table>
<thead>
<tr>
<th>Predictors/controls</th>
<th>Standardized beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion ratings (regarded)</td>
<td>.080</td>
<td>1.081</td>
<td>.281</td>
</tr>
<tr>
<td>Emotion ratings (disregarded)</td>
<td>.003</td>
<td>0.041</td>
<td>.967</td>
</tr>
<tr>
<td>Moral self score</td>
<td>.217</td>
<td>2.682</td>
<td>.008</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.086</td>
<td>1.222</td>
<td>.223</td>
</tr>
<tr>
<td>Gender (0 = male, 1 = female)</td>
<td>.070</td>
<td>0.987</td>
<td>.325</td>
</tr>
<tr>
<td>Social desirability</td>
<td>.054</td>
<td>0.761</td>
<td>.448</td>
</tr>
<tr>
<td>Moral self score</td>
<td>.217</td>
<td>3.059</td>
<td>.003</td>
</tr>
</tbody>
</table>
.19, $F(3, 195) = 15.53, p < .001$. As indicated by the positive weight of the interaction, the association between moral emotion expectancies and antisocial behaviour became stronger with increasing age.

When a similar regression was run predicting prosocial behaviour from age, self-importance of moral values (both variables centred) and the interaction of these two variables, the interaction term was not significant, $\beta = .034, t(197) = 0.49, p = .626$, with an overall $R^2 = .07, F(3, 200) = 4.78, p = .003$. Thus, the relation between prosocial behaviour and the self-importance of moral values did not change across adolescence.

**Mediation analyses**

The hypothesis that moral emotion expectancies would represent a mediator in the relationship between the moral self and (im)moral behaviour was tested using the rationale outlined by Baron and Kenny (1986). In the case of antisocial behaviour and norm-disregarded expectancies, a regression was first used to confirm that the self-importance of moral values predict levels of self-reported antisocial behaviour, $F(1, 201) = 9.93, p = .002, R^2 = .05$ with a $\beta$ of $-.22$ for self-importance of moral values, $t(200) = -3.15, p < .001$. Next, norm-disregarded emotion expectancies were regressed on the self-importance of moral values, $F(1, 197) = 53.32, p < .001, R^2 = .21$. Finally, antisocial behaviour scores were regressed on both emotion expectancies and the self-importance of moral values. This model was significant, $F(2, 195) = 12.72, p < .001, R^2 = .12$. When emotion expectancies were included in the model, the self-importance of moral values was no longer a significant predictor, $\beta = -.087, t(193) = -1.15, p = .253$, suggesting a mediating relationship. The significance of this mediating effect was tested by multiplying the unstandardized path coefficients of self and emotions and dividing the product by the standard error term, yielding a $z$ score of $4.09, p < .001$.

In the case of prosocial behaviour, level of prosocial behaviour was first regressed on the self-importance of moral values to confirm this association, $F(1, 202) = 13.00, p < .001, R^2 = .06$. Next, the self-importance of moral values were used to predict norm-regarded emotion expectancies and this model was also significant, $F(1, 198) = 19.28, p < .001, R^2 = .09$. Finally, prosocial behaviour was regressed on both the self-importance of moral values and norm-regarded emotion expectancies, $F(2, 197) = 6.94, p = .001, R^2 = .07$. In this model, the self-importance of moral values remained a significant predictor, $\beta = .218, t(195) = 3.02, p = .003$, whereas the contribution of emotion expectancies was not significant, $\beta = .085, t(195) = 1.18, p = .239$. 
DISCUSSION

The present research aimed at a variety of interrelated goals. First, it was meant to replicate well-documented findings on the relationship between moral emotion expectancies, moral self and (im)moral behaviour with a sample of non-selected adolescents. Second, it was designed to extend previous research by investigating relationships between moral emotion expectancies, the moral self and (im)moral action that have been largely neglected so far. In this context, it was also explored to what extent relationships between moral self, moral emotion expectancies and behaviour change over the adolescent years. Finally, this research was aimed at considering moral emotion expectancies and the self-importance of moral values simultaneously as predictors of (im)moral action and testing a mediating relationship. Findings are discussed according to these goals.

Previous research comparing groups of aggressive youth to non-aggressive comparison groups demonstrated an association between moral emotion expectancies and levels of antisocial behaviour (Arsenio et al., 2004). In the present sample, this relationship was confirmed for a non-selected group of adolescents. Adolescents who expected to feel less negative in hypothetical situations involving moral norm transgressions reported higher levels of delinquent activities. Thus, it seems that moral emotion expectancies are related to level of antisocial behaviour in the general adolescent population and not merely in highly aggressive youth. Strikingly, the effect of moral emotion expectancies as a predictor of antisocial behaviour increased with age. This finding suggests that moral emotion expectancies in hypothetical situations reflect individual differences in real-life emotion expectancies more accurately and reliably as teenagers grow older.

Previous research primarily involving comparisons of moral exemplars and matched peers, has found an association between the self-importance of moral values and prosocial engagement (Hart et al., 1995). This relationship was also confirmed in the present study with a sample of non-selected adolescents. Moral self scores were significantly associated with adolescents’ self-reported levels of prosocial action, suggesting that variations in self importance of moral values relate to adolescent prosocial behaviour in general, and not only in selected groups of highly committed adolescents. The relationship between self-importance of moral values and prosocial behaviour was robust across the developmental course of adolescence and not moderated by age. This finding may suggest that the moral self is already well established in early adolescence and does not undergo a process of elaboration and consolidation in the adolescent years. As developmental data regarding the moral self are largely missing (Lapsley & Hill, 2009) this
interpretation remains speculative and needs to be investigated by future research.

The present research was meant to explore relationships between moral emotion expectancies, the moral self, and self-reported prosocial and antisocial behaviour that have only sporadically been previously examined. Specifically, associations between the moral self and levels of antisocial behaviour and between moral emotion expectancies and levels of prosocial behaviour were investigated. It was found that the self-importance of moral characteristics was negatively correlated with self-reported levels of antisocial activities. At the same time, a significant correlation between self-reported levels of prosocial action and emotion expectancies in norm-regarded scenarios was found. Thus, the present study suggests that moral emotion expectancies and the self-importance of moral values are related to behavioural outcomes that have been rarely considered by previous research. However, once the self-importance of moral values and emotion expectancies are considered simultaneously as predictors of moral action, this conclusion needs to be further qualified. When predicting self-reported antisocial behaviour by both moral emotion expectancies and the self-importance of moral values, emotion expectancies were the only significant predictor. Prosocial behaviour, on the other hand, was best predicted by the self-importance of moral values. Thus, once the moral self and moral emotion expectancies were considered simultaneously as predictors of antisocial and prosocial behaviour, it was possible to confirm previous research in these domains demonstrating links between the moral self and prosocial engagement (e.g., Hart, 2005) as well as moral emotion expectancies and antisocial behaviour (e.g., Arsenio et al., 2004). It seems that this difference in research foci reflects a real difference in the factors that have the greater influence over prosocial and antisocial behaviours.

The final goal of the study was to investigate whether the expectancy of moral emotions may be an important process through which the moral self regulates action. Using mediation analysis techniques it was possible to confirm such a mediating relationship when predicting antisocial action but not prosocial action. Moral emotion expectancies in norm-disregarded situations were found to mediate the relationship between the self-importance of moral values and self-reported levels of antisocial behaviour. This finding supports the idea that self-evaluative emotions are elicited through processes of identity–goal relevance and then regulate future behaviour. However, a similar type of mediated relationship was not found when predicting levels of prosocial engagement. In this case, self-importance of moral values was the primary variable associated with prosocial behaviour and moral emotion expectancies did not mediate this relationship. This finding resonates with findings reported by Malti et al.
demonstrating that children’s moral emotion expectancies did not contribute independently to prosocial behaviour but only in interaction with sympathy. In these studies, moral emotion attributions contributed to prosocial behaviour only in children who were low in sympathy. In the present study, the assessment of moral emotion expectancies was focused on self-evaluative emotions to the exclusion of other-related emotions such as empathy and sympathy. Perhaps, disentangling the relationship between moral emotion expectancies, moral self and prosocial behaviour requires the simultaneous consideration of self-evaluative and other-oriented emotions (guilt, pride, sympathy) and their interactions. These interactions need to be investigated in depth in future research.

This study is not without limitations. First, it should be noted that in the present sample, self-reported prosocial behaviour and antisocial behaviour were not significantly correlated whereas previous research suggested an association between these two types of behaviour (e.g., Borden, Donnemeyer, & Scheer, 2001). However, it is clear that the empirical association between these variables depends on the specific behaviours that are subsumed under these broad categories. In the present study, prosocial behaviour was primarily defined by helping behaviour whereas antisocial behaviour referred to delinquent activities. Similar to the findings of the present study, Duncan, Duncan, Strycker, and Chaumeton (2002) found no significant relation between non-sport prosocial activities and delinquent behaviours. In future research, it would important to include a broader range of prosocial and antisocial activities as well as observational behavioural measures in addition to self-reports. Second, it is important to keep in mind that moral emotion expectancies were operationalized as emotions that participants anticipated in response to hypothetical scenarios. It may be the case that the emotion expectancies elicited in response to real situations differ from those elicited by hypothetical scenarios. Moreover, all effect sizes obtained in this study are small to moderate. Thus, emotion expectancies and the moral self clearly are not the only factors that influence prosocial and antisocial behaviour. Finally, the data of this study are cross-sectional and correlational in nature and do not warrant causal conclusions. As described in the introduction moral emotions are related to (im)moral action in two different ways: They follow actual behaviour and, at the same time, influence decision making about future actions. Although the idea that moral emotion expectancies influence future actions is clearly supported by empirical research (see Malti & Krettenauer, 2009), it might be the case that the empirical relationships between emotion expectancies and actions, as documented in this study, primarily reflect emotions from past behaviour rather decisions that have been made on the basis of
emotion expectancies. Thus, the proactive role emotion expectancies play in individuals’ decision making needs to be further corroborated by longitudinal and experimental studies.

REFERENCES


