The Moral Identity Questionnaire predicts prosocial behavior better than the Moral Identity Scale

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Abstract

Recently, a growing number of studies has shown the relevance of Moral Identity to explain (im)moral conduct. The present study compared two moral identity measures in two independent samples (N= 282 and 245): i.e., the Moral Identity Scale (Aquino & Reed, 2002) and the Moral Identity Questionnaire (Black & Reynolds, 2016). The results revealed that the two scales are rather modestly correlated, which raises the question of whether they are measuring the same construct. Overall, hierarchical regression analyses revealed that the Moral Identity Questionnaire subscales were the superior predictors of (self-reported) moral behavior. Accordingly, this study suggests the use of the Moral Identity Questionnaire over the use of the Moral Identity Scale for the prediction of (im)moral behavior. Future research, however, should also include behavioral measures of (im)moral behavior rather than relying on self-reported behavior only.

Keywords: Moral Identity; Moral Identity Scale; Moral Behavior; Immoral Behavior; Scale Validity

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WORD COUNT: 3230 (excl. abstract, tables, declarations, references & appendix)

Declarations

Conflicts of Interest
No potential competing interest was reported by the authors.

Availability Statement
Data and material supporting this study's findings are openly available in OSF at https://osf.io/7j2as/?view_only=b3cd43d9c2564738a9768db59b503537 (Not publicly available yet).

Ethics Approval
Both studies were approved by the ethical commission of the Faculty of Psychology and Educational Sciences at Ghent University (file number: 2021/13).

Consent to participate
Participants were asked for their informed consent before participation.

Consent for publication
Participants were asked for their informed consent to use the collected data for scientific publications before participation.

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1.   Introduction

5   In recent years, moral concepts have increasingly been used to predict behavior. Moral

6 principles describe what is considered good and right in society, and the resulting moral rules

7 are considered to be essential for living together in communities. Moral behavior, then, refers

8 to behavior that is consistent with these moral rules (Ellemers et al., 2019). Moral behavior

9 cannot be described as homogeneous. The term encompasses two different categories of

10 behavior that involve inherently different motivational processes, namely approach, and

11 avoidance. From a psychological perspective, this refers to pro- and antisocial behavior. It

12 includes helping, donating, and supporting others, as well as refraining from bad actions such

13 as lying, stealing, and cheating. Accordingly, moral behavior is a highly relevant component of

14 our civilized coexistence (Hertz & Krettenauer, 2016).

15   Moral Identity refers to the degree to which people consider being a moral person as an

16 important part of their self-concept (Aquino & Reed 2002; Blasi 1980). The quite intuitive

17 notion that moral identity is a valid predictor of moral behavior has been confirmed by a meta-

18 analysis conducted by Hertz and Krettenauer (2016). The study revealed small to moderate

19 effect sizes (r = .22). The most established moral identity measure is the Moral Identity Scale

20 (MIS; Aquino & Reed, 2002). It is designed to measure the public and private dimensions of

21 moral identity. The subscale Symbolization describes the public dimension, which refers to the

22 individual's tendency to reveal moral characteristics through public actions. The private

23 dimension is represented by the subscale Internalization, relating to the self-importance

24 ascribed to moral characteristics. Despite the frequent application of the MIS, scholars reported

25 several issues. First, the Symbolization subscale tends to yield inconsistent results concerning

26 the prediction of moral behavior across different studies. This has led many researchers to omit

27 this subscale and use only the Internalization subscale as an indicator of moral identity in their

28 studies (Jennings et al, 2015). Second, the instrument misses one important aspect, which is,

29 the importance ascribed to acting in line with the moral self-perception (i.e., moral integrity)

30 (Black & Reynolds, 2016).

31   The Moral Identity Questionnaire (MIQ; Black & Reynolds, 2016) was partly developed

32 to address the aforementioned issues with MIQ. It attempts to measure moral identity and thus

33 is intended to probe into the same latent construct as MIS. The way MIQ measures moral

34 identity, however, differs from the MIS. While the MIS directly asks about the internalization

35 of moral traits and addresses symbolization in terms of behavior, the MIQ measures moral

36 identity by the extent to which participants agree that their moral beliefs are reflected in their

37 behavioral intentions. The MIQ also encompasses two subscales. The Moral Self subscale was

38 designed to measure the actual level of identification with moral values. The Moral Integrity

39 subscale measures the extent to which an individual ascribes value to enacting actions that are

40 in line with their moral principles.

41   The objective of the present two studies was twofold. First, we wanted to investigate the

42 relationship between the two measures of moral identity (i.e., MIS and MIQ). Second, we

43 wanted to investigate in regression analyses the capacity of these two measures to predict the

44 two aspects of moral behavior, i.e., engaging in moral behavior and refraining from immoral

45 behavior (Constandt, De Waegeneer, & Willem, 2018). Therefore, both measures were

46 examined in regression analyses to assess their contribution to the predictable variance of moral

47 behavior. (Im)moral behavior was operationalized using two measures of prosocial behavior

48 and one measure of antisocial behavior.

2. Methods

2.1 **Participants**

Study 1 was conducted on a sample of first-year psychology students at Ghent University (N=282). The mean age of the sample was 19.15 years (SD=3.63), and it was composed of 56 men, 225 women, and one person who did not identify with one of these two categories. The sample size of Study 1 was determined by student availability. A sensitivity analysis using the software G*Power 3.1 (Faul et al., 2009) revealed that, given this sample size and under standard criteria ($\alpha = .05$), the minimum detectable effect size in a linear multiple regression was $\Delta R^2 = .046$[1].

Study 2 was conducted on a general sample recruited through Prolific. In this study 245 UK citizens took part. Participants could earn £1. The mean age of the sample was 34.12 years (SD=12.46), including 81 men, 160 women, and four individuals who did not identify with one of these two categories. The sample size for Study 2 was based on the smallest significant effect in Study 1 (i.e., $\Delta R^2 = 0.488$, observed when adding the MIQ to the regression model predicting dire prosocial behaviors – see Table 2). An a priori power analysis using G*Power revealed that we needed a minimum sample size of 241 participants to achieve 80% power to detect an effect of similar magnitude.

2.2 **Measures**

All scales were presented with answer choices on a Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5) except for the adapted Workplace Deviance Measure (Bennet

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[1] Note that this effect is smaller than the smallest observed significant effect (i.e., $\Delta R^2 = 0.488$, observed when adding the MIQ to the regression model predicting dire prosocial behaviors). Thus, we concluded that our study was sufficiently powered.

71   & Robinson, 2000), which offered five answer choices ranging from *never* (1) to *very often* (5).

72   The items of all administered scales can be found in the supplementary material. The scales of

73   prosocial and antisocial behavior were chosen to probe into possible differences in the

74   predictive value of the MIS and MIQ subscales.

75

76   *2.2.1   Moral Identity*

77   The Moral Identity Scale (MIS; Aquino & Reed,2002), consisting of a list of nine moral

78   attributes (Caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, kind),

79   and two subscales, i.e. Symbolization (MIS_s; S1: α=.67, $M = 2.95$, $SD = 0.67$; S2: α=.76, $M =$

80   2.95, $SD = 0.73$) and Internalization (MIS_i; S1: α=.74, $M = 4.34$, $SD = 0.50$; S2: α=.58, $M =$

81   4.53, $SD = 0.46$), each containing five items, was applied. An example item for the subscale

82   Symbolization is: *"The types of things I do in my spare time (e.g., hobbies) clearly identify me*

83   *as having these characteristics."* An exemplary item for the subscale Internalization reads:

84   *"Being someone who has these characteristics is an important part of who I am"*.

85   The second instrument was the Moral Identity Questionnaire (MIQ; Black & Reynolds,

86   2016), consisting of 20 items with the two dimensions Moral Self (MIQ_m; S1: α =.73, $M =$

87   4.08, $SD = 0.44$; S2: α =.86, $M = 4.34$, $SD = 0.51$) and Moral Integrity (MIQ_i; S1: α =.80, M

88    $= 3.99$, $SD = 0.52$; S2: α =.85, $M = 4.17$, $SD = 0.57$). Eight of the items belong to the Moral

89   Self subscale, the other twelve items belong to the Moral Integrity subscale. One example of an

90   item for the Moral Self subscale is: *"It is important for me to treat other people fairly."* A

91   sample item for the subscale Moral Integrity is: *"I will go along with a group decision, even if*

92   *I know it is morally wrong."*

93   *2.2.2   Pro- and Antisocial Behavior*

94   Prosocial Behavior was captured by an adapted version of 13 items of the Organizational

95   Citizenship Behavior Scale (Moorman & Blakeley, 1992; Haesevoets et al., 2021). The

96   modifications resulted in a homogeneous unidimensional scale, which was adapted to measure

97   prosocial group behavior (PGB) in a student population (S1: α =.78, M = 3.94, SD = 0.44; S2:

98   α =.88, M = 3.93, SD = 0.55). The scale was chosen because it has been validated in a student

99   population. An exemplary item of this scale is: *"Within the group, I am part of, I voluntarily*

100   *help new people to feel at home in the group."*

101   Additionally, the Revised Prosocial Tendencies Measure (Carlo et al., 2003) was used

102   to measure different aspects of prosocial behavior. This instrument captures six types of

103   prosocial behavior: i.e., public, anonymous, dire, altruistic emotional, and compliant. Public

104   prosocial behaviors are behaviors that are intended to benefit others but are primarily exhibited

105   when other people are present (PT_pu; four items; S1: α=.80, M = 1.85, SD = 0.73; S2: α=.78,

106   M = 1.95, SD = 0.72; sample item: *"I can help others best when people are watching me."*).

107   Anonymous prosocial behaviors refer to the tendency to help others without anyone knowing

108   it (PT_an; five items; S1: α=.77, M = 2.52, SD = 0.84; S2: α=.74, M = 3.33, SD = 0.73; sample

109   item: *"I prefer to donate money without anyone knowing."*). Dire prosocial behaviors refer to

110   helping others in an urgent emergency or crisis (PT_di; three items; S1: α=.56, M = 3.92, SD =

111   0.68; S2: α=.64, M = 3.81, SD = 0.73; sample item: *"I tend to help people who are in a real*

112   *crisis or need."*). Altruistic behavior was defined as helping others, when there is little or no

113   prospect of direct, explicit reward for one's behavior (PT_al; six items; S1: α=.69, M = 4.29,

114   SD = 0.56; S2: α=.77, M = 4.20, SD = 0.63; sample item: *"I often help even if I don't think I*

115   *will get anything out of helping.")*. Emotional prosocial behaviors are behaviors exhibited

116   primarily in very emotional situations (PT_em; five items; S1: α=.80, M = 3.76, SD = 0.71; S2:

117   α=.86, M = 3.56, SD = 0.83; sample item: *"I usually help others when they are very upset."*).

118   Compliant prosocial behaviors (PT_co; two items; S1: α=.60, *M* = 4.04, *SD* = 0.74; S2: α=.55,

119   *M* = 3.78, *SD* = 0.78; sample item: *"When people ask me to help them, I don't hesitate."*) were

120   defined as helping others when explicitly asked to do so (Carlo et al., 2003).

121   Antisocial Behavior was measured using 12 adapted items of the 19-item Interpersonal

122   and Organizational Workplace Deviance Measure (Bennet & Robinson,2000; Haesevoets et al.,

123   2021; S1: α=.84, M = 1.71, SD = 0.53; S2: α=.82, M = 1.57, SD = 0.49). The items were adapted

124   to measure antisocial group behavior (AGB) in a student population and were used as a

125   unidimensional scale (Haesevoets et al., 2021). An example item of this scale reads: *"In the*

126   *past year, you acted rudely towards someone in the group."*

3.   Results

128   A Confirmatory Factor Analysis (CFA; see Appendix A for the results) yielded acceptable

129   fit indices for a two factorial structure of MIS and MIQ as it has been reported in the original

130   studies (Aquino & Reed, 2002; Black & Reynolds, 2016).

3.1   Correlations

132   Table 1 reports the correlations between the MIS and MIQ subscales and the outcome

133   variables. The relationship between the MIS and MIQ subscales ($r \leq .36$ and .31, Study 1 and

134   2, respectively) was rather modest, considering that both instruments measure moral identity.

135   Moreover, the even weaker correlation between the MIS subscales ($r = .25$ and .18,

136   respectively) was neither anticipated.

Table 1 about here

138   As can be seen in this Table, for each of the behavioral outcome measures the MIQ

139   subscales showed correlations of stronger magnitude than the MIS subscales in both studies. A

140   particularly strong difference was noted for prosocial group behavior and altruistic prosocial

141   behavior in Studies 1 and 2, and antisocial group behavior in Study 2, revealing non-

142   overlapping confidence intervals of the MIS and MIQ subscales.

143   Within the moral identity instruments, the subscales yielded relationships of different

144   strength with the behavioral outcomes. Within the MIS, Internalization was the stronger

145   correlate for most dependent variables, whereas Symbolization only had a stronger relationship

146   in the case of prosocial group behaviors. These differences, however, were rather small as

147   testified by the overlapping confidence intervals. For MIQ, Moral Self was mostly the stronger

148   correlate for prosocial behaviors, and Moral Integrity the stronger correlate for antisocial and

149   altruistic behaviors, but again, the confidence intervals overlapped.

150   Given the definition of Symbolization as the public display of moral behavior, it is not

151   surprising that this subscale yielded a small positive correlation with public prosocial behavior.

152   The other moral identity subscales, however, showed a moderately negative correlation with

153   this behavioral outcome.

154

155   3.2 **Hierarchical Regression**

156   Next, we conducted hierarchical regression analyses with the MIS and MIQ subscales

157   as predictors and each behavioral outcome scale as the dependent variable. In these analyses,

158   the MIS and MIQ dimensions were entered in the first and second block respectively, or vice

159   versa, to assess the relative contribution of the two moral identity measures in predicting the

160   behavioral outcomes.

161   *Table 2 about here*

162   As shown in Table 2, the MIQ proved to be a better predictor of the behavioral

163   outcomes. Across Studies 1 and 2, MIQ explained more variance than MIS when entered in the

164   first block of the regression, except for two out of 16 analyses. When entered in the second

165   block after the other moral identity measure, MIQ again outperformed MIS except for two out

166   of 16 analyses. Clearly, the extent of explained variance was mostly substantially lower for MIS

167   than for MIQ. The exception to this general pattern is the report of anonymous and emotional

168   prosocial behavior in Study 1. The extent of explained variance in the latter two regression

169   analyses, however, was quite small and in the case of anonymous prosocial behavior, all beta

170   values were even non-significant.

171   A closer look at the beta values is also revealing. In all but one regression analysis, one

172   of the MIQ subscales yielded the strongest relationship. In one analysis, there was an *ex aequo*

173   between both scales. Within the MIS, Symbolization is the stronger predictor of prosocial

174   behavior, while Internalization is the better predictor for antisocial behavior. It is striking,

175   though, that, in the second study, Symbolization shows a negative value for altruistic behavior,

176   while Internalization shows a positive value.

177   For the MIQ subscales, both studies show a very similar pattern. Moral Self shows

178   higher beta values for most of the prosocial outcomes while the peak values of Moral Integrity

179   lie with antisocial and altruistic behavior. Interestingly, Moral Self shows in the first study a

180   positive significant value for public prosocial behavior.

181

182   **4.   Discussion**

183   The objective of this study was to compare two moral identity scales. The Moral Identity

184   Scale (MIS) is currently the most established instrument to measure moral identity. The Moral

185   Identity Questionnaire (MIQ; Black & Reynolds, 2016) was developed to face some

186   measurement issues regarding MIS, specifically by including a subscale that captures the

187   congruence between moral perception and moral action, namely moral integrity (Black &

188   Reynolds, 2016).

189   We obtained several interesting results. Specifically, the cross-instrument relationships

190   between the subscales of the two measures were typically rather low, in the .20-.30 range, which

191   is less strong than what can be reasonably expected for instruments that are assumed to measure

192   the same concept. Moreover, the within instrument relationship of the MIS subscales was also

193   rather weak.

194   In general, MIQ appears to be a better predictor for the selected behavioral outcomes. On

195   the one hand, it yielded correlations of greater magnitudes than MIS. In hierarchical regression

196   analyses, we were able to show that MIQ typically explains a greater portion of the predictable

197   variance than MIS, and at the subscale level, a MIQ subscale was the stronger predictor in 15

198   out of 16 regression analyses. These differences were very clear for the variables prosocial

199   group behavior, altruism, and antisocial group behavior.

200   Another noteworthy result is that Symbolization (MIS) and Moral Self (MIQ) more

201   strongly relate to positive behavior in more urgent or emotional situations or when helping

202   behavior is explicitly requested and where the helper is known, whereas the Internalization

203   (MIS) and Moral Integrity (MIQ) subscales are the stronger correlates of the absence of

204   negative behavior and unconditional helping behavior.

205   In summary, the MIQ was the better predictor of the selected behavioral outcomes. Its two

206   subscales captured different behaviors and were more predictive of both positive and negative

207   behavior than the subscales of the MIS. Accordingly, this study concludes that, when it comes

208   to predicting self-reported moral behavior, MIQ is the superior instrument.

209   However, it should be admitted that the MIQ still shows some room for methodological

210   improvements. The Moral Self subscale consists of only positively poled pro-trait items,

211   whereas the items of the subscale Moral Integrity are without exception negatively poled. It is

212   therefore unclear whether methodological artifacts like acquiescence bias are at work. This may

213   explain the findings that Moral Self predicted more positive behaviors, whereas Moral Integrity

214   predicted negative behaviors.

215   Even though we could support our findings across two independent samples, there are still

216   some issues that should be addressed. First, our study relied exclusively on behavioral outcomes

217   assessed by self-report. It might well be that the two moral identity instruments yield a different

218   pattern of results when actual behavior is involved. Indeed, what people say does not always

219   correspond to what they actually do (Schwitzgebel & Rust, 2014). Second, the fact that the two

220   moral identity instruments have different ways of assessing moral identity might also pose a

221   problem in terms of interpretation. The MIS, and in particular the Internalization subscale,

222   includes items that specifically target the extent of identification with certain moral attributes,

223   while the MIQ tries to capture this identification by assessing how moral beliefs are reflected

224   in general behavioral intentions. In other words, with the MIS Internalization scale, we searched

225   for correlations with anti- and prosocial behavior through an identification measure, whereas in

226   the case of MIQ we tried to explain behavior by an assessment based on general behavioral

227   dispositions. [2] However, at the same time, it should be stressed that this reasoning does not

228   apply to the MIS Symbolization scale which is formulated in terms of behavior as well. Future

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[2] Given that correlation analyses as well as hierarchical regressions showed the superiority of the MIQ over the MIS in predicting (im)moral behavior, we wanted to ensure that these effects were not due to criterion contamination. In particular, the items of the MIQ may probe into the same concepts as some of the behavioral measures, particularly the Prosocial Tendencies measure. For this reason, we excluded all items of the MIQ that were formulated as behavior (MIQ items 1, 5, 6, 8, 11, 13, 14, 15, 17, 18 and 19) and performed the same analyses again. The results show that almost the same effects emerge even after excluding the corresponding items. The effects found are slightly smaller. However, for each of the behavioral outcomes, the MIQ subscales showed stronger correlations than the MIS subscales in both studies, and with respect to the hierarchical regressions, the magnitude of explained variance is higher in 13 of 16 cases when the MIQ is placed in the first block or added in the second block. From this, we conclude that criterion contamination plays a minor role in this context. Tables concerning the above results are available on request from the first author.

229 research should address this question by assessing anti- and prosociality as a trait or a general

230 inclination rather than as a behavior.

231   However, the present results provide researchers with a better way to consider different

232 types of behaviors when studying the effects of moral identity. As described above, the

233 Internalization subscale is often used singularly without any assessment of the Symbolization

234 subscale. But, as shown in this study, while Internalization is a good predictor of negative

235 behavior, it has only limited explanatory value for a range of positive behavioral outcomes. In

236 this study, the MIQ was shown to encompass two effective subscales that have been proven to

237 be stronger correlates than MIS for different types of pro-and antisocial behavior.

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283   **6.   Appendix A**

284

Confirmatory factor analysis for the confirmation of the factor structure within the Moral Identity Scale and the Moral Identity Questionnaire in two studies

Model		Chi-Square	Df	Chi-Square/DF	RMSEA	SRMR
MIS (2 Factors)	Study 1	114.08	34	3.36	.091	.072
	Study 2	102.16	34	3.00	.090	.073
MIQ (2 Factors)	Study 1	463.25	169	2.74	.079	.074
	Study 2	329.08	169	1.95	.062	.056

Note. We chose to not report CFI or other incremental fit indices as they may not be very informative if the baseline model's RMSEA < 0.158 (Kenny, Kaniskan, & McCoach, 2015).

Tables for the article: The Moral Identity Questionnaire predicts prosocial behavior better than the Moral Identity Scale

Table 1

Correlations between Moral Identity subscales and between Moral Identity and outcome measures with respective confidence intervals

		MIS-s	MIS_i	MIQ_m	MIQ_i	PGB	PT_pu	PT_an	PT_di	PT_al	PT_em	PT_co	AGB
MIS_s	Study 1	-	.25**	.23**	.01	.18**	.13*	.12	.16**	-.04	.19**	.14*	-.06
			(.13,.35)	(.11,.33)	(-.11,.13)	(.07,.29)	(.15,.24)	(-.00,.23)	(.05,.28)	(-.16,.08)	(.07,.30)	(.02,.25)	(-.18,.05)
	Study 2	-	.18**	.16*	.18**	.33**	.12	.25**	.22**	.00	.17**	.22**	-.07
			(.06,.29)	(.03,.28)	(.06,.30)	(.21,.43)	(-.00,.24)	(.13,.36)	(.10,.34)	(-.12,.13)	(.04,.29)	(.09,.33)	(-.19,.06)
MIS_i	Study 1		-	.36**	.27**	.13*	-.21**	-.03	.21**	.22**	.14*	.15*	-.32**
				(.25,.45)	(.16,.38)	(.01,.24)	(-.32,-.09)	(-.15,.09)	(.09,.32)	(.10,.32)	(.03,.26)	(.03,.26)	(-.43,-.22)
	Study 2		-	.31**	.23**	.18**	-.30**	.20**	.22**	.30**	.20**	.25**	-.23**
				(.20,.42)	(.11,.34)	(.05,.30)	(-.41,-.18)	(.07,.31)	(.10,.34)	(.18,.41)	(.07,.31)	(.13,.36)	(-.34,-.10)
MIQ_m	Study 1			-	.40**	.41**	-.06	.11	.29**	.31**	.19**	.33**	-.36**
					(.30,.50)	(.31,.51)	(-.17,.06)	(-.01,.22)	(.18,.39)	(.20,.42)	(.07,.30)	(.22,.43)	(-.46,-.26)
	Study 2			-	.66**	.56**	-.26**	.26**	.32**	.49**	.24**	.41**	-.37**
					(.59,.73)	(.46,.64)	(-.38,-.14)	(.14,.38)	(.21,.43)	(.38,.58)	(.12,.36)	(.30,.51)	(-.47,-.26)
MIQ_i	Study 1				-	.26**	-.39**	.00	.17**	.52**	.07	.14*	-.50**
						(.16,.37)	(-.49,-.29)	(-.11,.12)	(.05,.28)	(.43,.60)	(-.05,.19)	(.02,.25)	(-.58,-.41)
	Study 2				-	.47**	-.38**	.32**	.16**	.62**	.10	.29**	-.47**
						(.36,.56)	(-.48,-.26)	(.21,.43)	(.04,.28)	(.54,.70)	(-.02,.23)	(.17,.40)	(-.56,-.36)

Note. ** *p* < .01 * *p* < .05. Confidence intervals between parentheses. MIS_s = Symbolization; MIS_i = Internalization; MIQ_m = Moral Self ; MIQ_i = Integrity; PGB = Prosocial Group Behavior; PT_pu = Prosocial Tendencies (PT) - public; PT_an = PT – anonymous; PT_di = PT – dire; PT_al = PT – altruistic; PT_em = PT – emotional; PT_co = PT - compliant; AGB = Antisocial Group Behavior .

Moral Identity

Table 2

Hierarchical regression analyses with MIS and MIQ subscales as predictors and Prosocial Group Behavior, Prosocial Tendencies, and Antisocial Group Behavior as dependent variables: Percentage of variance explained, change in explained variance, and beta values of subscales

Study 1	PGB	PT_pu	PT_an	PT_di	PT_al	PT_em	PT_co	AGB
ΔR^2 MIQ (block 1)	18.36 %	16.73 %	1.29 %	8.68 %	28.57 %	3.59 %	10.58 %	27.95 %
ΔR^2 MIS (block 2)	1.35 %	3.96 %	1.55 %	1.87 %	0.92 %	2. 58 %	0.46 %	2.36 %
(ΔF) 1→ 2	2.32	6.92**	2.21	2.90	1.80	3.80*	0.72	4.71**
ΔR^2 MIS (block 1)	4.11 %	7.75 %	1.68 %	5.57 %	5.49 %	4.60 %	3.20 %	10.55 %
ΔR^2 MIQ (block 2)	15.60 %	12.94 %	1.16 %	4.88 %	23.99 %	1.57 %	7.84 %	19.76 %
(ΔF) 1→ 2	26.91**	22.59**	1.65	7.55**	47.13**	2.31	12.23**	39.28**
Total R^2	19.71 %	20.69 %	2.84 %	10.56 %	29.49 %	6.17 %	11.0 %	30.31 %
β MIS_s	.12*	.15**	.11	.09	-.09	.14*	.06	.02
MIS_i	-.06	-.18**	-.09	.10	.07	.06	.02	-.17**
MIQ_m	.35**	.13*	.12	.21**	.13*	.14*	.30**	-.15*
MIQ_i	.14*	-.40**	-.02	.06	.45**	-.00	.01	-.39**
Study 2	PGB	PT_pu	PT_an	PT_di	PT_al	PT_em	PT_co	AGB
ΔR^2 MIQ (block 1)	32.69 %	14.19 %	10.90 %	10.86 %	39.79 %	6.41 %	16.88 %	22.26 %
ΔR^2 MIS (block 2)	5.28 %	9.70 %	4.41 %	4.37 %	3.83 %	3.17 %	3.37 %	1.30 %
(ΔF) 1→ 2	10.23**	15.29**	6.26**	6.19**	8.16**	4.20*	5.07**	2.04
ΔR^2 MIS (block 1)	12.01 %	11.81 %	8.58 %	8.38 %	9.04 %	5.65 %	9.14 %	5.17 %
ΔR^2 MIQ (block 2)	25.98 %	12.08 %	6.74 %	6.86 %	34.58 %	3.92 %	11.11 %	18.39 %
(ΔF) 1→ 2	50.52**	19.04**	9.56**	9.71**	73.61**	5.21**	16.72**	28.87**
Total R^2	37.98 %	23.89 %	15.32 %	15.24 %	43.62 %	9.58 %	20.25 %	23.56 %
β MIS_s	.24**	.23**	.18**	.17**	-.14**	.13*	.14*	.04
MIS_i	-.03	-.26**	.10	.12	.17**	.12	.11	-.12*
MIQ_m	.43**	.04	.05	.34**	.09	.26**	.35**	-.08
MIQ_i	.14*	-.38**	.24**	-.12	.55**	-.12	.01	-.39**

Note. ** $p < .01$ * $p < .05$.; MIS = Moral Identity Scale; MIQ = Moral Identity Questionnaire; MIS_s = Symbolization; MIS_i = Internalization; MIQ_m = Moral Self ; MIQ_i = Integrity; PGB = Prosocial Group Behavior ; PT_pu = Prosocial Tendencies (PT) - public;   PT_an = PT – anonymous; PT_di = PT – dire; PT_al = PT – altruistic; PT_em = PT – emotional; PT_co = PT - compliant; AGB = Antisocial Group Behavior.