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Self-Control Moralization: The Role of Moral Identity and Moral Foundations in Young Adults

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ABSTRACT

Despite the morality and self-control relationship having been studied in the past, there is still not enough information about how different moral variables, and their possible interaction, affect self-control levels; especially when referring to young adulthood, a critical period for development of self-control and morality. Within the framework of self-control moralization, the current study aimed to explore whether self-control scores were affected by levels of moral identity and binding-individualizing foundations through early adulthood. Data were obtained by an online survey from a non-probabilistic sample (n=626) of young adults from Bolivia. Having found significant correlations between variables, hypotheses were tested employing t-tests and an ANCOVA, with age as a covariate. Findings showed that binding foundations, moral identity, age and the interaction between moral identity and both types of moral foundations had a significant effect on self-control scores and marginal means, with small to moderate effect sizes. Finally, finding's implications within the theoretical framework of self-control moralization are discussed.

Keywords
Moralization; moral identity; moral foundations; self-control; young adulthood

RESUMEN

A pesar de que la relación entre la moralidad y el autocontrol ha sido estudiada en el pasado, todavía no hay suficiente información sobre cómo las diferentes variables morales en simultáneo, y su posible interacción, afectan a los niveles de autocontrol; especialmente en la adultez temprana, un período crítico para el desarrollo del autocontrol y la moralidad. En el marco de la moralización del autocontrol, el presente estudio buscó explorar si las puntuaciones de autocontrol son afectadas por los niveles de identidad moral y los fundamentos vinculantes-individualizadores a lo largo de la edad adulta temprana. Los datos se obtuvieron mediante una encuesta en línea de una muestra no probabilística (n=626) de adultos jóvenes de Bolivia. Habiendo encontrado correlaciones significativas, se probaron las hipótesis empleando la prueba t de Student y un ANCOVA, con la edad como covariable. Los resultados mostraron que los fundamentos vinculantes, la identidad moral, la edad y la interacción entre la identidad moral y ambos tipos de fundamentos morales tuvieron un efecto significativo sobre las puntuaciones y medias marginales de autocontrol, con tamaños de efecto pequeños a moderados. Finalmente, se discuten las implicaciones de los resultados en el marco teórico de la moralización del autocontrol.

Palabras clave
Moralización; identidad moral; fundamentos morales; autocontrol; adultez temprana

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Moralización del autocontrol: El papel de la identidad moral y los fundamentos morales en adultos jóvenes

Introduction

Self-control is the ability of an individual to alter a certain behaviour that creates a conflict of consequences and goals (Duckworth & Gross, 2024; Skinner, 1953, 1982), by inhibiting a response or postponing an immediate reward in favour of a middle or long-term goal. It is considered one of the most powerful and beneficial adaptations of the human species (Tangney et al., 2018), being as relevant as intelligence (Inzlicht & Berkman, 2015) for survival and achieving wellness. Low levels of self-control have been linked with different contemporary social and health issues, such as those arising from aggressive and criminal behaviour or obesity (Robson et al., 2020), substance abuse and addictions (Li et al., 2021; Pennington et al., 2019), obesity and overeating (Cobb-Clark et al., 2023; Hardee et al., 2020), and more unhealthy modifiable lifestyle patterns (Andrade & Hoyle, 2023). It is evident, then, that self-control failures transcend the individual sphere and have effects that affect at a societal level, making it relevant to look for new forms to intervene and prevent its negative consequences (Hofmann, 2024).

Although self-control caught the attention of many disciplines, when establishing the relationship between self-control and morality from a moral psychology lens, two perspectives can be distinguished (Hofmann et al., 2018). The first one implies conceiving self-control as a moral value since it allows individuals to comply with moral norms and principles socially valued and reinforced (Schloss, 2017; Wu et al., 2017). However, there is an urgent necessity to understand how morality operates in complex individual traits and behaviours to potentially alter and orient complex behaviours. Thus, the second direction proposes that it is morality which exerts an influence on self-control; this phenomenon of self-control becoming *moralized* has been less explored in the literature (Mooijman et al., 2020).

The process of moralizing self-control introduced by Rozin (1999; Rozin et al., 1997) implies that the consequences of behaviour where self-control ability is involved will be evaluated in terms of what an individual intrinsically considers as right or wrong due to the conversion of a preference into a moral value. Because moral principles are also considered strong motivators to determine success or failure when exerting control over own behaviour, the probability of self-control failures may be reduced, as the consequences are morally condemned (Mooijman et al., 2020). This theoretical proposition implies that morality exerts an effect on emotional, cognitive, and

motivational levels to successfully control one's behaviour (Hofmann et al., 2018; Xie et al., 2019; Zahn et al., 2020).

Among the moral variables, moral identity becomes theoretically relevant when addressing self-control, as it refers to some relatively stable characteristics that point out the place that morality occupies in an individual, and that determine the degree of consistency between moral thought and moral behaviour (Aquino et al., 2009; Blasi, 1994). Since individuals can appraise self-control demanding situations by framing goals oriented by their core identities or representations of themselves (Berkman et al., 2017; Duckworth & Gross, 2024), the stronger the moral identity, the stronger the consistency between the moral intention and desired behaviour since cognition, motivation and values evoked by identity facilitate goal achievement (Berkman et al., 2017). Moral identity has been linked with self-control in the past: both by self-control being required for morally valued behaviour, such as avoiding unethical behaviour and cheating (Gino et al., 2011); and more recently, by higher levels of it being required for successful self-control (Joosten et al., 2015).

In addition to the stable traits associated with identity, the Moral Foundations Theory (Graham et al., 2011, 2013; Haidt, 2013; Haidt & Graham, 2007) has gained a lot of attention during the last decades for its potentiality in explaining moral judgment and subsequent behaviour based in a more situational evaluation. This theory proposes that two groups of moral principles or foundations are present in every culture and orient individuals' behaviour: binding foundations, aiming to ensure group wellbeing; and individualizing foundations, prioritising the individual rather than the group (Zakharin & Bates, 2021). These categories are not opposed to each other, rather each category may be prioritized under certain contextual and situational conditions, claiming moral pluralism (Graham et al., 2013; Haidt, 2013). Supported by the fact that explicit norms prioritizing collective or individual well-being shape our core moral values and subsequent behaviour, self-control consequences may become moralized when particular situations evoke binding or individualizing foundations. Previous literature has tried to identify which group of foundations has a stronger effect on self-control, with inconclusive results favouring both individualizing (Hofmann et al., 2018; Silver & Silver, 2021) and binding foundations (Mooijman et al., 2020).

The present study

Morality implies numerous variables whose roles and influences need to be specified to clarify how and when self-control moralization occurs and how self-control failures are less likely to be committed (Mooijman et al., 2018). Despite both moral identity and moral foundations being previously individually linked to self-control, no evidence has been reported regarding their effects when combined, or any possible interaction given their theoretical conceptions. Moreover, considering that there are certain critical periods for the development, the existent literature suggests that during young adulthood, both self-control and moral reasoning undergo a stage of rapid development and consolidation (Anderson & Krettenauer, 2021; Kim et al., 2022; Krettenauer, 2022; Zondervan-Zwijnenburg et al., 2020). Therefore, research focused on this life stage might be valuable for understanding self-control moralization mechanisms.

To contribute to filling these gaps, the present study aims to explore whether self-control scores show a significant difference based on high and low levels of moral identity, binding and individualizing foundations during young adulthood. To do so, the following hypotheses will be tested:

- H1: We expect a positive association between moral identity and self-control.
- H2. We anticipate a positive association between individualizing foundations and self-control.
- H3. We anticipate a positive association between binding foundations and self-control.
- H4. We predict a significant interactive effect between moral identity and individualizing foundations on self-control.

H5. We predict a significant interactive effect between moral identity and binding foundations on self-control.

Method

Participants

Data from 677 people were collected, however, following the study's age criterion, we included a final non-probabilistic convenience sample of 626 participants aged between 18 and 30 years old (M = 22.87; SD = 2.66) from two cities from the La Paz region, located in the Bolivian Highlands. 61 % of the sample were women (*n* = 382); regarding the occupation, more than half reported they were exclusively students when

they were surveyed (55.8%; *n* = 349), while less than 10% reported being exclusively working (*n*= 9.4). The minimum required sample size (*n*=384) was set based on the Population Projections, 2020 Revision (Instituto Nacional de Estadisticas, n.d.) for 2020 (658,369 people aged from 18-30 years in La Paz region), setting a confidence level of 95%.

Table 1

Sociodemographic data of the sample (n=626)

	Female (*n* = 382; 61.0%)	**Male** (*n* = 232; 37.1%)	**Not stated** (*n* = 12; 1.9%)	**Total** (*N* = 626; 100%)
Age	22.68 (SD = 2.72)	23.17 (*SD* = 2.51)	23.08 (*SD* = 3.48)	22.87 (*SD* = 2.66)
Occupation				
Studies only	60.5%	47.8%	58.3%	55.8%
Works only	11.0%	6.9%	8.3%	9.4%
Studies and works	26.4%	44.0%	33.3%	33.1%
None of the above	2.1%	1.3%	0%	1.8%

Measurements

Self-Control

The 13-item Brief Self-Control Scale (BSCS) (Tangney et al., 2018) was employed, with each item rated on a 5-point scale from 1 = *"Not at all like me"* to 5 *"Very much like me"*. The Spanish-translated version by del Valle et al. (2019) was employed for this study. The BSCS assesses individual differences in self-control and has shown high consistency and validity between different studies, as it is one of the most employed instruments for measuring self-control (Garrido et al., 2018). Consideration of previous studies (Garrido et al., 2018; Lindner et al., 2015; Pilarska & Baumeister, 2018) and a Confirmatory Factor Analysis (CFA) conducted in the present study, confirmed the one-factor solution among the sample with an acceptable fit (CFI = 0.94; TLI = 0.93; RMSEA = 0.07, 90% CI: 0.05-0.8; SRMR = 0.06; $X^2(65) = 246.12$; p<0.00). The Alpha (α = 0.78) and Omega coefficients (ω=0.79) reflected acceptable internal consistency.

Moral identity

We used the Self-Importance of Moral Identity Scale (MIS) (Aquino & Reed, 2002), a 10-item scale with a 7-points scale that contains two dimensions with five items each: internalization, referring to "the degree to which a set of moral traits is central to the self-concept" (e.g.,"It would make me feel good to be a person who has these characteristics") and symbolization, concerning "the degree to which those traits are expressed" (e.g., "I often wear clothes that identify me as having these characteristics") (Aquino & Reed, 2002, pp. 1272). Both subscales showed acceptable reliability (α = .70 and α = .77 respectively) and were identified as first-order factors by a CFA within our sample, high values of RMSEA and SRMS should be noticed (CFI = 0.95; TLI = 0.92; RMSEA = 0.10, 90% CI: 0.08-0.11; SRMR = 0.09; $X^2(31) = 227.90$; p<0.00). However, for purposes of the study, and since the global scale also showed acceptable internal consistency (α = 0.72; ω=0.74), a total score was calculated by the mean of all items, and based on the mean as a cut-off point, groups of low and high levels of moral identity were created.

Moral Foundations

The Spanish-translated abbreviated version of the Moral Foundations Questionnaire (MFQ-20) (Graham et al., 2011), including 20 of the 30 original 6-point Likert-type items, was employed for this study, which is provided by the original authors on their website moralfoundations.org. Despite the instrument assessing five moral foundations (Care/Harm; Fairness/Cheating; Loyalty/Betrayal; Authority/Subversion; and Purity/Degradation), for research purposes, we categorized them into binding (Loyalty/Betrayal; Authority/Subversion; and Purity/Degradation) and individualizing foundations (Care/Harm; Fairness/Cheating) as in previous studies (Doğruyol et al., 2019; Olivera La Rosa & Saldarriaga, 2017; Silver & Silver, 2021). CFA showed an acceptable fit for the two/factor structural solution, high values of RMSEA and SRMS should be noticed (CFI = 0.91; TLI = 0.90; RMSEA = 0.09, 90% CI: 0.08-0.10; SRMR = 0.09; $X^2(166) = 999.24$; p<0.00) and acceptable internal consistency coefficients for both individualizing (α = 0.73; ω=0.74) and binding (α = 0.82; ω=0.82) foundations were found within the sample. For each factor, final scores, and the mean as a cut-off point were employed to create high- and low-value groups.

Procedure

A pilot study (n = 25) was carried out to verify that all instructions and items were clear and understandable. Feedback provided during this initial phase allowed us to confirm that all items were easily understood and that no further clarifications or corrections were needed. Instruments were presented on *Google Forms*, and official data collection started with an open call for participation on social media platforms (Facebook and Instagram), specifying that people aged between 18- and 30 years old living in La Paz or El Alto cities could participate. For submitting the questionnaire, all questions needed to be answered to avoid missing data. After the survey, a message to encourage participants to share the link with family and friends who meet age and location criteria was presented. Data were collected between September and October 2020.

Ethical considerations

Ethical approval was not required due to the study design and the anonymity of the participants. However, informed consent was required for taking part in the study. Additionally, to guarantee ethical standards, and based on the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2017), we specified - through the callout and the survey's informed consent- that participation was voluntary, anonymous, and confidential, and that risks of any type were associated with the participation.

Data analysis

Descriptive statistics (mean, standard deviation, median, minimum and maximum points) were calculated for each scale and subscale. Subsequently, bivariate and partial correlations were performed between the dependent variable (self-control), the independent variables (moral identity, binding, and individualizing foundations) and age. Despite the total score of self-control originating from ordinal data, several authors defend the fact that it can be subjected to parametric analysis if: a) Likert- type scale has no less than 5 points and b) if kurtosis and skewness for the total scores are no higher than 1 or lesser than -1 (Barbaranelli, 2003; Carifio & Perla, 2008). Under such an argument, our exploratory analysis showed that 5% trimmed mean and median had similar values (39.27 and 39.00 respectively); and the skewness (0.12) and kurtosis (0.06) were within the

accepted range to suggest that our dependent variable could be treated as relatively normal distributed and allowed us to proceed with further analysis.

To explore differences in self-control scores based on each independent variable, *t*-test scores and their effect sizes were calculated, including a Levene's test for checking for homogeneity of variance; when this assumption was violated, the nonparametric U de Mann-Whitney test was preferred. Finally, a two-way analysis of covariance (ANCOVA) was calculated after checking for the statistical assumptions of linearity, homogeneity, independence of observations and normally distributed residuals. The model included the three independent variables, their possible interactions, and age as a covariate. To facilitate interpretation, marginal means of self-control were also estimated based on low- and high-level groups of the independent variables. Additionally, a confirmatory factor analysis for each measure with unweighted least squares (ULS) as the estimation method was performed and pairwise missing data handling. Statistical significance was based on a *p*-value <.05, and correlation and effect sizes were interpreted based on the criteria provided by Cohen (2013). All data analysis was performed in IBM SPSS V.26 and JASP V.0.19.0.0.

Results

Descriptive statistics for each variable and the coefficients for their respective bivariate correlations are presented in Table 2. As may be noticed, participants got higher mean scores for individualizing foundations compared to binding foundations, and the three independent variables showed a negatively skewed distribution, reflecting a tendency for higher values. When referring to the bivariate correlations, all independent variables and age were significantly and positively related to self-control, suggesting that higher values of each independent variable were related to higher values of self-control; moral identity had the higher correlation coefficient (r=0.21; p<.01), and individualizing foundations had the lowest but still significant correlation (r=0.09; p<.05). As obtained coefficients may be considered low or weak according to some authors (Cohen, 2013; Schober et al., 2018), partial correlations were employed to make sure that the obtained significant relations were not due to "indirect between-attribute interactions of other attributes not being tested" (Zhang, 2015, pp. 65). After controlling for the other variables, the results of each correlation remained significant.

Table 2

Descriptive Statistics and bivariate correlations

	M	SD	Skewness	Kurtosis	1	2	3	4	5
Self-control (1)	3.03	0.58	0.11	0.06	1.00				
Age (2)	22.87	2.66	0.67	0.28	.13**	1.00			
Moral identity (3)	4.95	0.87	-0.50	0.51	.21**	-0.04	1.00		
Individualizing foundations (4)	5.18	0.58	-1.01	1.41	.09*	-0.03	.48**	1.00	
Binding foundations (5)	4.17	0.80	-0.28	0.36	.18**	0.07	.42**	.39**	1.00

Nota. **= Correlation is significant at the 0.01 level (2-tailed); *= Correlation is significant at the 0.05 level (2-tailed).

When assuming equal variances, the t-test analysis showed significant differences in the self-control scores between participants with high (M = 40.78; SD = 7.35) and low (M = 38.06; SD = 7.41) values of moral identity (t = 4.61; p <.01; d = .38). Similarly, high- (M = 40.49; SD = 7.33) and low- (M = 38.28; SD = 7.52) values of binding foundations showed significant differences in self-control scores (t = 3.71; p <.01; d = .30). Notice that the Cohen's d effect sizes for moral identity and binding foundations are interpreted as moderate to low. Since homogeneity of variances was not met (F = 10.69; p < .01) the Mann-Whitney test pointed out that self-control scores did not significantly differ between participants with low (Mean rank: 305.75) and high levels (Mean rank: 322.54) of individualizing foundations (Z = 1.16, p = .246).

Finally, when assuming equal variances (F_7=1.30; p=0.25), the ANCOVA model pointed out that, groups based on moral identity (F_1=12.11; p<0.001; η2=.02) and binding foundations values (F_1=3.99; p<0.05: η2=.01) showed statistically significant differences on self-control when taking age as a covariate, which also had a significant effect in the dependent variable scores age (F_1=13.88; p<0.001; η2=0.02). Individualizing foundations showed no significant differences in self-control scores (F_1=0.15; p=0.49). Effect sizes pointed out that the independent variables that showed statistical significance when introduced in the model had a small effect size among the sample (Cohen, 2013).

Additionally, the only significant interaction found included the three independent variables (F_1=4.91; p<.05; η2=.01). This interaction is reflected in Table 3 and the fact

that the highest marginal mean was exhibited by participants with high moral identity, high individualizing foundations and high binding foundations (*M*=3.26, *SE*=0.05, 95%*CI* [3.16, 3.36]); and that in all the cases, the combination of groups of high levels of any of the two moral foundations and moral identity predicts higher self-control marginal means. Additionally, the lack of effect of individualizing foundations on its own on self-control is reflected in the lowest marginal mean among participants with high levels of individualizing foundations but low levels of the other two variables (*M*=2.83, *SE*=0.07, 95%*CI* [2.69, 2.98]).

Table 3

Estimated marginal means of self-control scores based on high and low levels of the independent variables when introducing age as a covariate

Moral Identity (MI)	Individualizing foundations (IF)	Binding Foundations (BF)	Marginal Mean	95% CI		SE
				Lower	Upper	
Low MI	Low IF	Low BF	2.92	2.83	3.00	0.04
High MI	Low IF	Low BF	3.12	2.96	3.27	0.08
Low MI	High IF	Low BF	2.83	2.69	2.98	0.07
High MI	High IF	Low BF	2.98	2.84	3.13	0.08
Low MI	Low IF	High BF	3.05	2.92	3.19	0.07
High MI	Low IF	High BF	3.03	2.88	3.17	0.07
Low MI	High IF	High BF	2.90	2.74	3.06	0.08
High MI	High IF	High BF	3.26	3.16	3.36	0.05

Discussion

Self-control moralization implies that self-control failure or success depends on the individual's assessment of behavioural consequences and the resolution of a goal conflict in terms of moral judgment, measured by moral foundations and identity in this study. Therefore, self-control stops being an individual preference, and its evaluation is based on what is considered morally correct (Mooijman et al., 2020; Silver & Silver, 2021). Supporting the first hypothesis of the study, our findings suggest that participants who showed higher levels of moral identity tended to show higher self-control over their behaviour. Literature suggests that high levels of moral identity imply looking for consistency between moral thinking and moral behavior; and reducing chances for self-

control failure (Aquino & Reed, 2002; Bandura, 2014; Wikström & Svensson, 2010), and theoretical approaches like the Identity-Value-Model (Berkman et al., 2017) highlight the role of the identity and self-core for orienting behaviour through cognition, motivation and core values that might facilitate solving the conflict of consequences implied in the process of moralizing self-control.

On the other hand, despite some studies such as the one performed by Silver & Silver (2019) found that individualizing foundations have a more important role than binding foundations, no supporting evidence allowed us to reject the second null hypothesis. However, one point may be noticed: moral foundations were related to each other and between groups of binding and individualizing. Therefore, they are not contrary or exclusive categories (Graham et al., 2011; Haidt & Joseph, 2004). In addition, individualizing foundations and self-control are normally contrasted from a theoretical perspective: self-control implies having to sacrifice freedom and individual welfare – both valuable when talking about individualizing foundations - in favour of the greater good in the long run (Berkman et al., 2017; Duckworth & Gross, 2024), and having to suppress selfish impulses that are contrary to social order maintenance and group preservation (Rozin et al., 1997). This perspective of self-control also serves as an explanation for rejecting the third null hypothesis: the low- and high levels of binding foundations had different self-control scores among the participants. This finding is consistent with previous studies that suggest that the motivation to maintain or increase collective welfare is important for controlling one´s behaviour (Li et al., 2021; Mooijman et al., 2018). Morality is an expression of the species that motivates its members to prioritize the long-term welfare of the group over their own (Schloss, 2017), encouraging them to control their behaviour according to the consequences that will fit communal goals; favouring self-control from young ages in collectivistic societies, with previous evidence signalling a positive correlation between self-control and binding values, but a negative correlation with individualizing values (Li et al., 2018). These moral mandates exert an effect on emotional, cognitive, and motivational levels to make effective self-control possible (Hofmann et al., 2018; Xie et al., 2019; Zahn et al., 2020).

Nowadays, self-control is one of the processes that has received significant attention within psychology and other sciences; hoping that by its increase or failure

reduction, diverse individual and social challenges may be solved (Canet Juric et al., 2016). Therefore, our findings provide new evidence for filling some of the gaps concerning how moral identity, binding, and individualizing foundations act individually and interact over self-control during young adulthood. The evidence supporting the hypotheses of significant interactions between the moral identity and both types of moral foundations (individualizing and binding) help to clarify findings by previous authors (Silver & Silver, 2021; Li et al., 2018; Joosten et al., 2015), providing a useful insight to address the social and health effects of low self-control, considering the developmental implications of young adulthood and the situational, social and cultural environment in which motivational conflicts are evoked (Hofmann, 2024). We expect this effort may serve as a background to future studies, applications, and profound reflections on the incidence of morality on behavioural control both at the individual and societal levels.

Conclusion

The present study aimed to explore whether self-control scores showed a significant difference based on high and low levels of moral identity and preferences for binding and individualizing foundations among a young adult sample. Our findings suggest that high and low levels of moral identity and binding foundation have a significant effect on self-control scores. These findings are consistent with existing literature. To date, there is evidence that conceives moral identity (Gino et al., 2011; Joosten et al., 2015) and moral foundations (Li et al., 2018; Mooijman et al., 2018; Silver & Silver, 2021) as variables capable of modifying self-control. Additionally, we found that age and an interaction between moral identity, binding and individual foundations also implied significant differences in self-control scores.

Although the small to moderate effect sizes obtained could lead to underestimations about the percentage of self-control variance that could be explained by the independent variables (Funder & Ozer, 2019), a small effect size is not trivial at all (Sullivan & Feinn, 2012. As Abelson (1985) stated, a difference with a small effect size could become maximized over time or could carry significant consequences when it becomes a joint effect of many individuals at a given time. Therefore, results may be interpreted with caution and unbiased.

Regarding some limitations of the study, causal interpretations of the results should be taken cautiously; although the theoretical framework of self-control

moralization claims a cause-effect relationship between moral variables and self-control, the cross-sectional nature of the current work cannot confirm a one-direction relationship. Further studies should aim to collect longitudinal data to clarify if the temporal changes in moral identity and moral foundations account for self-control score variations during young adulthood. Moreover, it must be noticed that collected data corresponded to a non-probabilistic and convenience sample in one region of Bolivia, therefore, results may be not representative of the general population of young adults.

Additionally, there is no evidence of previous employment of the MFQ in this geographical context, and despite trying to guarantee reliability based on statistical techniques in this study, more psychometric exploration is needed to validate the binding-individualizing foundation's structure aiming to improve the current model fit indices. Finally, being that a general self-control measure was employed, we encourage further studies to include specific measures for moralized self-control behaviours in the future and to control for additional moral and sociocultural variables, to clarify relationships and increase effect sizes.

References

Abelson, R. P. (1985). A variance explanation paradox: When a little is a lot. *Psychological Bulletin*, *97*(1), 129. https://psycnet.apa.org/fulltext/1985-11199-001.html

American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct*. https://www.apa.org/ethics/code

Anderson, D. J., & Krettenauer, T. (2021). Connectedness to nature and pro-environmental behaviour from early adolescence to adulthood: A comparison of urban and rural canada. *Sustainability*, *13*(7), 3655.

Andrade, F. C., & Hoyle, R. H. (2023). A synthesis and meta-analysis of the relationship between trait self-control and healthier practices in physical activity, eating, and sleep domains. *Personality and Individual Differences*, *205*, 112095. https://doi.org/10.1016/j.paid.2023.112095

Aquino, K., Freeman, D., Reed II, A., Lim, V. K. G., & Felps, W. (2009). Testing a social-cognitive model of moral behavior: The interactive influence of situations and moral identity centrality. *Journal of Personality and Social Psychology*, *97*(1), 123-141. https://doi.org/10.1037/a0015406

Aquino, K., & Reed, A. I. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*(6), 1423-1440. https://doi.org/10.1037/0022-3514.83.6.1423

Bandura, A. (2014). Social cognitive theory of moral thought and action. In *Handbook of moral behavior and development* (pp. 45-103). Psychology press. https://www.taylorfrancis.com/chapters/edit/10.4324/9781315807294-8/social-cognitive-theory-moral-thought-action-albert-bandura

Barbaranelli, C. (2003). AnalisideiDati. Tecniche Multivariate per la RicercaPsicologica e Sociale, Milano: LED Bentler, PM and Bonnet, DC (1980). Significance Tests and Goodness of Fit in the Analysis of Covariance Structures. *Psychological Bulletin*, *88*(3), 588-606.

Berkman, E. T., Livingston, J. L., & Kahn, L. E. (2017). Finding the "self" in self-regulation: The identity-value model. *Psychological Inquiry*, *28*(2-3), 77-98. https://doi.org/10.1080/1047840X.2017.1323463

Blasi, A. (1994). Moral identity: It's role in moral functioning (Vol. 2). *New York, NY: Garland*.

Canet Juric, L., Introzzi, I. M., Andrés, M. L., & Stelzer, F. (2016). *La contribución de las Funciones Ejecutivas a la autorregulación*. https://doi.org/10.7714/CNPS/10.2.206

Carifio, J., & Perla, R. (2008). Resolving the 50-year debate around using and misusing Likert scales. *Medical Education*, *42*(12), 1150-1152. https://doi.org/10.1111/j.1365-2923.2008.03172.x

Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2023). Self-control and unhealthy body weight: The role of impulsivity and restraint. *Economics & Human Biology*, *50*, 101263. https://doi.org/10.1016/j.ehb.2023.101263

del Valle, M. V., Galli, J. I., Urquijo, S., & Juric, L. C. (2019). Adaptación al español de la Escala de Autocontrol y de la Escala de Autocontrol-Abreviada y evidencias de validez en población universitaria. *Revista Argentina de Ciencias del Comportamiento*, *11*(2), Article 2. https://doi.org/10.32348/1852.4206.v11.n2.23413

Doğruyol, B., Alper, S., & Yilmaz, O. (2019). The five-factor model of the moral foundations theory is stable across WEIRD and non-WEIRD cultures. *Personality and Individual Differences*, *151*, 109547. https://doi.org/10.1016/j.paid.2019.109547

Duckworth, A. L., & Gross, J. J. (2024). Self-control. In *Handbook of emotion regulation, 3rd ed* (pp. 250-257). The Guilford Press.

Funder, D. C., & Ozer, D. J. (2019). Evaluating Effect Size in Psychological Research: Sense and Nonsense. *Advances in Methods and Practices in Psychological Science*, *2*(2), 156-168. https://doi.org/10.1177/2515245919847202

Garrido, S. J., Morán, V., Azpilicueta, A. E., Cortez, F., Arbach, K., & Cupani, M. (2018). Análisis de Modelos Rivales Unidimensionales y Bidimensionales de la Escala Breve de Autocontrol en Estudiantes Universitarios Argentinos. *Psicodebate*, *18*(2), Article 2. https://doi.org/10.18682/pd.v18i2.745

Gino, F., Schweitzer, M. E., Mead, N. L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behavior. *Organizational Behavior and Human Decision Processes*, *115*(2), 191-203. https://doi.org/10.1016/j.obhdp.2011.03.001

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S. P., & Ditto, P. H. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. In *Advances*

in experimental social psychology (Vol. 47, pp. 55-130). Elsevier. https://www.sciencedirect.com/science/article/pii/B9780124072367000024

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, *101*(2), 366-385. https://doi.org/10.1037/a0021847

Haidt, J. (2013). Moral psychology for the twenty-first century. *Journal of Moral Education*, *42*(3), 281-297. https://doi.org/10.1080/03057240.2013.817327

Haidt, J., & Graham, J. (2007). When Morality Opposes Justice: Conservatives Have Moral Intuitions that Liberals may not Recognize. *Social Justice Research*, *20*(1), 98-116. https://doi.org/10.1007/s11211-007-0034-z

Haidt, J., & Joseph, C. (2004). Intuitive ethics: How innately prepared intuitions generate culturally variable virtues. *Daedalus*, *133*(4), 55-66. https://doi.org/10.1162/0011526042365555

Hardee, J. E., Phaneuf, C., Cope, L., Zucker, R., Gearhardt, A., & Heitzeg, M. (2020). Neural correlates of inhibitory control in youth with symptoms of food addiction. *Appetite*, *148*, 104578. https://doi.org/10.1016/j.appet.2019.104578

Hofmann, W. (2024). Going beyond the individual level in self-control research. *Nature Reviews Psychology*, *3*(1), 56-66. https://doi.org/10.1038/s44159-023-00256-y

Hofmann, W., Meindl, P., Mooijman, M., & Graham, J. (2018). Morality and Self-Control: How They Are Intertwined and Where They Differ. *Current Directions in Psychological Science*, *27*(4), 286-291. https://doi.org/10.1177/0963721418759317

Instituto Nacional de Estadisticas. (n.d.). Proyecciones de Población, Revisión 2020. *INE*. Retrieved July 30, 2024, from https://www.ine.gob.bo/index.php/censos-y-proyecciones-de-poblacion-sociales/

Inzlicht, M., & Berkman, E. (2015). Six Questions for the Resource Model of Control (and Some Answers). *Social and Personality Psychology Compass*, *9*(10), 511-524. https://doi.org/10.1111/spc3.12200

Joosten, A., Dijke, M. van, Hiel, A. V., & Cremer, D. D. (2015). Out of Control!? How Loss of Self-Control Influences Prosocial Behavior: The Role of Power and Moral Values. *PLOS ONE*, *10*(5), e0126377. https://doi.org/10.1371/journal.pone.0126377

Kim, Y., Richards, J. S., & Oldehinkel, A. J. (2022). Self-control, Mental Health Problems, and Family Functioning in Adolescence and Young Adulthood:

Between-person Differences and Within-person Effects. *Journal of Youth and Adolescence*, *51*(6), 1181-1195. https://doi.org/10.1007/s10964-021-01564-3

Krettenauer, T. (2022). Development of moral identity: From the age of responsibility to adult maturity. *Developmental Review*, *65*, 101036. https://www.sciencedirect.com/science/article/pii/S0273229722000260

Li, J.-B., Vazsonyi, A. T., & Dou, K. (2018). Is individualism-collectivism associated with self-control? Evidence from Chinese and U.S. samples. *PLOS ONE*, *13*(12), e0208541. https://doi.org/10.1371/journal.pone.0208541

Li, S., Ren, P., Chiu, M. M., Wang, C., & Lei, H. (2021). The Relationship Between Self-Control and Internet Addiction Among Students: A Meta-Analysis. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.735755

Lindner, C., Nagy, G., & Retelsdorf, J. (2015). The dimensionality of the Brief Self-Control Scale—An evaluation of unidimensional and multidimensional applications. *Personality and Individual Differences*, *86*, 465-473. https://doi.org/10.1016/j.paid.2015.07.006

Mooijman, M., Meindl, P., & Graham, J. (2020). Moralizing Self-Control. In A. R. Mele (Ed.), *Surrounding Self-Control* (p. 0). Oxford University Press. https://doi.org/10.1093/oso/9780197500941.003.0014

Mooijman, M., Meindl, P., Oyserman, D., Monterosso, J., Dehghani, M., Doris, J. M., & Graham, J. (2018). Resisting temptation for the good of the group: Binding moral values and the moralization of self-control. *Journal of Personality and Social Psychology*, *115*(3), 585-599. https://doi.org/10.1037/pspp0000149

Olivera La Rosa, A., & Saldarriaga, L. (2017). *Fundaciones Morales en Colombia y su Relación con Actitudes Sexistas*. https://doi.org/10.13140/RG.2.2.30982.27203

Pennington, C. R., Monk, R. L., Qureshi, A. W., & Heim, D. (2019). Alcohol belongs here: Assessing alcohol-related inhibitory control with a contextual go/no-go task. *Experimental and Clinical Psychopharmacology*, *27*(5), 455-465. https://doi.org/10.1037/pha0000256

Pilarska, A., & Baumeister, R. F. (2018). Psychometric properties and correlates of the Polish version of the Self-Control Scale (SCS). In *Polish Psychological Bulletin* (Vol. 49, Issue No 1: Motivation and Social Perception: Theory and Practice). Committee for Psychological Science PAS. https://doi.org/10.24425/119476

Robson, D. A., Allen, M. S., & Howard, S. J. (2020). Self-regulation in childhood as a predictor of future outcomes: A meta-analytic review. *Psychological Bulletin*, *146*(4), 324. https://psycnet.apa.org/fulltext/2020-00476-001.html

Rozin, P. (1999). The Process of Moralization. *Psychological Science*, *10*(3), 218-221. https://doi.org/10.1111/1467-9280.00139

Rozin, P., Markwith, M., & Stoess, C. (1997). Moralization and Becoming a Vegetarian: The Transformation of Preferences Into Values and the Recruitment of Disgust. *Psychological Science*, *8*(2), 67-73. https://doi.org/10.1111/j.1467-9280.1997.tb00685.x

Schloss, J. P. (2017). Darwinian Explanations of Morality: Accounting for the Normal but not the Normative. In *Understanding Moral Sentiments* (pp. 81-122). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781351296281-6/darwinian-explanations-morality-accounting-normal-normative-jeffrey-schloss

Silver, E., & Silver, J. R. (2021). Morality and Self-Control: The Role of Binding and Individualizing Moral Motives. *Deviant Behavior*, *42*(3), 366-385. https://doi.org/10.1080/01639625.2019.1678580

Skinner, B. F. (1953). Some contributions of an experimental analysis of behavior to psychology as a whole. *American Psychologist*, *8*(2), 69. https://psycnet.apa.org/journals/amp/8/2/69/

Skinner, B. F. (1982). *Reflexiones sobre conductismo y sociedad*. Trillas México, DF. https://conductitlan.org.mx/02_bfskinner/skinner/3.%20reflexiones_conductismo_sociedad_skinner.pdf

Sullivan, G. M., & Feinn, R. (2012). Using Effect Size—Or Why the P Value Is Not Enough. *Journal of Graduate Medical Education*, *4*(3), 279-282. https://doi.org/10.4300/JGME-D-12-00156.1

Tangney, J. P., Boone, A. L., & Baumeister, R. F. (2018). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. In *Self-regulation and self-control* (pp. 173-212). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781315175775-5/high-self-control-predicts-good-adjustment-less-pathology-better-grades-interpersonal-success-june-tangney-angie-luzio-boone-roy-baumeister

Wikström, P.-O. H., & Svensson, R. (2010). When does self-control matter? The interaction between morality and self-control in crime causation. *European*

Journal of Criminology, *7*(5), 395-410. https://doi.org/10.1177/1477370810372132

Wu, C.C., Wu, W.-H., & Chiou, W.-B. (2017). Construing Morality at High versus Low Levels Induces Better Self-control, Leading to Moral Acts. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.01041

Xie, C., Bagozzi, R. P., & Grønhaug, K. (2019). The impact of corporate social responsibility on consumer brand advocacy: The role of moral emotions, attitudes, and individual differences. *Journal of Business Research*, *95*, 514-530. https://doi.org/10.1016/j.jbusres.2018.07.043

Zahn, R., de Oliveira-Souza, R., & Moll, J. (2020). Moral Motivation and the Basal Forebrain. *Neuroscience & Biobehavioral Reviews*, *108*, 207-217. https://doi.org/10.1016/j.neubiorev.2019.10.022

Zakharin, M., & Bates, T. C. (2021). Remapping the foundations of morality: Well-fitting structural model of the Moral Foundations Questionnaire. *PLOS ONE*, *16*(10), e0258910. https://doi.org/10.1371/journal.pone.0258910

Zhang, W. (2015). Calculation and statistic test of partial correlation of general correlation measures. *Selforganizology*, *2*(4), 65-77. http://www.iaees.org/publications/journals/selforganizology/online•version.asp

Zondervan-Zwijnenburg, M. A. J., Richards, J. S., Kevenaar, S. T., Becht, A. I., Hoijtink, H. J. A., Oldehinkel, A. J., Branje, S., Meeus, W., & Boomsma, D. I. (2020). Robust longitudinal multi-cohort results: The development of self-control during adolescence. *Developmental Cognitive Neuroscience*, *45*, 100817. https://doi.org/10.1016/j.dcn.2020.100817

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