

Modelo bifactorial de equilibrio moral emocional en estudiantes universitarios

Bifactorial Model of Emotional Moral Balance in University Students

Modelo bifatorial de equilíbrio moral emocional em estudantes universitários

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Resumen

El objetivo del presente trabajo fue validar y confirmar el ajuste de un modelo bifactorial de equilibrio moral emocional (EME) considerando la culpa y el orgullo como factores determinantes. Para la validez del modelo, se realizó un análisis factorial exploratorio (AFE) con 177 participantes, que se ratificó con un análisis factorial confirmatorio (AFC) con 300 personas. En el AFE se encontró una estructura de dos factores correspondientes a la culpa y el orgullo. El AFC validó el ajuste del modelo, el constructo de EME, con dos variables latentes, la culpa y el orgullo, y un total de 12 variables observables.

Palabras clave: análisis factorial, balance emocional, culpa, orgullo.



Abstract

The research objective was to validate and confirm a bifactorial model of emotional moral balance (EMB), considering guilt and pride as determining factors. An exploratory factor analysis (EFA) was executed with 177 participants and a confirmatory factor analysis (CFA) with 300 participants. In the EFA, a bifactorial structure was found, corresponding to guilt and pride. The CFA validated the EMB construct with two latent variables, guilt and pride, and a total of 12 observable variables.

Keywords: factor analysis, emotional balance, guilt, pride.

Resumo

O objetivo do presente trabalho foi validar e confirmar a adequação de um modelo bifatorial de equilíbrio emocional moral (EME) considerando a culpa e o orgulho como fatores determinantes. Para a validade do modelo, foi realizada uma análise fatorial exploratória (AFE) com 177 participantes, a qual foi confirmada com uma análise fatorial confirmatória (AFC) com 300 pessoas. No EFA, foi encontrada uma estrutura de dois fatores correspondendo à culpa e ao orgulho. O CFA validou o ajuste do modelo, o construto EME, com duas variáveis latentes, culpa e orgulho, e um total de 12 variáveis observáveis.

Palavras-chave: análise fatorial, equilíbrio emocional, culpa, orgulho.

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Introduction

Santoya, Garcés and Tezón (2018) and Cova, Deonna and Sander (2015) mention that, in the first decades of this century, research on the link of emotions with moral reasoning and daily dilemmas has had a significant increase.

Tangney, Stuewig, and Mashek (2007), Pinedo (2015), and Malti, Ongley, Dys, and Colasante (2012) have shown that compliance with moral norms, moral thinking, and behavior are importantly determined by emotions. And they point out that the moral guidelines that mark behavior are shaped by knowledge and internalized by those moral conventions. Usually the person controls her behaviors and manifests an effective moral balance (Nisan, 1991). In this sense, little research has examined the relationship between moral standards and moral emotional factors in people's behavior (Tangney et al., 2007).



In this regard, Beruchashvili, Price and Gentry (2006) clarify that the accepted level of morality represents a base of moral balance in terms of moral strengths and weaknesses. According to Horne and Powell (2016), the individual sustains their thoughts, choices and actions on this basis, in accordance with internalized social norms. These same authors assure that, from the point of view of moral balance, the individual does everything possible to compensate for any deviation in her behavior and thus, align it with social norms to balance his moral harmony.

According to Cova et al. (2015) and Greene and Haidt (2002), emotions, in addition to being windows to understand what to do, are also crossbows that promote the realization of what is correct. Thus, moral emotions are those that occur due to the full compliance or non-compliance of social interests, of the purposes of some person who is recognized as a moral authority or originated by the compliance or not of the moral duty to oneself (Cova et al., 2015).

Likewise, Bericart (2012) Vélez and Ostrosky (2006) argue that negative moral emotions, manifested in some type of distress, and positive ones, which originate a certain gratifying sensation, are balanced trying to establish a moral balance. In relation to negative and positive moral emotions, Tangney et al. (2007) and Kaplan and Tivnan (2014) point out that guilt is a fundamental negative emotion, arising from some violation of moral standards, and that it is manifested by a painful sensation; and that pride is another elemental emotion, but, unlike guilt, it is positive and brings a pleasant sensation to those who experience it. These two moral emotions are primary, commonly adaptive and self-conscious, not dependent on any other prior emotion (Prinz, 2007). However, these emotions can have an implicit or explicit self-evaluation and be consciously noticed by the human being or not. (Kaplan y Tivnan, 2014; Tangney *et al.*, 2007).

Rebega (2017) emphasizes that guilt makes the person suffer and pride produces enjoyment. It can be stated, supported by Tangney et al. (2007) and Kaplan and Tivnan (2014), that guilt is a broadly adaptive emotion, which implies a self-punishment that causes suffering to those who suffer it (Freud, 1923). This suffering in the person due to guilt is caused by having violated social norms and not complying with the self-imposed morality that guides his behavior. In this way, the person as an agent, who acts and brings bad consequences, will receive the sentence of a moral authority related to the actor, will feel the condemnatory look or some type of reproving statement. This is: a stigmatization coming



from the recognized moral judge, whether imaginary or real, who morally judges the action as something unpleasant and even monstrous (Bush, 2013; Caparrós, 1986; Orsi, 2006).

On the contrary, the moral judge can judge the agent's action as good, with high merit, and thereby stimulate a gratifying emotion, called pride. Following Tangney et al. (2007), is a pleasant emotion well valued by society, adaptive and self-conscious, which improves people's self-esteem and channels, according to moral standards and social merits, future behaviors. It should be clarified that the moral judge can be individual or represented by some social group involved (Lindenbaum, Geddes and Gabriel, 2017). In this case, the proud person will perceive the approval from the moral judge in some way. Strictly, both pride and guilt are strongly associated with the judgment of the moral judge.

The sentence perceived by the person as approving or condemning will cause an emotional affectation of guilt or pride, trying to reduce the painful sensation or maintain the pleasant sensation, respectively. In such a way that, similar to that proposed by Erlandsson (2006), the emotional moral balance is conceptualized as the difference between these two moral emotions.

Consequently, this research aimed to validate a two-factor model of emotional moral balance (EME) based on guilt and pride. This by means of an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA), at two different moments and with two respective samples.

The hypotheses formulated in the present investigation are the following:

- The two-factor EME model of guilt and pride is validated through an EFA and its adjustment is ratified through an TFA.
- Guilt and pride make up a two-factor model of the EME, whose validity is made by means of an AFC and its adjustment by means of the AFC.

Materials and method

The research had a descriptive-correlational scope. The variables were described and the incidence and interrelationship between them was analyzed. It was aimed at identifying the association of the guilt and pride variables through predictable patterns for a given population. It had a non-experimental cross-sectional design, since the variables were analyzed as they behave in the context studied, without any intervention. It was of a cross-



sectional type, because the data collection was carried out in a single period of time (Hernández, Fernández, Baptista, 2014).

Two studies were conducted. In the first, an EFA was carried out and in the second, an TFA. Both with independent samples in order to explore and confirm the number of factors of the Scale of Emotional Moral Balance (SEME). The reliability and validity tests of the instrument were also carried out.

The first study, the AFE, considered 177 participants: university students from different careers from a higher technological institute in southeastern Mexico, with an average age of 23.89 years ($SD = 6.5$), 123 female and 54 male. They were selected through a non-probabilistic convenience sampling (Etikan, Abubakar and Sunusi, 2016). This is in accordance with Hair, Black, Babin and Anderson (2014), who suggest a minimum sample size of 10 observations for each item. The SEME has 12 items, so it was fulfilled even with a greater number of participants per item (14.75).

Data capture and statistical analysis were performed with SPSS version 23 statistical software. The EFA consisted of the Bartlett and Kaiser-Meyer-Olkin (KMO) and Bartlett tests and the varimax analysis to obtain the main components of the SEME. Likewise, reliability tests were performed by calculating Cronbach's alpha and convergent and discriminant validity. For validity, the correlations were analyzed using Pearson's r coefficient between the different observed variables, items, and the latent variables, guilt and pride; positive correlations were considered evidence of convergent validity, while negative correlations and the absence of correlation were considered evidence of discriminant validity.

In the second study, a CFA was carried out, which examined 300 participants: university students from six different Mexican universities, aged 19.8 years on average ($SD = 3.25$), 189 women, 111 men; thus, as with the previous study, the suggested sample size was met (Hair et al., 2014). These participants answered the SEME in person, under the same guidelines as in the first study. The AMOS software was used, complementing the SPSS version 23 software, to confirm the factorial structure through the modeling of structural equations of the SEME. Likewise, the Cronbach's alpha reliability test and the correlation analysis for convergent and discriminant validity were performed.

Instrument

Participants answered the SEME (Annex 1), designed by Robles (2019), corresponding to the bifactorial model of guilt and pride, which assesses reactive consistency based on the sensation of horror when reading a parricide and two basic moral emotions , guilt and pride. Guilt based on the degree of the disgusting sensation and pride in the pleasurable sensation of perceived attractive self-images. Thus, the subjects judge each of the assertions about the pleasant affect of pride, which makes it possible to evaluate the relationship between the cognitive and emotional structure of moral judgment.

Reading the story of moral horror, a patricide committed by the protagonist, named Juan, stimulates in the viewer an emotional reaction, guilt or pride (Prinz, 2006, 2007). The subject's stimulus, under the question "If you were Juan, to what degree would you feel guilt (or pride) for killing your father?", Is recorded in 12 items, six on guilt and six on pride, corresponding to the stages Kohlbergian morals (Kohlberg, 1992; Kohlberg and Hersh, 1977). These are on a Likert-type scale from 1 to 10, where 1 implies not feeling anything and 10 indicates completely feeling the emotion. The EME is quantified by the difference of the sum of the guilt items minus the sum of the respective pride items.

The SEME was applied in person, in printed format, at the place of the participants; There the objective of the surveys and the evaluation scale were explained to them. Their informed consent was requested and it was clarified that the responses would be treated confidentially; They were also asked to ponder the responses and urged to express their feelings as faithfully as possible.

Results

Study 1

Exploratory factor analysis

For the validity of the model, an EFA was first performed, which previously required an appropriate KMO sample adequacy measure (Ferrando and Anguiano, 2010). In addition, the result of the Bartlett's sphericity test was statistically significant, so that a sufficient degree of relationship was demonstrated between the items of the instrument to be analyzed factorially (Table 1).



Tabla 1. Prueba KMO y esfericidad de Bartlett

Medida de adecuación muestral de KMO		0.818
Prueba de esfericidad de Bartlett	Ji al cuadrado aproximado	1265.750
	Gl	66
	Sig.	0.000

Fuente: Elaboración propia

The analysis of total explained variance indicated that the two components, corresponding to the guilt and pride factor, have variances greater than one, and between the two components they explained more than 65% of the total total variance (Table 2).

Tabla 2. Varianza total explicada

Componente	Suma de rotación de cargas cuadradas		
	Total	% de Varianza	% Acumulativo
1	4.023	33.528	33.528
2	3.862	32.185	65.713

Fuente: Elaboración propia

The main component analysis showed that the items were grouped around two components. In component one, the pride factor, six items were grouped; and in the second component, guilt, the six remaining items were grouped (Table 3).



Tabla 3. Matriz de componentes rotados

Pregunta	Clave	Componente	
		1	2
I) Solo por quitarle la vida a alguien y quizás por defenderme vaya a prisión.	Met-jc 1		0.641
2) Por matar a mi padre, yo no podría ver a mi madre a los ojos.	Met-jc 2		0.781
3) Por matar a mi padre me señalarían, además de mi madre, toda mi familia, mi novia y amigos.	Met-jc 3		0.872
4) Porque me atormentaría imaginar que las personas que más amo no pudieran vivir en armonía en sociedad y menos junto a mí por mi culpa.	Met-jc 4		0.884
5) Que traería el rechazo de la gente y de toda la sociedad por ser el asesino de su padre.	Met-jc 5		0.856
6) Porque no cumplí el principio inculcado por mi madre, el amor a la vida, la prudencia y el respeto hacia el padre.	Met-jc 6		0.710
7) Por defender mi vida y emplear lo que aprendí de defensa personal.	Met-jo 1	0.803	
8) Por defenderme bien, cuidar de mí, como me lo enseñó mi mamá.	Met-jo 2	0.784	
9) Por matar a mi padre, quien no se ocupó de mí nunca y violó a mi mamá, que siendo ladrón tendría la aprobación de la gente y cualquiera actuaría de la misma forma.	Met-jo 3	0.800	
10) Porque aparte de mi madre, toda mi familia y la sociedad me reconocerían.	Met-jo 4	0.848	
11) Que traería el reconocimiento de la gente y de toda la sociedad por castigar a alguien que no cumple con las reglas sociales ni humanas	Met-jo 5	0.838	

I2) Porque cumplí el principio de salvaguardar mi vida, principio inculcado por mi madre, el de justicia y el respeto del deber.	Met-jo 6	0.824	
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Fuente: Elaboración propia

Reliability index

The internal consistency of the SEMS was evaluated using Cronbach's alpha statistical test, the result of which was acceptable, as suggested by Nunnally (1970), who points out that an acceptable value for this test should be greater than 0.70. Likewise, each of the two dimensions, guilt and pride, yielded values greater than 0.70. These results indicated that the SEME and its two factors have good reliability for the population sample (table 4).

Tabla 4. Análisis de confiabilidad

Escala y factor	Alfa de Cronbach	Ítems
EME	0.777	12
Culpa	0.882	6
Orgullo	0.902	6

Fuente: Elaboración propia

Convergent and discriminant validity

For the analysis of the validity of the SEM, the Pearson correlation test was performed. When performing the correlation analysis between the items of the scale, values between 0.395 and .729 were obtained, which indicates that the variables share a minimum variance.

Regarding the evidence of convergent validity in Table 5, significant and positive correlations were found. The six guilt items had high positive correlations (between 0.658 and 0.872) with the guilt factor and the six pride items also highly correlated (between 0.799 and 0.8538) with the pride factor. In relation to the evidence of discriminant validity, negative and weak correlations (from -0.022 to -0.146) were found between the guilt items and the pride factor, in the same way that the six pride items correlated negatively and weakly with the guilt (de -0.026 a -0.195).



Tabla 5. Correlación de Pearson entre ítems y factores

	Culpa	Orgullo
Met-jc 1	0.658**	-0.096
Met-jc 2	0.781**	-0.022
Met-jc 3	0.861**	-0.090
Met-jc 4	0.872**	-0.093
Met-jc 5	0.855**	-0.146
Met-jc 6	0.732**	-0.097
Met-jo 1	-0.138	0.812**
Met-jo 2	-0.195**	0.803**
Met-jo 3	0.026	0.799**
Met-jo 4	-0.032	0.838**
Met-jo 5	-0.045	0.824**
Met-jo 6	-0.149*	0.833**

Fuente: Elaboración propia

Study 2

Confirmatory factor analysis

Study 2, using the CFA, evaluated the bifactorial model of the EEMO, which reported the adjustment indices shown in table 6; the value of the root mean square error RMSEA was close to 0.06, considered optimal then, and the standardized mean square residual SRMR was close to 0.05, which is why it was qualified as a good fit (Cangur and Ercan, 2015; Hu and Bentler , 1999). Complementarily, the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the goodness of fit index (GFI) were higher than 0.95, which confirms an optimal fit (Cupani, 2012; Medrano and Muñoz, 2017). Finally, another index that ratified the model was the chi squared between degrees of freedom, whose result was less than five, an acceptable value (Chión and Charles, 2016; Escobedo, Hernández, Estebané and Martínez, 2016). Given the indices provided by the CFA, it is inferred that, for the studied population, the EME construct, the model with two latent variables, guilt and pride, behaves with a total of 12 observable variables (figure 1). That is: the bifactorial model proposed and resolved by the AFE is confirmed, corresponding to the emotion of guilt and pride, where each factor integrates the six moral stages.

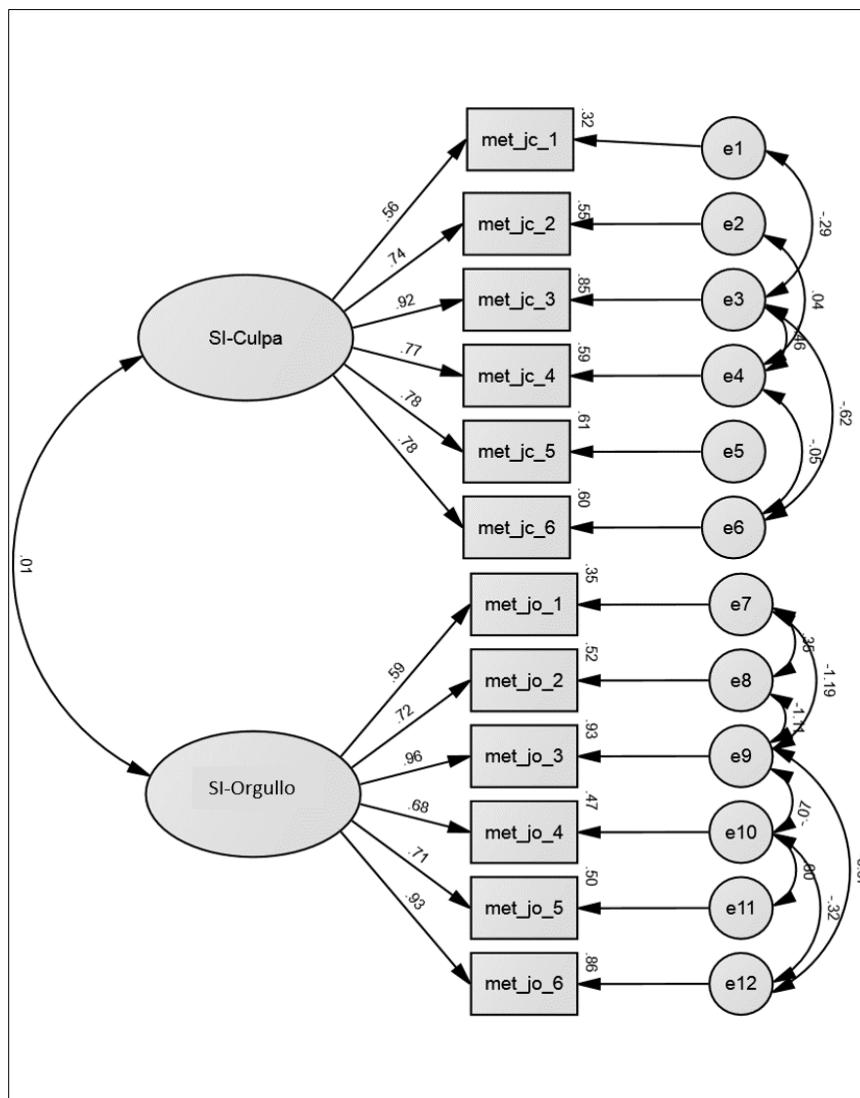


Tabla 6. Índices de ajuste del modelo bifactorial

	RMSEA	GFI	CMIN/df	SRMR	CFI	NFI	TLI
Esperado	≈ 0.06	> 0.95	< 5.0	≈ 0.05	> 0.95	> 0.95	> 0.95
Encontrado	0.054	0.961	1.874	0.0533	0.982	0.962	0.979

Fuente: Elaboración propia

Figura 1. Modelo bifactorial del EEMO



Fuente: Elaboración propia

Reliability index

The reliability values for the 12 items of the SEME of the guilt factor and the pride factor were higher than 0.80, considered as acceptable (table 7), since they are higher than the minimum (0.70) required. (Nunnally, 1970).

Tabla 7. Confiabilidad del EMO y factores

	Alfa de Cronbach	Número de ítems
EME	0.809	12
Culpa	0.880	6
Orgullo	0.883	6

Fuente: Elaboración propia

Convergent and discriminant validity

Regarding the evidence of convergent validity, Table 8 shows that significant and positive correlations were found. The six items of guilt had high positive correlations (between 0.653 and 0.829) with the guilt factor and the six of pride similarly correlated highly (between 0.700 and 0.850) with the pride factor. In relation to the evidence of discriminant validity, negative and weak correlations (from -0.036 to 0.080) were found between the guilt items and the pride factor, in the same way that the six pride items correlated negatively and weakly with the pride factor. Fault (de -0.103 a 0.154).

Tabla 8. Análisis de correlaciones de los ítems

	Culpa	Orgullo
Met-jc 1	0.653**	0.037
Met-jc 2	0.823**	-0.020
Met-jc 3	0.844**	0.021
Met-jc 4	0.800**	-0.036
Met-jc 5	0.829**	0.080
Met-jc 6	0.793**	0.047
Met-jo 1	-0.103	0.700**
Met-jo 2	-0.042	0.795**
Met-jo 3	0.056	0.781**
Met-jo 4	0.154**	0.814**
Met-jo 5	0.053	0.850**
Met-jo 6	0.010	0.828**

Fuente: Elaboración propia

Discussion

Aiming to stimulate investigations between morality and emotional factors, the present research aimed to validate and confirm a bifactorial model corresponding to the emotion of guilt and pride by applying the SEME. This through an EFA and a CFA with independent population samples.

The findings of the first analysis (EFA) contributed two factors from the SES model, corresponding to the emotions of guilt and pride. This ratified the precepts of Kaplan and Tivnan (2014) and Bericart (2012), among other authors, who suggest that EME is explained between a negative painful emotion and a positive rewarding one. This is: avoiding the pain of guilt and maintaining the joy of pride (Bericart, 2012; Vélez and Ostrosky, 2006). The principal component analysis showed a Guilt factor with six dimensions and another of pride with the respective six moral stages. That is: the EME model with two factors was demonstrated, whose reliability of Cronbach's alpha obtained acceptable values and its convergent and discriminant validity was good, since the correlations of the items of pride and guilt were high positive, while the correlations crossovers were weak negatives.

The second analysis (CFA), corroborated the bifactorial structure of the EME model with the guilt factor and the pride factor, where each one integrated six observable variables, corresponding to the six moral stages, making a total of 12 items. In this analysis, the goodness of fit of the model showed that the indices were optimal and indicated a good fit, according to Hu and Bentler (1999), Cangur and Ercan (2015) and Medrano and Muñoz (2017). It should also be noted that the validated model showed covariances between the errors of the respective observed variables, for example, between three and four, as well as between seven and eight. It is deduced that these variations, from what is stated by Kohlberg (1992), Kohlberg and Hersh (1977), are related to the contiguous stadiums and belong to the same moral level: the participant will have a guilty or shameful sense indistinctly in one of the two stages of the corresponding moral level. In this sense, as suggested by Lind (2008), it does not invalidate the fit of the model or its respective scale.

Conclusions

The bifactorial model of moral balance, based on the emotions of guilt and pride, together with the six moral stages, was validated and a good fit was observed. This through an exploratory and a confirmatory analysis, at two different times and with two respective samples. Likewise, its corresponding scale, for the researched population of university students, was constituted as an effective instrument to evaluate and diagnose moral balance, as well as an auxiliary tool to prevent deviant actions, improve moral balance and match behavior with high moral standards. or human virtues.

The results found cannot be generalized to populations other than the one addressed, since it was university students who helped to validate and adjust the bifactorial model of EME. If you want to expand the external validity of the model, it is necessary to study other populations, other than the student one.

Future lines of research

This scientific article contributes to the development of the line of research on emotional morality. It is suggested that the presented EME model works as a diagnostic tool for people. This is because when they have an emotional imbalance, they feel driven to commit wrong actions, such as acts of violence, fraud, abuse and immoral behavior in general. In such a way that, when diagnosing the level of EME, some behavioral deviation of the subject can be detected and, once detected, it is possible to prevent dire individual or collective consequences.

From the field of emotional health, a person with optimal EME does not suffer from any disorder. On the contrary, the individual with a negative imbalance towards a high degree of guilt will suffer a painful sensation. Conversely, the subject with an excessive level of pride generates in him a narcissistic disorder, an attitude of arrogance and contempt towards others. These imbalances manifest disorders in emotional health that require some type of intervention or behavioral therapy.

Finally, future research should be oriented towards coping strategies for people with emotional moral disorders that establish guidelines to increase gratifying sensations, positive emotions and also guide the recognition of the punitive of negative ones and thus optimize the EME.

References

- Bericart, E. (2012). Emociones. *Sociopedia.isa*, 1-13.
- Beruchashvili, M., Price, L. and Gentry, J. W. (2006). Striving to be Good: Moral Balance in Consumer Choice. In Ekstrom, K. M. and Brembeck, H. (eds.), *European Advances in Consumer Research* (pp. 303-308). Goteborg, Sweden: Association for Consumer Research.
- Bush, S. (2013). Horribly Wrong: Moral Disgust and Killing. *Journal Religious Ethics*, 41(4), 585-600. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/jore.12033>.
- Cangur, S. and Ercan, I. (2015). Comparison of model fit indices used in structural equation modeling under multivariate normality. *Journal of Modern Applied Statistical Methods*, 14(1), 152-167. Retrieved from <https://doi.org/10.22237/jmasm/1430453580>.
- Caparrós, L. (1986). Desbordamiento de la personalidad y horror moral en La gran Semíramis, de Virués. *Epos*, (2), 49-52. Recuperado de <https://doi.org/10.5944/epos.2.1986.9463>.
- Chión, S. and Charles, V. (2016). *Analítica de datos para la modelación estructural*. México: Pearson.
- Cova, F., Deonna, J. and Sander, D. (2015). Introduction: Moral Emotions. *Topoi*, 34(2), 397-400. Retrieved from <https://doi.org/10.1007/s11245-015-9345-0>.
- Cupani, M. (2012). Análisis de ecuaciones estructurales: conceptos, etapas de desarrollo y un ejemplo de aplicación. *Revista Tesis*, (1), 186-199. <http://www.revistas.unc.edu.ar/index.php/tesis/article/download/2884/2750>.
- Erlandsson, A. (2006). *The differences in Frequent and Intense Affect Balance when measuring Subjective Well-Being and Personality*. (Thesis advanced). Växjö Universitet, Växjö. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:vxu:diva-773>.
- Escobedo, M., Hernández, J., Estebané, V. y Martínez, G. (2016). Modelos de ecuaciones estructurales: Características, fases, construcción, aplicación y resultados. *Ciencia & Trabajo*, 18(55), 16-22. Recuperado de <https://doi.org/10.4067/s0718-24492016000100004>.



- Etikan, I., Abubakar, S. and Sunusi, R. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. Retrieved from <https://doi.org/110.11648/j.ajtas.20160501.11>.
- Ferrando, P. y Anguiano, C. (2010). El análisis factorial como técnica de investigación en psicología. *Papeles del Psicólogo*, 31(1), 18-33. Recuperado de <http://www.papelesdelpsicologo.es/pdf/1793.pdf>.
- Freud, S. (1923). *Das Ich und das Es*. Leipzig, Deutschland: Internationaler Psychoanalytischer Verlag.
- Greene, J., and Haidt, J. (2002). How (and where) does moral judgment work? *Trends in Cognitive Sciences*, 6(12), 517-523. doi:10.1016/S1364-6613(02)02011-9
- Hair, J., Black, W., Babin, B. and Anderson, R. (2010). *Multivariate Data Analysis: A Global Perspective*. Harlow, England: Pearson.
- Hernández, R., Fernández, C. y Baptista, P. (2014). *Metodología de la investigación*. Ciudad de México, México: McGraw-Hill.
- Horne, Z. and Powell, D. (2016). How Large Is the Role of Emotion in Judgments of Moral Dilemmas? *PLoS One*, 11(7), 1-19. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/27385365/>.
- Hu, L. and Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. Retrieved from <https://doi.org/10.1080/10705519909540118>.
- Kaplan, U. and Tivnan, T. (2014). Multiplicity of Emotions in Moral Judgment and Motivation. *Ethics and Behavior*, 24(6), 421-443. Retrieved from <https://doi.org/10.1080/10508422.2014.888517>.
- Kohlberg, L. (1992). *Psicología del desarrollo moral*. Bilbao, España: Desclée de Brouwer.
- Kohlberg, L. and Hersh, R. (1977). Moral Development: A Review of the Theory. *Theory into Practice*, 16(2), 53-59. Retrieved from <http://links.jstor.org/sici?si=0040-5841%28197704%2916%3A2%3C53%3AMDAROT%3E2.0.CO%3B2-%23>.
- Lind, G. (2008). The meaning and measurement of moral judgment competence revisited. A dual aspect model. In Fasko, D. and Willis, W. (eds.), *Contemporary Philosophical and Psychological Perspectives on Moral Development and Education* (pp.185-220). New Jersey, United States: Hampton Press.



- Lindenbaum, D., Geddes, D. and Gabriel, Y. (2017). Moral Emotions and Ethics in Organisations : Introduction to the Special Issue. *Journal Business Ethics*, 141(4), 645-656. Retrieved from <https://doi.org/10.1007/s10551-016-3201-z>.
- Malti, T., Ongley, F., Dys, S. and Colasante, T. (2012). Adolescents' emotions and reasoning in contexts of moral conflict and social exclusion. *New Directions For Youth Development*, (136), 27. Retrieved from <https://ezproxy.upaep.mx:2107/10.1002/yd.20036>.
- Medrano, L. A. y Muñoz, R. (2017). Aproximación conceptual y práctica a los modelos de ecuaciones estructurales. *Revista Digital de Investigación en Docencia Universitaria*, 11(1), 219-239. Recuperado de <https://doi.org/10.19083/ridu.11.486>.
- Nisan, M. (1991). The Moral Balance Model: Theory and Research. Extending our Understanding of Moral Choice and Deviation. In Kurtines, W. and Gewirtz, J. (ed.), *Handbook of Moral Behavior and Development* (pp. 213-249). New Jersey, United States: Lawrence Erlbaum Associates, Publishers
- Nunnally, J. (1970). *Introduction to Psychological Measurement*. New York, United States: McGraw-Hill.
- Orsi, R. (2006). Emociones morales y moralidad. Ideas y valores. *Ideas y Valores*, 55(131), 33-49.
- Prinz J. (2006). The emotional basis of moral judgments. *Philosophical Explorations*, 9(1), 29-43. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/13869790500492466>.
- Prinz, J. (2007). Can Moral Obligations Be Empirically Discovered? *Midwest Studies in Philosophy*, 31, 271-291. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1475-4975.2007.00148.x>.
- Pinedo, I. (2015). El factor emocional en la construcción del juicio moral: una trayectoria desde Kohlberg al horizonte de la filosofía experimental y la neurociencia cognitiva. *Revista Interdisciplinaria de Filosofía y Psicología*, 10(32), 15-25.
- Rebega, O. (2017). Gender Differences in Moral Concerns, Guilt and Shame Proness, and Empathy. *Romanian Journal of Experimental Applied Psychology*, (8), 130-135. Retrieved from <https://www.rjeap.ro/volume-8-special-issue-1-2017-pseworld-2016-proceedings/rjeap/volume-8-special-issue-1-2017-pseworld-2016-proceedings/20-paper-30-gender-differences-in-moral-concerns-guilt-and-shame-proness-and-empathy>.



- Robles, V. (2019). Introducing the Emotive Moral Competence Index (EMCI): A New Measurement of Moral Judgment. *Iranian Journal of Psychiatry and Behavioral Sciences*, 13(4).
- Santoya, Y., Garcés, M. y Tezón, M. (2018). Las emociones en la vida universitaria: análisis de la relación entre autoconocimiento emocional y autorregulación emocional en adolescentes y jóvenes universitarios. *Psicogente*, 21(40), 124-137. Recuperado de <https://doi.org/10.17081/psico.21.40.3081>.
- Tangney, J. P., Stuewig, J. and Mashek, D. J. (2007). Moral Emotions and Moral Behavior. *Annual Review of Psychology*, 58, 345-372. Retrieved from <https://doi.org/10.1146/annurev.psych.56.091103.070145>.
- Vélez, A. and Ostrosky, F. (2006). From morality to moral emotions. *International Journal of Psychology*, 41(5), 348-354. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/00207590500345898>.

Anexo 1. Escala de Equilibrio Moral Emocional (EEMO)

Instrucciones:

A continuación, encontrarás una historia. Léela con detenimiento, observando e imaginando los detalles expresados en ella. Una vez leída y comprendida la historia, encontrarás una pregunta sobre qué tan horrible te pareció la historia. Posteriormente, encontrarás seis enunciados sobre la culpa del protagonista de la historia y seis sobre el orgullo. Cada enunciado tiene que ser valorado por ti en una escala del 1 al 10. Por favor, señala con una X solo un número de la escala.

HISTORIA DE JUAN

Una noche muy lluviosa, con oscuridad profunda y alta dificultad para observar personas y baches, en un barrio de la zona conurbada de la Ciudad de México, Juan regresaba de su trabajo, cansado de su jornada y de manejar por más de una hora su automóvil hasta su casa. Una vez habiendo detenido su auto enfrente de su hogar, Juan desciende para abrir la puerta de su cochera. En ese mismo instante, un hombre, cubierto el rostro, compleción ligeramente alta y robusta, con pistola en mano, sigilosamente se acerca para despojarlo de sus pertenencias personales y de su auto.

Juan siempre en momentos angustiantes graves recordaba a su Sra. madre. Abnegada, dedicada e inteligente, le había inculcado principios y valores como el amor a la vida, la sabiduría y la prudencia. Su madre, a pesar de ser ultrajada, dio a luz a su hijo producto de tal vejación, Juan. Sin embargo, por su buena educación, Juan, soltero aún, respetaba y valoraba el recuerdo de su padre, a quien nunca conoció.

En el transcurso del asalto, al despojarse de su reloj, anillo, celular, cartera y llaves, súbitamente, en un descuido del asaltante, Juan, con destreza magistral, experimentado en la defensa personal por más de ocho años, elude e invierte el arma, con la misma mano del asaltante en su contra, disparándose al mismo momento el arma de fuego. El asaltante sale huyendo, mientras Juan, asustado y angustiado, observando una mancha de sangre en su ropa, entra a su casa... ¡No tiene absolutamente nada! Y da cuentas de lo que sucedió a su querida mamá, se cambia de ropa y se retira a descansar. Sin embargo, durante gran parte de la noche, no puede descansar, sobresaltándose y sufriendo pesadillas de aquel hombre encapuchado, quizás mal herido.

Ya entrada la madrugada, Juan concilia el sueño... Empero, a escasas dos horas, su mamá, aturdida, entra bruscamente a su recamara y con periódico en mano le da la noticia: que en el



barrio había muerto una persona a unas cuadras de su casa, de un disparo, y su foto estaba en primera plana. Después de enseñarle el diario a Juan, donde yacía el rostro e imagen de aquel cadáver, ella le expresa asombrada y horrorizada:

—¡Ese es ... era, tu padre!

¿Qué tan horrible siente tú lo que hizo Juan?

Absolutamente nada horrible	1	2	3	4	5	6	7	8	9	10	Totalmente horrible
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Si tú fueras Juan, ¿con qué grado sentirías <i>culpa</i> por matar a tu padre? Considera las siguientes razones:	1 2 3 4 5 6 7 8 9 10
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- | | |
|---|--|
| 1) Solo por quitarle la vida a alguien y quizás por defenderme vaya a prisión.
2) Por matar a mi padre, yo no podría ver a mi madre a los ojos.
3) Por matar a mi padre me señalarían, además de mi madre, toda mi familia, mi novia y amigos.
4) Porque me atormentaría imaginar que las personas que más amo no podrán vivir en armonía en sociedad y menos junto a mí por mi culpa.
5) Que traería el rechazo de la gente y de toda la sociedad por ser el asesino de mi padre.
6) Porque no cumplí el principio inculcado por mi madre, el amor a la vida, la prudencia y el respeto hacia el parente. | 1 2 3 4 5 6 7 8 9 10 |
|---|--|

Si tú fueras Juan, ¿con qué grado sentirías <i>orgullo</i> por matar a tu padre? Considera las siguientes razones:	
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- | | |
|---|--|
| 7) Por defender mi vida y emplear lo que aprendí de defensa personal.
8) Por defenderme bien, cuidar de mí, como me lo enseñó mi mamá.
9) Por matar a mi padre, quien no se ocupó de mí nunca y violó a mi mamá, que siendo ladrón tendría la aprobación de la gente y cualquiera actuaría de la misma forma. | 1 2 3 4 5 6 7 8 9 10 |
|---|--|



10) Porque aparte de mi madre, toda mi familia y la sociedad me reconocerían.	1 2 3 4 5 6 7 8 9 10
11) Que traería el reconocimiento de la gente y de toda la sociedad por castigar a alguien que no cumple con las reglas sociales ni humanas.	1 2 3 4 5 6 7 8 9 10
12) Porque cumplí el principio de salvaguardar mi vida, principio inculcado por mi madre, el de justicia y el respeto del deber	1 2 3 4 5 6 7 8 9 10