Personal risk and protective factors involved in aggressive behaviour

Raquel Gomez-Leal[1] , Alberto Megías-Robles[1] , María José Gutiérrez-Cobo[2], Rosario Cabello[2] and Pablo Fernández-Berrocal

University of Málaga, Spain 2
University of Granada, Spain

Corresponding Author: Alberto Megías-Robles, Faculty of Psychology, Department of Basic Psychology, University of Málaga, Campus Teatinos, s/n, Málaga 29071, Spain.
Email: amegias@uma.es

Abstract

The study of aggression plays a prominent role in psychology and public health, because of the important adverse consequences of such behaviour for victims, aggressors, and society in general. The General Aggression Model (GAM) provides a general conceptual framework for understanding the aggressive as a result of three stages: 1) inputs: personal and situational factors; 2) present internal states: affect, cognition, and arousal; and 3) outcomes: decision processes with a (non) aggressive result. The main objective of this research was to study the personal protective and risk factors most strongly associated with aggressive behaviour acting at the first stage of the GAM model. A total of two hundred and eighty-two young adult participants took part in this study. Participants were assessed for aggression levels and a set of the most relevant variables that have been associated with aggressive behaviour in the previous literature. Stepwise multiple regression analysis revealed that levels of aggression were mainly associated (73.2% of the explained variance) with the following protective factors: the ability to manage emotions as a component of EI, and perspective taking and personal distress as components of empathy; and with the following risk factors: negative and positive urgency as a component of impulsivity, fantasy as a component of empathy, negative affect, and expressive suppression of emotions. These findings provide a better understanding of the mechanisms underlying aggressive behaviour and provide greater empirical value to the current theoretical models. In addition, this research can help to inform the design of more successful programs for the prevention, control, and treatment of aggressive behaviour. Limitations and future lines of research are discussed.

Keywords: Aggression; Protective factors; Risk factors; Emotional intelligence; Empathy; Negative affect; Impulsivity.

Introduction

Human aggression is defined as "any behaviour directed toward another individual that is carried out with the proximate intent to cause harm" (Anderson & Bushman, 2002). Aggression is considered a problem of great relevance to society, which has a significant influence on social policies and clinical practice. Due to this, research on aggression has increased considerably in recent years, studying its characteristics, prevalence, and consequences (Lee, 2016). The negative consequences of aggressive behaviour are suffered by both the victims, including such problems as anxiety, depressive symptoms, relationship stability or even psychiatric disorders (Cullerton-Sen et al., 2008; Crick & Bigbee, 1998; O'Moore & Kirkham, 2001; Simmons, Knight, & Menard, 2018) and by the aggressors, who experience personal relationship problems or exhibit antisocial behaviours (Moffitt, 2006; Ostrov & Godleski, 2009).

The literature has postulated numerous theories to understand why people behave aggressively (e.g., Heise, 1998; Mischel & Shoda, 1995; Tedeschi & Felson, 1994). Many of these theories focus on specific variables; however, aggression is a complex phenomenon that is influenced by multiple factors. Thus, it is important to provide a comprehensive and integrative social-cognitive framework to better understand this phenomenon.

Two of the integrative models that receive the most attention in the current literature are the I3 Model (Finkel, 2014; Finkel & Hall, 2018) and the General Aggression Model (GAM; Allen, Anderson, & Bushman, 2018; Anderson & Bushman, 2002), which are compatible models in terms of explaining aggression. The I3 Model suggests that aggressive behaviour emerges from the combination of three orthogonal processes: 1) Instigation, which refers to the exposure of a particular object in a determined context; 2) Impellance, which refers to the situational or dispositional qualities that increase the likelihood of aggressive behaviour; and 3) Inhibition, which is related to the situational or dispositional qualities that reduce the likelihood of aggressive behaviour. With regard to the GAM, although this model has recently received some criticism (see Ferguson & Dyck, [2012] or Finkel [2014]), it still remains the most strongly supported model in the literature, providing a general conceptual framework for understanding violence and human aggression. The GAM postulates that aggression occurs as a result of three stages: (1) inputs: including person (e.g., attributional biases,

personality, positive attitudes toward aggression) and situation factors (e.g., provocation, anonymity); (2) routes: present internal states (affect, cognition, and arousal), which are influenced by inputs, and these, in turn, have an impact on the next stage; and (3) outcomes: appraisal and decision-making processes which give rise to aggressive or non-aggressive outcomes. The increase or decrease in the probability of behaving aggressively will depend on the factors involved in each of the stages of this model. In this regard, the GAM is primarily a theoretical model that helps to build a unique conceptual framework.

The current research aimed to provide a stronger empirical basis for the theoretical approach of the GAM model (we focused on the GAM given its greater impact in the literature, but the same objective could be applied to the I3 Model). The GAM proposes the existence of a set of personal risk and protective factors acting at the first stage of the model; however, the evidence regarding which variables are implied in this process and their effects, both in terms of strength and direction, is not sufficiently clear. We were interested in studying the effect of these personal variables in order to be able to integrate these into the GAM model and to better understand the mechanisms underlying aggressive behaviour.

Most of the studies investigating the factors that influence the appearance (or not) of aggressive behaviour have assessed a single factor or a small number of factors (e.g., Coccaro, Solis, Fanning, & Lee, 2015; Jaffe, Simonet, Tett, Swopes, & Davis, 2015). In the present research, we worked with a wide set of personal factors, selecting those that have received the most attention in the previous literature (Figure 1), thus achieving a more overarching study framework. The personal risk and protective factors of interest in the present study were the following:

- Insert Figure 1 -

Emotional Intelligence (EI). The protective influence of EI, that is, the ability to perceive, use, understand, and regulate emotions, has been shown to have an impact on aggression in numerous studies (Gutiérrez-Cobo, Megías, Gómez-Leal, Cabello, & Fernández-Berrocal, 2018; Megías, Gómez-Leal, Gutiérrez-Cobo, Cabello, & Fernández-Berrocal, 2018). In a systematic review of 19 articles, García-Sancho, Salguero, and

Fernández-Berrocal (2014), observed that people with high EI show less aggressive behaviour regardless of age, cultural context, types of aggression, and EI measures.

Empathy. Several studies have shown that empathy inhibits aggressive behaviour, acting as a protective factor against aggression (e.g., Escrivá, García, & Navarro, 2002; Richardson, Hammock, Smith, Gardner, & Manuel, 1994). Miller and Eisenberg (1988) conducted a meta-analysis of the relation between empathy and aggression using 50 articles, and they found a significant negative relationship regardless of gender. Vachon, Lynam, & Johnson (2014), in a more recent meta-analysis of 106 published and unpublished studies, found that although there was a negative relationship between aggression and empathy, it was weak.

Impulsivity. Previous literature has shown that higher impulsivity is associated with greater difficulty in inhibiting aggressive behaviour, this being considered a key factor in the control of this behaviour. For example, Velotti et al. (2016) found a positive relationship between impulsivity and aggression, both in clinical and community samples. Moreover, Netter, Hennig, Rohrmann, Wyhlidal, & Hain-Hermann (1998) conducted a study where the participants had to perform a task under provocative conditions. The results showed that the individuals with high impulsivity were more aggressive during the task than the individuals with low impulsivity.

Positive and negative affect. Previous research has shown that aggression is influenced by levels of negative and positive affect (Ebesutani, Kim, & Young, 2014; Tice, Baumeister, Shmueli, & Muraven, 2007). On the one hand, high levels of negative affect can encourage cognitive and emotional biases, such as hostile thoughts, which increase the likelihood of aggressive behaviour (Burt & Donnellan, 2008). On the other hand, there are discrepancies in the literature regarding the effect of positive affect on aggression. High levels of positive affect have been related to a greater degree of self-control that leads people to show a decrease in aggressive behaviour (Tice et al., 2007). However, other studies such as that of Salavera, Usán, Antoñanzas, Teruel, & Lucha (2017) have found that positive affect is related to higher impulsivity, a risk factor in the development of aggression. Lawrence and Hodgkins (2009) also found a positive relationship between positive affect and sensitivity to provocation.

Strategies of emotion regulation: cognitive reappraisal and expressive suppression. The way individuals regulate their emotions impacts on the occurrence of human aggression (Butler et al., 2003; Gross & John, 2003). The two most commonly

studied strategies of emotion regulation are cognitive reappraisal and expressive suppression (Gross, 1998; Megías et al., 2019). People who reappraise their emotions — in comparison with those who tend to suppress them — are more successful at mood repair, experiencing fewer negative emotions (John & Gross, 2004). In this regard, reappraisal is considered an inhibiting force for aggression given the lower impact of negative emotions, and the greater availability of cognitive resources that this entails (Butler et al., 2003; Gross & John, 2003). In contrast, suppression strategies inhibit emotion-expressive behaviour, but, in general, tend to create an aversive internal state (e.g., anger), increasing the likelihood of aggressive behaviour (Tull, Jakupcak, Paulson, & Gratz, 2007). With respect to the latter relationship, there is a certain degree of controversy, since some studies have found the opposite pattern of results. For example, Niven, Sprigg, and Armitage (2013) observed a negative relationship between suppression strategies and verbal aggression.

Sensitivity to reward and sensitivity to punishment. A higher sensitivity to reward has been associated with higher levels of anger and expression of aggression (Arnett & Newman, 2000; Smits & Kuppens, 2005). However, the relationship between sensitivity to punishment and behavioural aggression remains unclear. Previous studies have shown that a high reactivity to punishment is related to a better ability to inhibit impulsive and aggressive behaviours (Bjørnebekk, 2007; Smits & Kuppens, 2005; von Collani & Werner, 2005), but there are also several studies showing no relationship (Constantinou et al., 2011; Harmon-Jones & Peterson, 2008) or even a positive relationship (Pederson, Fite, & Bortolato, 2018).

Aims

The main objective of this research was to identify the most relevant personal risk and protective factors associated with aggressive behaviour. The subsequent integration of these factors into theoretical models of aggression such as the GAM could then contribute to a better understanding of the mechanisms underlying this behaviour. To this end, we analysed the relationship between aggressive behaviour and a wide set of variables (described above) that have received attention in the literature on aggression. Unlike previous studies, we explored this set of variables within a single study and sample, which allows us to discern those factors most strongly associated with aggressive behaviour. Moreover, it appears that some of the studies in the reviewed literature have shown mixed results (e.g., positive affect, strategies of emotion suppression, or sensitivity

to punishment) or showed a weak effect (e.g., empathy). In this regard, the current study will try not only to consolidate the relationships that are already well-established, but also to clarify those where discrepancies have previously been observed. Researchers and clinicians can take advantage of these findings when designing programs for the prevention and treatment of aggressive behaviour.

Methods

Participants

We recruited 346 young adult volunteers by advertisements in the University of Malaga, social networks, and online platforms. We excluded 74 participants because they failed to complete the whole battery of questionnaires, resulting in a final sample of 282 young adults. Of the sample, 107 were men. The age of the participants ranged between 18 and 30 years, with a mean of 22.02 years (SD = 2.90). Previous research has shown aggression to be a relatively stable trait, with more serious and violent acts emerging during young adulthood (Huesman, Eron, Lefkowitz, & Walder, 1984; Liu, Lewis, & Evans, 2013), which is the sample target of our study. Of the sample, 0.4% had received primary school education, 30.1% had secondary school education, and 69.5% had or were attending higher education. Participants were informed that confidentiality and anonymity of the collected data would be assured, and all of them were treated in accordance with the Helsinki declaration (World Medical Association, 2008). The Research Ethics Committee of the University of Málaga approved this research as part of the project PSI2017-84170 (approval number: 10-2018-H).

Although the sample size was based on availability, statistical power should not be a problem given that a power analysis using G*Power 3.1.9 (Faul et al., 2007) determined that, for conducting regression analysis, 163 was the minimum number of participants required to obtain a power of 0.8 according to an alpha of 0.05, a medium effect size, and the maximum number of possible predictors associated with the instruments assessed (23 predictors).

Procedure and Instruments

Data were collected in two sessions. In the first session, participants completed the questionnaires assessing levels of aggression, empathy, positive and negative affect, impulsivity, emotion regulation strategies, and sensitivity to reward/punishment through

the online platform Lime survey (http://limesurvey.org). Access to the questionnaires was provided via email invitation from the authors. The second session was carried out face-to-face at the University of Malaga (Spain), where a psychologist administered the instrument measuring EI to each participant. The participants needed approximately 60 min to complete this instrument. The whole study (including both sessions) took around 100 min. A description of each scale is detailed below:

Buss-Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992) is a 29-item self-report scale used to measure aggression. Participants rated how well each BPAQ item described themselves using a 5-point scale, ranging from extremely uncharacteristic of me (1) to extremely characteristic of me (5). The Spanish version of the scale was used in our study (Rodríguez, Fernández, & Gómez, 2002). This has previously shown good internal consistency (α = .88). In our study, the internal consistency was α = .90.

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002) is a performance-based ability measure of EI. This scale consists of 141 items divided into the following four branches according to Mayer and Salovey's theory (Mayer & Salovey, 1997): perceiving, facilitating, understanding, and managing emotions. To carry out the present study, the Spanish version of the MSCEIT was used (Extremera, Fernández-Berrocal, & Salovey, 2006), which showed adequate psychometric properties, similar to the English version (α = .95; Sánchez-Garcia, Extremera, & Fernández-Berrocal, 2016). In our study, the internal consistency of the total score was α = .85, and that of the sub-dimensions ranged between α = .64 and α = .85.

Interpersonal Reactivity Index (IRI; Davis, 1983) is a 28-item self-report scale used to measure empathy. This scale is composed of four subscales of seven items each (perspective-taking, fantasy, empathic concern, and personal distress). Each item uses a 5-point Likert scale ranging from 1 ("Does not describe me at all") to 5 ("Describes me very well"). The Spanish version of the scale was used in our study (Escrivá, Navarro, & García, 2004). It has shown an adequate internal consistency where the alpha values range from .56 to .70. In our study, the internal consistency of the total score was α = .79 and that of the sub-dimensions ranged between α = .69 and α = .77.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a self-report questionnaire used for the assessment of positive affect and negative affect. This scale has 20 items and uses a 5-point scale (1 "not at all" to 5"strongly") to

measure the extent to which participants feel a particular emotion at a given time. We employed the Spanish version of the questionnaire (Sandin et al., 1999), which has an adequate Cronbach's reliability coefficient alpha (positive affect: α = .89; negative affect: α = .91). In our study, the internal consistency for positive affect was α = .82 and for negative affect this was α = .86.

Impulsive Behaviour Scale (UPPS-P; Lynam, Smith, Whiteside, & Cyders, 2006) is a 29-item self-report scale used to assess five dimensions of impulsivity: negative urgency, positive urgency, lack of perseverance, lack of premeditation, and sensation seeking. Participants were asked to indicate their level of agreement with the statements on a four-point Likert scale ranging from 1 ("I strongly agree") to 4 ("I strongly disagree"). The Spanish version of the UPPS-P was used in this study (Verdejo-García, Lozano, Moya, Alcázar, & Pérez-García, 2010). This has been shown to have adequate psychometric properties across all five subscales, with alpha values range from .79 to .93. In our study, the internal consistency ranged between α = .67 and α = .85.

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is a 10-item self-report questionnaire used to measure the two most common emotion regulation strategies (cognitive reappraisal and expressive suppression). Participants must indicate their degree of agreement with the statements on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The Spanish version of the ERQ was used in the current study (Cabello, Salguero, Fernández-Berrocal, & Gross, 2013). This has been shown to have an adequate internal consistency similar to the English version (α = .75 for expressive suppression, α = .79 for cognitive reappraisal). In our study, the internal consistency of the total score was α = .74 for expressive suppression and α = .81 for cognitive reappraisal.

Short version of the Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ–20; Aluja & Blanch, 2011) is a 20 item self-report questionnaire in a yes–no format that was used for the assessment of sensitivity to punishment (10 items) and reward (10 items). The version utilized has been shown to have an adequate internal consistency (sensitivity to punishment: α = .77; sensitivity to reward α = .73). The internal consistency in our study was α = .75 for sensitivity to punishment and α = .71 for sensitivity to reward.

Data analysis

First, a descriptive analysis was carried out to explore the scores obtained for each measure, both total score and sub-dimensions. Gender differences were contrasted using t-tests. Second, Pearson's correlations were used to explore the relationship between aggression levels and the variables included as risk and protective factors. Third, we conducted a stepwise multiple regression analysis in order to identify those personal factors that were more strongly associated with aggressive behaviour. Only significant variables identified in the correlational analysis were included as predictors in the regression analysis. Gender was also introduced as predictor to control for possible gender differences. The total scores of those factors involving sub-dimensions were not included since these are the result of averaging their sub-dimensions. The multicollinearity assumption was met for all predictors (always VIF $\leq$ 1.79 and tolerance $\geq$ .65). Finally, in order to study the influence of gender in more detail, we conducted moderation analyses of gender on the relationship between aggression and each of the predictors included in the final model of the regression analysis. The t-test, correlation, and regression analyses were conducted using SPSS 24 (IBM corp., USA). Moderation analyses were conducted using SPSS PROCESS macro 3.4 (Hayes, 2018).

Results

Table 1 shows the descriptive statistics of the variables included in the study (total scores and sub-dimensions). Significantly higher scores were observed for women in comparison with men on fantasy and empathic concern (IRI), negative affect (PANAS), and total EI and the subdimensions of managing and facilitating emotions (MSCEIT) (effect size by Cohen´s standards [Cohen, 1988] was large for empathic concern and medium for the other variables). Significantly higher scores were observed for men in comparison with women on lack of perseverance (UPPS), expressive suppression (ERQ) and sensitivity to reward (SPSRQ–20) (effect size by Cohen´s standards were large and medium). No other gender differences were found.

Table 1. Means, standard deviations (SD), and gender t-test analyses for all the variables included in the study.

	Total sample		Men		Women			
	Mean	SD	Mean	SD	Mean	SD	t	Cohen´s
BPAQ Total	2.53	0.60	2.54	0.57	2.52	0.60	0.17	0.03
UPPS Total	8.90	1.66	8.90	1.62	8.90	1.64	0.00	0.00
URG N (UPPS)	9.42	3.10	9.18	3.20	9.60	3.02	-1.04	0.13
URG P (UPPS)	9.82	2.31	9.65	2.32	9.91	2.30	-0.92	0.11
SS (UPPS)	10.86	2.83	11.12	2.85	10.70	2.81	1.21	0.14
L Prem (UPPS)	7.15	2.33	6.92	2.44	7.30	2.25	-1.24	0.16
L Pers (UPPS)	7.30	2.45	7.64	2.41	7.04	2.45	2.00*	0.25
FA (IRI)	3.25	0.63	3.08	0.62	3.40	0.60	-3.80*	0.52
PT (IRI)	3.64	0.68	3.61	0.70	3.70	0.70	-0.63	0.13
EC (IRI)	4.00	0.63	3.67	0.70	4.20	0.50	-6.90**	0.90
PD (IRI)	2.36	0.75	2.27	0.72	2.41	0.76	-1.60	0.19
CR (ERQ)	4.90	1.11	4.80	1.20	4.90	1.04	-0.80	0.09
ES (ERQ)	3.31	1.43	3.76	1.40	3.04	1.40	4.18**	0.51
PA (PANAS)	3.41	0.65	3.40	0.64	3.40	0.65	0.09	0.00
NA (PANAS)	2.21	0.72	2.00	0.65	2.20	0.80	-1.50*	0.30
SR (SRSRQ)	4.17	2.35	5.00	2.42	3.65	2.15	4.90**	0.60
SP (SRSRQ)	4.76	2.80	4.64	2.90	4.82	2.74	-0.54	0.06
Total MSCEIT	105.73	10.21	103.80	11.50	106.92	9.20	-2.52*	0.30
Perc (MSCEIT)	104.07	12.85	103.80	13.63	104.24	12.40	0.30	0.03
Facil (MSCEIT)	99.14	11.40	97.07	13.15	100.40	9.93	-2.42*	0.30
Under (MSCEIT)	107.46	10.31	107.33	10.90	107.54	10.00	-0.18	0.02
Manag (MSCEIT)	108.12	12.10	103.36	12.65	111.03	10.78	-5.43**	0.65

Note: UPPS (URG N: Urgency negative, URG P: Urgency Positive, SS: Sensation Seeking, L Pers: Lack of perseverance, L Prem: Lack of premeditation); IRI (PT: Perspective taking, FA: Fantasy, EC: Empathic concern, PD: Personal distress); ERQ (CR: Cognitive reappraisal, ES: Expressive suppression); PANAS (PA: Positive affect, NA: Negative Affect); SPSRQ-20 (SR: Sensitivity to reward, SR: Sensitivity to punishment) MSCEIT (Perc: Perceiving, Facil: Facilitating, Under: Understanding, Manag: Managing).
*$p < .05$, **$p < .01$

Pearson's correlations between aggression scores and the variables included as risk and protective factors of aggression are shown in Table 2 (see Appendix A for the full correlation matrix). The analyses revealed significant positive correlations between aggression and: a) total UPPS-P and all its sub-dimensions; b) personal distress and fantasy (IRI); c) expressive suppression (ERQ); d) sensitivity to punishment and sensitivity to reward (SPSRQ–20); and e) negative affect (PANAS). Further, a significant negative correlation was observed between aggression and: a) MSCEIT total and its

perceiving, facilitating, and managing sub-dimensions; b) perspective-taking (IRI); c) cognitive reappraisal (ERQ); and d) positive affect (PANAS).

Table 2. Pearson's correlations between risk and protective factors and aggression.

	Total UPPS	URG N (UPPS)	URG P (UPPS)	SS (UPPS)	L Prem (UPPS)	L Pers (UPPS)	FA (IRI)	PT (IRI)	EC (IRI)	PD (IRI)	CR (ERQ)	ES (ERQ)	PA (PANAS)	NA (PANAS)	SR (SPSRQ-20)	SP (SPSRQ-20)	MSCEIT Total	Perc (MSCEIT)	Facil (MSCEIT)	Under (MSCEIT)	Manag (MSCEIT)
Aggression	.52**	.56**	.42**	.14*	.25**	.24*	.20*	-.42**	-.04	.28**	-.17**	.15*	-.17**	.49**	.16**	.14**	-.23**	-.15*	-.12*	-.10	-.27**

Note: UPPS (URG N: Urgency negative, URG P: Urgency positive, SS: Sensation seeking, L Pers: Lack of perseverance, L Prem: Lack of premeditation); IRI (PT: Perspective taking, FA: fantasy, EC: Empathic concern, PD: Personal distress); ERQ (CR: Cognitive reappraisal, ES: Expressive suppression); PANAS (PA: Positive affect, NA: Negative Affect); SPSRQ-20 (SR: Sensitivity to reward, SR: Sensitivity to punishment); MSCEIT (Perc: Perceiving, Facil: Facilitating, Under: Understanding, Manag: Managing).
*$p < .05$, **$p < .01$

The stepwise multiple regression analysis revealed that the resulting model accounted for 73.2% of the explained variance in aggression (Table 3; see Appendix B for a more detailed description of the included and excluded variables in the final regression model). The significant predictors included in the final model were: managing emotions (MSCEIT), perspective-taking, personal distress and fantasy (IRI), negative affect (PANAS), negative and positive urgency (UPPS-P), and expressive suppression (ERQ). Moderation analyses of gender on the relationships included in the final model do not revealed any significant effect of this variable (all $p > .05$).

Table 3. Summary of the stepwise regression analysis.

Step	Sample	Criterion	Predictors	B	SE	Beta	t	*p*
1	282	Aggression	URG N (UPPS)	.10	.00	.56	11.32	< .001
2	282	Aggression	URG N (UPPS)	.08	.00	.44	8.63	< .001
			NA (PANAS)	.25	.04	.32	6.32	< .001
3	282	Aggression	URG N (UPPS)	.07	.00	.37	7.37	< .001
			NA (PANAS)	.23	.04	.30	6.09	< .001
			PT (IRI)	-.20	.04	-.24	5.00	< .001
4	282	Aggression	URG N (UPPS)	.07	.00	.37	7.46	< .001
			NA (PANAS)	.23	.04	.29	6.10	< .001
			PT (IRI)	-.17	.04	-.20	4.40	< .001
			Manag (MSCEIT)	-.00	.00	-.17	-3.90	< .001

5	282	Aggression	URG N (UPPS)	.05	.01	.29	5.34	< .001
			NA (PANAS)	.23	.04	.29	6.20	< .001
			PT (IRI)	-.16	.04	-.20	-4.24	< .001
			Manag (MSCEIT)	-.00	.00	-.17	-3.90	< .001
			URG P (UPPS)	.04	.01	.17	3.48	< .01
6	282	Aggression	URG N (UPPS)	.05	.01	.28	5.25	< .001
			NA (PANAS)	.21	.04	.26	5.60	< .001
			PT (IRI)	-.19	.04	-.22	-4.80	< .001
			Manag (MSCEIT)	-01	.00	-.18	-4.05	< .001
			URG P (UPPS)	.04	.01	.15	3.13	< .01
			FA (IRI)	.11	.04	.12	2.70	< .05
7	282	Aggression	URG N (UPPS)	.06	.01	.30	5.60	< .001
			NA (PANAS)	.25	.04	.32	6.25	< .001
			PT (IRI)	-.20	.04	-.24	-5.17	< .001
			Manag (MSCEIT)	-.00	.00	-.18	-4.20	< .001
			URG P (UPPS)	.04	.01	.16	3.23	< .01
			FA (IRI)	.13	.04	.15	3.24	< .01
			PD (IRI)	-.10	.04	-.14	-2.70	< .05
8	282	Aggression	URG N (UPPS)	.06	.01	.31	5.90	< .001
			NA (PANAS)	.23	.04	.29	5.72	< .001
			PT (IRI)	-.21	.04	-.25	-5.35	< .001
			Manag (MSCEIT)	-.00	.00	-.16	-3.60	< .001
			URG P (UPPS)	.04	.01	.15	3.22	< .01
			FA (IRI)	.16	.04	.17	3.80	< .001
			PD (IRI)	-.11	.04	-.15	-3.00	< .01
			ES (ERQ)	.05	.02	.11	2.54	< .05

Note. Manag: Emotional managing; PT: Perspective taking; NA: Negative affect; URG N: Urgency negative; URG P: Urgency positive; FA: fantasy; PD: Personal distress; ES: Expressive suppression.

Discussion

The fact that aggressive behaviour has a number of significant social and economic consequences for society has led researchers to increase their interest in the

search for those factors that help to reduce this behaviour. This study aimed to provide a more in-depth understanding of this behaviour by analysing the personal protective and risk factors that guide its execution.

According to the correlation analysis, our findings are consistent with most of the previous literature (Ebesutani et al., 2014; Escrivá et al., 2002; Gross & John, 2003; Megías et al., 2018; Smits & Kuppens, 2005; Tice et al., 2007; Velotti et al., 2016). The protective factors associated with aggression were EI (including all sub-dimensions except understanding), perspective-taking (sub-dimension of empathy), positive affect, and cognitive reappraisal. The risk factors associated with aggression were impulsivity (including all sub-dimensions), fantasy and personal distress (sub-dimensions of empathy), negative affect, sensitivity to punishment, sensitivity to reward, and expressive suppression. There is controversy in the literature regarding the direction of the relationship between aggression and the factors of positive affect, sensitivity to punishment, and expressive suppression (Niven et al., 2013; Salavera et al., 2017; Tice et al., 2007; Tull et al., 2007). Our results are in accord with previous research supporting the notion that positive affect acts as a protective factor (Tice et al., 2007) whilst sensitivity to punishment and expressive suppression act as risk factors (Pederson et al., 2018; Tull et al., 2007).

Having clarified the relationship between all these variables and aggression, we then focused on identifying those factors that were most strongly associated with this behaviour. The stepwise regression analysis revealed eight factors related to the appearance of aggression, which explained 73.2% of the variance: managing emotions, perspective-taking, personal distress, fantasy, negative affect, negative and positive urgency, and expressive suppression. Each of these factors is discussed below.

The negative relationship found between aggression and managing emotions, i.e., the ability to regulate these in oneself and others, is in accord with previous findings in the literature (Cabello & Fernández-Berrocal, 2015; Gutiérrez-Cobo et al., 2016). People who do not have good emotion management may be overwhelmed by these emotions during appraisal and decision-making processes. As a consequence, the range of responses is reduced and tends to be associated with their emotional state. For example, showing aggressive behaviours when the situation has generated anger (Lemerise & Arsenio, 2000).

With respect to empathy, the negative relationship between aggression and the sub-dimensions of perspective-taking and personal distress is also in agreement with previous evidence (Miller & Eisenberg, 1988; Bartholow, Sestir, & Davis, 2005). An individual who has the ability to take the points of view of other people, i.e. perspective-taking, can understand the potential negative consequences of aggression for both themselves and others (Davis, 1980: Escrivá et al., 2002). With regard to personal distress, the mere act of observing or thinking about the negative consequences of aggression can cause distress in an empathic observer. This distress is related to the inhibition of aggressive behaviour (Feshbach, 1969). Further, the positive relationship between the sub-dimension of fantasy and aggression is in accord with studies in the literature suggesting that a higher tendency to transpose oneself into the feelings and actions of fictional characters can be related to social dysfunction (e.g., certain violent behaviours) (Varker & Devilly, 2007).

The positive relationship between aggression and negative affect is well-established in the literature (Megías et al., 2018; Shorey, McNulty, Moore & Stuart, 2015). Negative affect reflects the disposition to experience aversive affective states such as anger and disgust (Watson & Tellegen, 1985). Therefore, the higher the score in this risk variable the higher the likelihood that emotional and cognitive biases related to aggressive behaviour appear.

With regard to impulsivity, negative urgency, i.e. the tendency to act impulsively when experiencing negative affect, and positive urgency, i.e. the tendency to act impulsively when experiencing positive affect, have been shown to be important dispositional contributors to acts of aggression (Dvorak, Pearson & Kuvaas, 2013; Miller, Zeichner & Wilson, 2012). Previous literature has shown that although impulsivity, in general, positively correlates with aggression (Dvorak et al., 2013; Miller et al., 2012), the sub-dimensions of negative and positive urgency are those that better predict this behaviour (Miller et al., 2003).

Finally, the positive relationship between aggression and expressive suppression is partially supported by the previous literature. Results have been found in support of both a positive and negative relationship between these variables (Niven et al., 2013; Tull et al., 2007). Our findings are in accord with those studies suggesting that the continued suppression of emotional expressivity could eventually result in aversive internal states

and maladaptive ways of expressing emotions, with the use of aggressiveness being an example (Bushman, Baumeister, & Phillips, 2001; Jakupcak, 2003; Tull et al., 2007).

The present study represents a step forward in understanding the mechanisms underlying aggressive behaviour, and provides a stronger empirical basis for theoretical models of aggression such as the GAM. Our findings show the role played by a set of personal variables in constituting risk and protective factors that can be integrated in the first stage of the GAM. Following this model, in a situation of provocation or one associated with some type of aggressive response, individuals characterized by person factors such as high levels of negative affect, negative and positive urgency, expressive suppression and fantasy (risk factors in Stage 1), or deficits in the ability to manage emotions, low perspective-taking, and personal distress (protective factors in Stage 1), would be more likely to have a negative internal state associated with hostile thoughts and increased arousal (Stage 2), which would favour aggressive behaviours (Stage 3) (Allen et al., 2018). Importantly, the identification of the most relevant risk and protective factors allows for simplifying the theoretical model explaining aggression. The GAM provides a general framework where multiple personal and situational variables (as well as internal states) can be integrated. However, our research reveals that through only the 8 factors included in the final stepwise regression model it is possible to explain a high percentage of the variance in aggression (73.2%).

The results revealed in this research could have important practical implications for the implementation of treatment and preventive programs for aggressive behaviour. Future programs should focus on reducing the risk factors and strengthening the protective factors highlighted in this study, in order to reduce negative emotional states and thus facilitate correct appraisal and decision-making. Previous intervention programs have already demonstrated the effectiveness of providing training on some of these variables that reduce aggressiveness, such as EI or impulsivity (Denson, Capper, Oaten, Friese, & Schofield, 2011; Castillo, Salguero, Fernández-Berrocal, & Balluerka, 2013). In particular, being better able to manage emotions can increase the ability to control and alter both negative and positive affect, resulting in a decrease in maladaptive behaviours. It has also been shown that increasing empathy and perspective-taking reduces aggressiveness, by, for example, training individuals to take the points of view of others and to be able to anticipate the negative consequences of aggressive behaviour (Davis, 2005). In relation to risk factors, working on negative and positive urgency would

decrease levels of impulsivity, and consequently aggressive behaviour (Miller et al; 2012). The development of a more integrative model addressing multiple factors would be very beneficial for the control of aggressive behaviour in our society. Specifically, these training programs can be implemented from an early age and could also involve parents in order to produce comprehensive improvements, particularly if the programs are run by professionals in this area, combined with the use of empirically valid techniques for increasing or decreasing the factors mentioned above.

Further studies should consider some limitations of the present research. First, our sample included a greater number of women (175) than men (107), and it was restricted to young adults, many of whom (69.5%) had completed or were currently studying in higher education. A sample better matched for gender as well as a greater diversity of in age, socioeconomic status, or cultural aspects would be needed to be able to generalize the results to general population. In addition, it would be of interest for further studies to focus on specific risk populations characterized by high levels of aggression, such as inmates. Second, with the exception of the MSCEIT instrument, the instruments used are self-report measures, which are based on the subjective perceptions of the participants. Therefore, we recommend that future studies employ more objective evaluations. Finally, the correlational nature of our study prevents us from establishing any causal relationship between variables. Therefore, in the future it might be worthwhile to pursue complementary lines of research that employ longitudinal and experimental designs in order to extend the generality of the findings reported here.

Conclusion

The present work allows for a better understanding of the psychological factors and processes that underlie aggressive behaviour. In particular, we identified a set of eight personal factors related to aggressive behaviour, which were able to explain 72.3% of the total variance. High levels of negative affect, positive and negative urgency, fantasy, and expressive suppression of emotions were considered as risk factors. A good ability to manage emotions, and high levels of the empathy subdimensions of perspective-taking and personal distress were considered as protective factors. Intervention programs based on the control of the risk factors and the development of the protective factors may have important implications for the reduction of aggression. The knowledge of the mechanisms underlying aggressive behaviour is an important step on the road toward prevention or

reduction of this phenomenon, which would bring considerable benefits for victims, aggressors, and society in general.

References

Allen, J. J., Anderson, C. A., & Bushman, B. J. (2018). The general aggression model. *Current Opinion in Psychology, 19*, 75–80. doi: 10.1016/j.copsyc.2018.08.005

Aluja, A., & Blanch, A. (2011). Neuropsychological behavioral inhibition system (BIS) and behavioral approach system (BAS) assessment: A shortened sensitivity to punishment and sensitivity to reward questionnaire version (SPSRQ–20). *Journal of Personality Assessment, 93*(6), 628-636. doi: 10.1080/00223891.2011.608760

Anderson, C. A., & Bushman, B. J. (2002). Human aggression. Annual Review of Psychology, 53, 27-51. doi: 10.1146/annurev.psych.53.100901.135231

Arnett, P. A., & Newman, J. P. (2000). Gray´s three-arousal model: An empirical investigation. *Personality and Individual Differences, 28*, 1171–1189. doi: 10.1016/S0191-8869(99)00169-5

Bartholow, B. D., Sestir, M. A., & Davis, E. B. (2005). Correlates and consequences of exposure to video game violence: Hostile personality, empathy, and aggressive behavior. *Personality and social psychology bulletin, 31*(11), 1573-1586. doi: 10.1177/0146167205277205

Bjørnebekk, G. (2007). Reinforcement sensitivity theory and major motivational and self-regulatory processes in children. *Personality and Individual Differences, 43*(8), 1980-1990. doi: 10.1016/j.paid.2007.06.010

Burt, S.A., & Donnellan, M.B. (2008). Personality correlates of aggressive and non-aggressive antisocial behavior. *Personality and Individual Differences, 44*(1), 53–63. doi: 10.1016/j.paid.2007.07.022

Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion, 3*, 48–67. doi: 10.1037/1528-3542.3.1.48

Bushman, B. J., Baumeister, R. F., & Phillips, C. M. (2001). Do people aggress to improve their mood? Catharsis beliefs, affect regulation opportunity, and aggressive responding. Journal of Personality and Social Psychology, 81(1), 17.doi: 10.1037/0022-3514.81.1.17

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459.

Cabello, R., Salguero, J. M., Fernández-Berrocal, P., & Gross, J. J. (2013). A Spanish adaptation of the emotion regulation questionnaire. *European Journal of Psychological Assessment, 29*(4), 234-240. doi: 10.1027/1015-5759/a000150

Cabello, R., & Fernández-Berrocal, P. (2015). Implicit theories and ability emotional intelligence. *Frontiers in Psychology, 6*, 700. doi: 10.3389/fpsyg.2015.00700

Castillo, R., Salguero, J.M., Fernández-Berrocal, P., & Balluerka, N. (2013). Effects of an emotional intelligence intervention on aggression and empathy among adolescents. *Journal of Adolescence, 36*(5), 883–892. doi: 10.1016/j.adolescence.2013.07.001

Coccaro, E. F., Solis, O., Fanning, J., & Lee, R. (2015). Emotional intelligence and impulsive aggression in Intermittent Explosive Disorder. *Journal of Psychiatric Research, 61*, 135-140. doi: 10.1016/j.jpsychires.2014.11.004

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd edition).* Hillsdale, NJ: Erlbaum.

Constantinou, E., Panayiotou, G., Konstantinou, N., Loutsiou-Ladd, A., & Kapardis, A. (2011). Risky and aggressive driving in young adults: Personality matters. *Accident Analysis & Prevention, 43*(4), 1323-1331.doi: 10.1016/j.aap.2011.02.002

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: a multiinformant approach. *Journal of Consulting and Clinical Psychology, 66*(2), 337-347. doi: 10.1037/0022-006X.66.2.337

Cullerton-Sen, C., Cassidy, A.R., Murray-Close, D., Cicchetti, D., Crick, N.R., & Rogosch, F.A. (2008). Childhood maltreatment and the development of relational and physical aggression: the importance of a gender-informed approach. *Child Development. 79*, 1736–1751. doi: 10.1111/j.1467-8624.2008.01222.x

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113–126. doi: 10.1037/0022-3514.44.1.113

Denson, T. F., Capper, M. M., Oaten, M., Friese, M., & Schofield, T. P. (2011). Self-control training decreases aggression in response to provocation in aggressive individuals. *Journal of Research in Personality, 45*(2), 252-256. doi: 10.1016/j.jrp.2011.02.001

Dvorak, R. D., Pearson, M. R., & Kuvaas, N. J. (2013). The five-factor model of impulsivity-like traits and emotional lability in aggressive behavior. *Aggressive Behavior, 39*(3), 222-228. doi: 10.1002/ab.21474

Ebesutani, C., Kim, E., & Young, J. (2014). The role of violence exposure and negative affect in understanding child and adolescent aggression. *Child Psychiatry and Human Development, 45*, 736–745. doi:10.1007/s10578-014-0442-x

Escrivá, V. M., García, P. S., & Navarro, M. (2002). Procesos cognitivos y emocionales predictores de la conducta prosocial y agresiva: la empatía como factor modulador. *Psicothema, 14*(2), 227–232.

Escrivá, V., Navarro, M., & García, P. (2004). La medida de la empatía: análisis del Interpersonal Reactivity Index. *Psicothema, 16* (2), 255-260.

Extremera, N., Fernández-Berrocal, P, & Salovey, P. (2006). Spanish version of the Mayer-Salovey-Caruso Emotional Intelligence Test. Version 2.0: Reliabilities, age and gender differences. *Psicothema, 18*, 42-48.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191. doi:10.3758/BF03193146

Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the General Aggression Model. *Aggression and Violent Behavior, 17*(3), 220-228.doi: 10.1016/j.avb.2012.02.007

Feshbach, N.D. & Feshbach, S. (1969). The relationship between empathy and aggression in two age groups. *Developmental Psychology, 1*(2), 102 – 107.

Finkel, E. J. (2014). The I3 model: Metatheory, theory, and evidence. *Advances in Experimental Social Psychology, 49*, 1-104. doi:10.1016/B978-0-12-800052-6.00001-9

Finkel, E. J., & Hall, A. N. (2018). The I3 model: A metatheoretical framework for understanding aggression. *Current Opinion in Psychology, 19*, 125-130. doi: 10.1016/j.copsyc.2017.03.013

García-Sancho, E., Salguero, J. M., & Fernández-Berrocal, P. (2014). Relationship between emotional intelligence and aggression: A systematic review. *Aggression and Violent Behavior, 19*(5), 584-591. doi: 10.1016/j.avb.2014.07.007

Gross, J.J. (1998). Antecedent-and response-focused emotion regulation: divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224-237. doi:10.1037/0022-3514.74.1.224

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. doi: 10.1037/0022-3514.85.2.348

Gutiérrez-Cobo, M. J., Megías, A., Gómez-Leal, R., Cabello, R., & Fernández-Berrocal, P. (2018). The role of emotional intelligence and negative affect as protective and risk factors of aggressive behavior: A moderated mediation model. *Aggressive Behavior, 44*(6), 638-646. doi: 10.1002/ab.21788

Harmon-Jones, E., & Peterson, C. K. (2008). Effect of trait and state approach motivation on aggressive inclinations. *Journal of Research in Personality, 42*(5), 1381-1385. doi: 10.1016/j.jrp.2008.05.001

Hayes., A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: a regression-based approach*. (2nd ed.). Guilford Press.

Heise, L. (1998). Violence against women: An integrated, ecological framework. *Violence Against Women, 4*, 262–290. doi: 10.1177/1077801298004003002

Huesmann, L. R., Eron, L. D., Lefkowitz, M. M., & Walder, L. O. (1984). Stability of aggression over time and generations. *Developmental Psychology, 20*(6), 1120-1134. doi: 10.1037/0012-1649.20.6.1120

Jaffe, A. E., Simonet, D. V., Tett, R. P., Swopes, R. M., & Davis, J. L. (2015). Multidimensional trait emotional intelligence and aggressive tendencies in male offenders of domestic violence. *Journal of Family Violence, 30*(6), 769-781. doi: 10.1007/s10896-015-9729-3

Jakupcak, M. (2003). Masculine gender role stress and men's fear of emotions as predictors of self-reported aggression and violence. *Violence and Victims, 18*(5), 533-541.doi: 10.1891/vivi.2003.18.5.533

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and lifespan development. *Journal of Personality, 72*, 1301–1334. doi: 10.1111/j.1467-6494.2004.00298.x

Lawrence, C., & Hodgkins, E. (2009). Personality influences on interpretations of aggressive behavior: The role of provocation sensitivity and trait aggression. *Personality and Individual Differences, 46*(3), 319-324. doi: 10.1016/j.paid.2008.10.022

Lee, B. X. (2016). Causes and cures IX: Consequences of violence. *Aggression and Violent Behavior, 30*, 110-114. doi: 10.1016/j.avb.2016.06.013

Lemerise, E. A., & Arsenio, W. F. (2000). An integrated model of emotion processes and cognition in social information processing. *Child Development, 71*(1), 107-118. doi: 10.1111/1467-8624.00124

Liu, J., Lewis, G., & Evans, L. (2013). Understanding aggressive behaviour across the lifespan. *Journal of Psychiatric and Mental Health Nursing, 20*(2), 156-168. doi: 10.1111/j.1365-2850.2012.01902.x

Lynam, D. R., Smith, G. T., Whiteside, S. P., & Cyders, M. A. (2006). *The UPPS–P: Assessing five personality pathways to impulsive behavior*. West Lafayette: Purdue University.

Mayer, J.D., & Salovey, P. (1997). What is emotional intelligence (Ed.) In: Sluyter, S., D.J. (Eds.), *Emotional Development and Emotional Intelligence: Educational Implications*. Basic Book, New York, pp. 3–31.

Mayer, J. D., Salovey, P., & Caruso, D. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) User's Manual Test.* Toronto: Multi-health Systems.

Megías-Robles, A., Gutiérrez-Cobo, M.J., Gómez-Leal, R., Cabello, R., Gross, J.J & Fernández-Berrocal, P. (2019). Emotionally Intelligent People Reappraise Rather Than Suppress Their Emotions: The Moderating Effect of Gender and Age. *PloS One, 14*(8): e0220688. doi: 10.1371/journal.pone.0220688

Megías, A., Gómez-Leal, R., Gutiérrez-Cobo, M. J., Cabello, R., & Fernández-Berrocal, P. (2018). The relationship between aggression and ability emotional intelligence: The role of negative affect. *Psychiatry Research, 270*, 1074-1081. doi: 10.1016/j.psychres.2018.05.027

Miller, P., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin, 103*, 324–344. doi: 10.1037/0033-2909.103.3.324

Miller, J. D., Zeichner, A., & Wilson, L. F. (2012). Personality correlates of aggression: evidence from measures of the five-factor model, UPPS model of impulsivity, and BIS/BAS. *Journal of Interpersonal Violence, 27*(14), 2903-2919. doi: 10.1177/0886260512438279

Mischel, W., & Shoda, Y. (1995). A cognitive–affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102*, 246–268. doi: 10.1037/0033-295X.102.2.246

Moffitt, T.E. (2006). Life-course-persistent versus adolescent-limited antisocial behavior. In D. Cicchetti, and D. Cohen (Eds.), *Development psychopathology* (pp. 579-598). New York: John Wiley & Sons.

Netter, P., Hennig, J., Rohrmann, S., Wyhlidal, K., & Hain-Hermann, M. (1998). Modification of experimentally induced aggression by temper- ament dimensions. *Personality and Individual Differences, 25*, 873– 887. doi: 10.1016/S0191-8869(98)00070-1

Niven, K., Sprigg, C. A., & Armitage, C. J. (2013). Does emotion regulation protect employees from the negative effects of workplace aggression? *European Journal of Work and Organizational Psychology, 22*(1), 88-106. doi: 10.1080/1359432X.2011.626200

O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior, 27*(4), 269-283. doi: 10.1002/ab.1010

Ostrov, J., & Godleski, S. (2009). Impulsivity-hyperactivity and subtypes of aggression in early childhood: An observational and short term longitudinal study. *European Child and Adolescent Psychiatry, 18*, 477–483.

Pederson, C. A., Fite, P. J., & Bortolato, M. (2018). The role of functions of aggression in associations between behavioral inhibition and activation and mental health outcomes. *Journal of Aggression, Maltreatment and Trauma, 27*(8), 811–830. doi:10.1080/10926771.2017.1370053

Richardson, D., Hammock, G., Smith, S., Gardner, W., & Manuel, S. (1994). Empathy as a cognitive inhibitor of interpersonal aggression. Aggressive Behaviour, 20, 275–289. doi: 10.1002/1098-2337(1994)20:4<275::AID-AB2480200402>3.0.CO;2-4

Rodríguez, J. M. A., Fernández, M. E. P., & Gómez, J. L. G. (2002). Adaptación psicométrica de la versión española del Cuestionario de Agresión. *Psicothema, 14*(2), 476-482.

Sandin, B., Chorot, P., Lostao, L., Joiner, T.E., Santed, M.A., & Valiente, R.M. (1999). Escalas Panas de afecto positivo y negativo: Validación factorial y convergencia transcultural. *Psicothema 11*, 37–51.

Sanchez-García, M., Extremera, N., & Fernández-Berrocal, P. (2016). The factor structure and psychometric properties of the Spanish version of the Mayer-Salovey-Caruso emotional intelligence test. *Psychological Assessment, 28* (11), 1404–1415. doi: 10.1037/pas0000269

Salavera, C., Usán, P., Antoñanzas, J. L., Teruel, P., & Lucha, O. (2017). Affects and personality: A study with university students. *Annales Médico-psychologiques, revue Psychiatrique,175*, (4), 353-357. doi: 10.1016/j.amp.2016.06.014

Shorey, R. C., McNulty, J. K., Moore, T. M., & Stuart, G. L. (2015). Emotion regulation moderates the association between proximal negative affect and intimate partner violence perpetration. *Prevention Science, 16*(6), 873-880. doi: 10.1007/s11121-015-0568-5.

Simmons, S. B., Knight, K. E., & Menard, S. (2018). Long-term consequences of intimate partner abuse on physical health, emotional well-being, and problem behaviors. *Journal of Interpersonal Violence, 33*(4), 539-570. doi: 10.1177/0886260515609582

Smits, D. J., & Kuppens, P. (2005). The relations between anger, coping with anger, and aggression, and the BIS/BAS system. *Personality and Individual Differences, 39*(4), 783-793. doi: 10.1016/j.paid.2005.02.023

Tedeschi, J. T., & Felson, R. B. (1994). *Violence, aggression, and coercive actions*. Washington, DC: American Psychological Association.

Tice, D. M., Baumeister, R. F., Shmueli, D., & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology, 43*(3), 379-384. doi: 10.1016/j.jesp.2006.05.007

Tull, M. T., Jakupcak, M., Paulson, A., & Gratz, K. L. (2007). The role of emotional inexpressivity and experiential avoidance in the relationship between posttraumatic stress disorder symptom severity and aggressive behavior among men exposed to interpersonal violence. *Anxiety, Stress, and Coping, 20*(4), 337-351. doi: 10.1080/10615800701379249

Vachon, D.D., Lynam, D.R., & Johnson, J.A. (2014). The (Non)relation between empathy and aggression: Surprising results from a meta-analysis. *Psychological Bulletin, 140*, 751–773. doi: 10.1037/a0035236

Varker, T., & Devilly, G. J. (2007). Types of empathy and adolescent sexual offenders. *Journal of sexual aggression, 13*(2), 139-149. doi: 10.1080/13552600701661573

Velotti, P., Garofalo, C., Petrocchi, C., Cavallo, F., Popolo, R., & Dimaggio, G. (2016). Alexithymia, emotion dysregulation, impulsivity and aggression: A multiple mediation model. *Psychiatry Research, 237*, 296-303.doi: 10.1016/j.psychres.2016.01.025

Verdejo-García, A., Lozano, O., Moya, M., Alcázar, M. A., & Pérez-García, M. (2010). Psychometric properties of a Spanish version of the UPPS-P impulsive behavior scale: Reliability, validity and association with trait and cognitive impulsivity. *Journal of Personality Assessment ,92*,70–77. doi: 10.1080/00223890903382369

Von Collani, G., & Werner, R. (2005). Self-related and motivational constructs as determinants of aggression.: An analysis and validation of a German version of the Buss–Perry Aggression Questionnaire. *Personality and Individual Differences, 38*(7), 1631-1643. doi: 10.1016/j.paid.2004.09.027

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin, 98* (2), 219–235. doi: 10.1037/0033-2909.98.2.219

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54* (6), 1063–1070.

Figure Captions.

Figure 1. Representation of the personal protective and risk factors of aggression on the GAM. *Factors for which the previous literature has reported mixed results.