

TESIS DOCTORAL

**LA INFLUENCIA DE LA
INTELIGENCIA EMOCIONAL EN
EL COMPORTAMIENTO
AGRESIVO**

**[THE INFLUENCE OF
EMOTIONAL INTELLIGENCE
ON AGGRESSIVE BEHAVIOR]**



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LA INFLUENCIA DE LA INTELIGENCIA EMOCIONAL EN EL COMPORTAMIENTO AGRESIVO

[THE INFLUENCE OF EMOTIONAL INTELLIGENCE ON AGGRESSIVE BEHAVIOR]

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LISTA DE PUBLICACIONES QUE AVALAN LA TESIS DOCTORAL

- García-Sancho, E., Salguero, J. M., & Fernández-Berrocal, P. (2014). Relationship between emotional intelligence and aggression: A systematic review. *Aggression and Violent Behavior, 19*, 584-591. doi: 10.1016/j.avb.2014.07.007.
- García-Sancho, E., Salguero, J. M., & Fernández-Berrocal, P. (2015). Deficits in facial affect recognition and aggression: A systematic review. *Ansiedad y Estrés, 21*, 1-20.
- García-Sancho, E., Salguero, J. M., & Fernández-Berrocal, P. (2016). Angry rumination as a mediator of the relationship between ability emotional intelligence and various types of aggression. *Personality and Individual Differences, 89*, 143–147.
<http://dx.doi.org/10.1016/j.paid.2015.10.007>.
- García-Sancho, E., Salguero, J. M., Vasquez, E. A., & Fernández-Berrocal, P. (en prensa). Validity and reliability of the Spanish version of the Displaced Aggression Questionnaire: a pilot study. *Psicothema*.

PRÓLOGO

La presente Tesis Doctoral está compuesta por 3 capítulos generales.

El **capítulo 1** ofrece una introducción teórica sobre el estado teórico actual de las dos variables objeto de estudio: la inteligencia emocional y los comportamientos agresivos. A través de este apartado se muestran los principales modelos teóricos y la relación entre ambas variables. Posteriormente se presentan los objetivos generales y específicos de este trabajo.

El **capítulo 2** comprende los 4 estudios realizados en esta Tesis Doctoral. Estos trabajos están presentados siguiendo el formato de artículo de investigación, con su estructura y apartados correspondientes: resumen, introducción, método, resultados y discusión. Las referencias bibliográficas de estos trabajos se encuentran aunadas al final del documento junto con las referencias mencionadas en los capítulos 1 y 3.

El **capítulo 3** expone una discusión teórica que integra los resultados de los 4 estudios que componen el capítulo 2 y las principales contribuciones que supone para los campos de estudio de la inteligencia emocional y la agresión. Además, se discuten las implicaciones de carácter práctico que conlleva esta Tesis Doctoral. A continuación, se incluyen las principales conclusiones de este trabajo.

Al final del documento se presenta un resumen en inglés de la Tesis Doctoral que comprende una síntesis de los capítulos 1, 2 y 3 y finalmente, se adjuntan las referencias bibliográficas correspondientes a los capítulos 1, 2 y 3.

CAPÍTULO 1

INTRODUCCIÓN Y OBJETIVOS

INTELIGENCIA EMOCIONAL

La Inteligencia Emocional (IE) surge como un constructo que trata de explicar las diferencias individuales en el manejo de las emociones, estableciendo una relación entre cognición y afecto (Salovey & Mayer, 1990). En 1990, los autores Mayer y Salovey introdujeron en la comunidad científica este concepto en un intento por unir dos campos de investigación que históricamente se habían considerado opuestos: la inteligencia y las emociones, partiendo de la idea de un uso efectivo de nuestra cognición al servicio de la información emocional.

La IE se define como la habilidad para percibir, valorar y expresar las emociones con exactitud, la habilidad para acceder y generar sentimientos que faciliten el pensamiento; la habilidad para comprender la emoción y tener conocimiento emocional; y la habilidad para regular emociones y promover el crecimiento emocional e intelectual (Mayer & Salovey, 1997, p.10).

Desde el surgimiento del concepto y especialmente desde que, en 1995, Daniel Goleman popularizara el término con la publicación de su libro *Emotional Intelligence: Why it can matter more than IQ* (Goleman, 1995), comenzó a surgir el interés en este campo, tanto en la comunidad científica como en el resto de la población, promoviendo la idea de que un efectivo procesamiento emocional podía predecir el éxito en diferentes ámbitos, desde el personal y social, hasta el académico o profesional. Desde entonces, han proliferado los estudios científicos sobre la IE, pudiendo concentrarlos en tres grandes áreas: el estudio y análisis del constructo, el desarrollo y validación de diferentes instrumentos de medida y la relación de la IE con diferentes variables criterio. El objetivo de la presente Tesis Doctoral se sitúa en esta última categoría, con el propósito de profundizar en el estudio de las relaciones entre las habilidades emocionales y las conductas agresivas.

Aproximaciones teóricas a la IE

Durante las dos últimas décadas, en un intento por conceptualizar la IE, se ha desarrollado una gran variedad de modelos teóricos. Fundamentalmente, estos modelos se pueden agrupar en dos grandes categorías, pudiendo hablar así de IE rasgo o IE como habilidad. Esta clasificación distingue entre ambos tipos de IE, siguiendo como criterio el instrumento de medida utilizado, más que un enfoque teórico en sí (Matthews, Zeidner, & Roberts, 2002). Así, IE rasgo e IE como habilidad se desarrollan como dos constructos relacionados, pero diferenciados entre sí, evaluando conceptos diferentes.

El modelo de IE como rasgo (Petrides & Furnham, 2000a, 2000b y 2001)

La IE rasgo hace referencia a una tendencia o disposición de la persona al manejo de las emociones. Se puede definir, por tanto, como una constelación de predisposiciones comportamentales y autopercepciones referidas a la propia capacidad para reconocer, procesar y utilizar la información emocional. La IE Rasgo es concebida como un rasgo de personalidad que representa la auto-eficacia emocional de cada persona. Esta idea es avalada por diferentes estudios que sitúan a la IE rasgo como un factor independiente de segundo orden, incluido dentro de la taxonomía de los Cinco Grandes rasgos de personalidad (Petrides, Pita, & Kokkinaki, 2007). Dentro de esta perspectiva se incluyen todas aquellas aproximaciones teóricas y estudios empíricos que evalúan la IE como el rendimiento típico de la persona, es decir, la forma en que las personas reconocen y hacen uso de sus habilidades emocionales en el día a día.

La evaluación de la IE rasgo se realiza a través de medidas de autoinforme, como por ejemplo el Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009) o el Schutte Emotional Intelligence Scale (SEIS; Schutte et al., 1998). En este tipo de medidas la persona estima y comunica su propia percepción acerca del grado en el que cree poseer

determinadas habilidades emocionales (Mestre & Fernández- Berrocal, 2007; Petrides et al., 2007). La tabla 1 recoge algunas de las medidas que principalmente se han utilizado para evaluar la IE rasgo.

El modelo de habilidad de Mayer y Salovey (1997)

La IE concebida como una habilidad hace referencia a un conjunto de habilidades mentales que permiten el uso adaptativo de las emociones dentro de nuestra cognición, considerando a la IE como una inteligencia genuina que evalúa algo diferente a otras inteligencias y que es algo diferente a los rasgos de personalidad (Matthews et al., 2002). Dentro de los modelos de habilidad se encuentra el modelo de Mayer y Salovey (Mayer & Salovey, 1997; Salovey & Mayer, 1990).

El modelo de habilidad de Mayer y Salovey es la aproximación teórica que mayor número de investigaciones ha generado en el campo de la IE (Fernández-Berrocal & Extremera, 2006; Geher, 2004; Matthews et al., 2002) y concibe la IE como un concepto integrado por cuatro ramas o habilidades organizadas de forma jerárquica (Mayer & Salovey, 1997). Así, citándolas de menor a mayor complejidad, serían percepción y expresión emocional, facilitación emocional, comprensión de las emociones y por último, de mayor nivel y para la cual es requerido un cierto manejo de las anteriores, regulación emocional. La percepción y expresión emocional se define como la habilidad para percibir e identificar las emociones en uno mismo y en otros, así como en otros estímulos, incluyendo voces de personas, historias, música u obras de arte. La facilitación emocional se refiere a la habilidad para generar, utilizar o aprovechar las emociones de cara a favorecer nuestros procesos cognitivos.

Tabla 1. Principales instrumentos de evaluación de la IE rasgo

Medida	Autores	Nº de ítems	Subescalas		Índice global de IE
Swinburne University Emotional Intelligence Test (SUEIT)	Palmer & Stough (2002)	64	Reconocimiento y expresión emocional Cognición dirigida por las emociones Control emocional	Comprensión de emociones Gestión emocional	Sí
Trait Meta-Mood Scale (TMMS)	Salovey, Mayer, Goldman, Turvey, & Palfai (1995)	30	Atención a las emociones Reparación emocional	Claridad emocional	No
Bar-On Emotional Quotient Inventory (EQ-i)	Bar-On (1997)	133	Inteligencia interpersonal. Adaptación Humor general	Inteligencia intrapersonal Gestión del estrés	Sí
Schutte Emotional Intelligence Scale (SEIS)	Schutte et al. (1998)	33	Percepción emocional Manejo de las emociones	Utilización de las emociones Manejo de las emociones ajenas.	Sí
Trait Emotional Intelligence Questionnaire (TEIQue)	Petrides (2009)	144	Bienestar Habilidades emocionales	Habilidades de autocontrol Habilidades sociales	Si

La comprensión emocional se describe como la habilidad para reflexionar acerca de la información emocional, comprendiendo las relaciones que se dan entre emociones, la simultaneidad y mezcla de éstas, así como sus progresiones y transiciones a lo largo del tiempo. Y por último, la cuarta rama de la IE, regulación emocional, es la habilidad para regular los estados de ánimo y las emociones propias y las de los demás (Brackett, Rivers, & Salovey, 2011).

Para la evaluación de la IE como habilidad (IEH) se utilizan medidas de rendimiento máximo o ejecución. Estas medidas están diseñadas para evaluar el rendimiento máximo al que puede llegar una persona, es decir, la capacidad máxima que posee en un área y que puede llegar a desempeñar en un momento determinado, por el contrario, las medidas de rendimiento típico evalúan la estimación de la persona de su rendimiento diario. Partiendo de esta idea de evaluar el rendimiento máximo en IE, cabe señalar como un instrumento ampliamente utilizado y que ha demostrado poseer adecuadas propiedades psicométricas el Mayer-Salovey- Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Siratenios, 2003). En este tipo de instrumentos de evaluación las personas deben realizar diferentes tareas emocionales donde las respuestas, correctas o incorrectas, son conocidas de antemano (Brackett et al., 2011; Mayer, Salovey, & Caruso, 2000).

El desarrollo del presente estudio se guiará desde la perspectiva del modelo de habilidad de Mayer y Salovey (1997). La Tabla 2 presenta algunas de las principales medidas de IEH.

Tabla 2. Principales instrumentos de evaluación de la IE como habilidad

Medida	Autores	Nº de ítems	Subescalas	Índice global de IE
Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)	Mayer, Salovey, & Caruso (2002)	141	Percepción emocional Facilitación emocional Comprensión emocional Manejo emocional	Sí
The Situational Test of Emotional Understanding (STEU)	MacCann & Roberts (2008)	42	Comprensión emocional	No
The Situational Test of Emotional Management (STEM)	MacCann & Roberts (2008)	44	Manejo emocional	No
Test de Inteligencia Emocional de la Fundación Botín para Adolescentes (TIEFBA)	Fernández-Berrocal, Extremera, Palomera, Ruiz-Aranda, & Salguero (2015)	144	Percepción emocional Facilitación emocional Comprensión emocional Manejo emocional	Sí

Desde el modelo de habilidad, se presenta la IE como un concepto que cumple los criterios necesarios para ser considerado un tipo de inteligencia y como un constructo que evalúa algo diferente a otras inteligencias (Brackett et al., 2011).

A lo largo de todos estos años de desarrollo del concepto, ha existido cierta controversia acerca de cuál es la relación entre la IE y otras capacidades mentales. Sin embargo, diferentes trabajos han mostrado evidencias que la sitúan como un grupo factorial adicional dentro de la estructura de habilidades mentales de la teoría Cattell-Horn-Carroll (CHC) (McGrew, 2009; Roberts, & Lipnevich, 2011), estableciéndose como un factor de segundo orden, al mismo nivel que otros constructos, tales como la inteligencia fluida y cristalizada (Côté & Miners, 2006; Davies, Stankov, & Roberts, 1998; MacCann, Joseph, Newman, & Roberts, 2014), y que estaría subordinado a un único factor superior, un componente general de inteligencia, el factor G. Estudios realizados desde una perspectiva neuropsicológica avalan estos resultados, dando evidencia de los sustratos neurales que forman la arquitectura de la inteligencia emocional y de su relación con otras inteligencias (Barbey, Colom, & Grafman, 2012).

La importancia de este modelo de IE como habilidad radica en la integración de todas las habilidades emocionales en un mismo constructo, con evidencia empírica que avala la existencia de un factor unitario coherente, con poder explicativo más allá del que aportan sus 4 subcomponentes por separado (MacCann et al., 2014).

Inteligencia Emocional y su relación con importantes variables criterio

La teoría de la IE propone que aquellas personas con mayores habilidades para percibir, usar, comprender y manejar sus emociones y las de los demás mostrarán un mayor ajuste psicológico y social (Mayer, Roberts, & Barsade, 2008). En este sentido, existe evidencia empírica de la relación entre la IE e importantes variables criterio.

Diferentes revisiones y meta-análisis ponen de manifiesto una relación positiva entre IE y algunos indicadores de salud física y mental (Martins, Ramalho, & Morin, 2010; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Una menor capacidad para gestionar las emociones ha sido asociada a la presencia de trastornos psicológicos como depresión, ansiedad o esquizofrenia (Brackett et al. 2011; Martins et al., 2010; Resurrección, Salguero, & Ruiz-Aranda, 2014). Asimismo, menores niveles de IE han sido relacionados con una mayor implicación en conductas de riesgo como el consumo intensivo de alcohol, tabaco y sustancias ilegales (Kun & Demetrovics, 2010).

Dentro de las variables que pueden ser en parte explicadas por el nivel de IE, la literatura ha prestado importante atención a variables relacionadas con la interacción interpersonal. Así, en distintos trabajos realizados, se han encontrado evidencias de su relación con un mejor funcionamiento social de las personas (Mestre & Fernández-Berrocal, 2007), una mejor calidad social (Lopes et al., 2011; Lopes, Salovey, Côte, & Beers, 2005; Lopes, Salovey, & Straus, 2003) y un menor número de interacciones negativas y de conflicto en las relaciones sociales (Extremera & Fernández Berrocal, 2004). Desde esta perspectiva, en los últimos años, diferentes autores han comenzado a trabajar en una línea encaminada a explorar si la falta de habilidad para el manejo de las emociones puede predecir no solo conductas de conflicto en las relaciones, sino acciones de una gravedad mayor, ampliando su influencia a la realización de comportamientos agresivos. El propósito de esta Tesis Doctoral es extender el conocimiento en esta línea de trabajo.

AGRESIÓN: DEFINICIÓN, TIPOS Y MODELOS TEÓRICOS

De forma general, la agresión humana es definida como “el comportamiento de un individuo dirigido hacia otro con la intención próxima o inmediata de causar daño. Además, el agresor cree que con su conducta dañará a la otra persona y esta persona está motivada a huir de tal comportamiento” (Anderson & Bushman, 2002, p.28).

Según el Informe Mundial sobre la Violencia y la Salud (2002), cada año se registran más de 1,6 millones de personas en el mundo que pierden la vida de forma violenta. Los fallecimientos por causas violentas son registrados como una de las principales causas de defunción en las personas con edades comprendidas entre los 15 y 44 años. Si tenemos en cuenta aquellas manifestaciones agresivas que no desembocan en la muerte de las víctimas, las cifras de comportamientos agresivos que se producen en el día a día entre la población aumentan considerablemente.

Dada la alta ocurrencia de actos agresivos entre personas, la agresión ha sido estudiada bajo el foco de diferentes contextos donde se produce, tales como agresión en el ámbito de la pareja, agresión sexual, agresión en el contexto escolar, etc. Asimismo, son diversas las tipologías utilizadas por los autores expertos en el tema para clasificar este fenómeno. A lo largo de la literatura, la clasificación que con mayor frecuencia se ha utilizado distingue, en base a su forma de manifestarse, entre agresión directa y agresión indirecta o relacional (Crick & Grotpeter, 1995; 1996). La agresión directa englobaría aquellas conductas en las que se produce la agresión de forma más visible o manifiesta, incluyendo en este tipo la agresividad física y la verbal. La agresividad física comprende acciones tales como golpes, empujones y otras formas de maltrato físico, utilizando su propio cuerpo o un objeto externo para infligir una lesión o daño, mientras que la agresividad verbal se presenta a través de insultos, burlas, amenazas o gritos. Por otra

parte, la agresión indirecta o relacional es caracterizada por la provocación del daño mediante un mecanismo más encubierto o social, manipulando las relaciones sociales a través de distintas conductas, como hablar mal del compañero, extender rumores, mentiras, exclusión de las actividades, etc. (Card, Stucky, Sawalani, & Little, 2008).

Otra clasificación en el ámbito de la agresión es aquella referida a la tipología en relación al agente objeto de la agresión, pudiendo distinguir entre agresión dirigida hacia el provocador, o agresión desplazada. En el primer tipo, la conducta agresiva es dirigida hacia el agente causante de haber originado una situación de provocación, tomando represalias hacia la fuente responsable. Por otra parte, el término agresión desplazada se refiere a aquella conducta agresiva, producto de una provocación inicial, dirigida a hacer daño hacia una persona distinta de la fuente responsable de tal provocación, agrediendo, por tanto, a un objetivo aparentemente inocente (Dollard, Doob, Miller, Mowrer, & Sears, 1939; Hovland & Sears, 1940). Aunque en la historia del estudio de la agresión la literatura se ha focalizado principalmente en el estudio de la agresión dirigida hacia la persona responsable de la provocación, en los últimos 15 años ha aumentado el interés por el estudio de este tipo de conductas agresivas desplazadas, dada la relación de este fenómeno con algunos tipos de agresión, como por ejemplo la agresión en la pareja o la actitud agresiva de los conductores en carretera (Denson, Pedersen, & Miller, 2006; Marcus-Newhall, Pedersen, Carlson, & Miller, 2000).

El estudio de los comportamientos agresivos y acciones violentas ha recibido una amplia atención dentro de la psicología dadas las consecuencias que conlleva tanto para los propios agresores como para las víctimas de tal agresión (Card et al., 2008). La práctica de conductas agresivas ha sido asociada con un mayor riesgo de padecer distintos problemas de salud mental, consumo de sustancias o implicación en actos delictivos

durante la adolescencia (Moffitt, 2006; Ostrov & Godleski, 2009; Piquero, Daigle, Gibson, Piquero, & Tibbetts, 2007), así como la presencia de problemas psiquiátricos, comportamiento criminal o desempleo laboral en la vida adulta (Alsaker & Olweus, 2002; Asberg, 1994; Coccaro, Noblett, & McCloskey, 2009; Farrington, 1991). De igual forma, las víctimas que padecen esta agresión muestran una amplia diversidad de consecuencias negativas como, por ejemplo, mayores problemas de depresión, ansiedad, autoestima, etc. (Cava, Buelga, Musitu, & Murgui, 2010; O'Moore & Kirkham, 2001).

A tenor de estos resultados negativos, el estudio de la agresión es de gran relevancia en la actualidad, mostrándose un especial interés por conocer aquellas variables que puedan estar fomentándola o inhibiéndola, algo que permitirá no sólo conocer en mayor profundidad este fenómeno, sino también diseñar programas eficaces para prevenirla o reducirla. En este sentido, se han realizado múltiples propuestas para determinar cuáles son los mecanismos que pueden explicar las conductas agresivas (Anderson & Bushman, 2002; Bandura, 1986; Denson, Pedersen, Friese, Hahm, & Roberts, 2011; Pedersen et al., 2011; Van der Graaff, Branje, De Wied, & Meeus, 2012; Vasquez, Osman, & Wood, 2012). Entre los distintos modelos teóricos que existen, y desde una línea centrada en el ámbito emocional, en el siguiente apartado se presentarán aquellas propuestas que principalmente han otorgado relevancia al papel del procesamiento emocional y sus habilidades en la explicación de las conductas agresivas.

Modelo integrado del procesamiento cognitivo y emocional de la información social (Crick & Dodge, 1994; Lemerise & Arsenio, 2000)

El modelo de Procesamiento de la Información Social (PIS) (Crick & Dodge, 1994), propone 6 pasos para explicar el procesamiento de la información en las interacciones sociales. Estos son: 1) codificación de las señales sociales, incluyendo la

búsqueda y recogida de la información disponible en el ambiente, además de la focalización de la atención sobre la información relevante; 2) representación e interpretación, dando significado a las señales que se han atendido; 3) selección de metas u objetivos, donde, una vez interpretada la situación, la persona cambia o mantiene su objetivo en el encuentro social; 4) búsqueda de respuesta o generación de soluciones alternativas, que implica la elaboración de varias respuestas posibles ante la situación; 5) selección de respuesta, que implica valorar las distintas opciones y elegir la más adecuada; 6) representación o actuación de la solución escogida, siendo necesario poseer las habilidades necesarias para llevarla a cabo.

A lo largo de la literatura, este modelo ha sido utilizado con frecuencia para explicar las diferencias individuales en la conducta agresiva (Bailey & Ostrov, 2008; Dodge, Lochman, Harnish, Bates, & Pettit, 1997; Pettit, Polaha, & Mize, 2001), partiendo de la hipótesis de que algunas personas desarrollan dificultades específicas en el procesamiento de las claves sociales que incrementan el riesgo de comportarse de forma agresiva (ver Dodge, 1980, 1986; Huesmann, 1988; Rubin & Krasnor, 1986). Desde esta perspectiva, se han encontrado evidencias empíricas que señalan que las personas agresivas poseen déficits en distintos procesos cognitivos, por ejemplo, menor atención a señales relevantes, búsqueda de menos información, sesgo de atribución hostil en las intenciones de otras, o una reducida generación de soluciones (Bailey & Ostrov, 2008; Schultz, Izard, & Bear, 2004).

Más recientemente, el modelo PIS fue reformulado por Lemerise y Arsenio (2000) para incluir el papel de las emociones y el procesamiento de éstas en las interacciones sociales. El modelo integrador de los procesos cognitivos y emocionales de Lemerise y Arsenio (2000) destaca la emoción como un componente esencial que puede influir en el

procesamiento de la información social a través de las distintas fases propuestas por Crick y Dodge (1994). En las fases 1 y 2 de codificación e interpretación de señales, las claves afectivas tanto propias como de los interlocutores son una fuente principal de información (Saarni, 1999). En la fase 3 de clarificación de metas, las emociones pueden actuar favoreciendo la elección de una meta particular, acorde con el estado de ánimo (Crick & Dodge, 1994). Una persona que esté experimentando emociones negativas intensas es más probable que se focalice en metas instrumentales o de evitación. Además, el estado emocional de los demás también puede influir en las metas escogidas, favoreciendo metas de afiliación ante emociones positivas, o por el contrario, emociones negativas que pueden desalentar a mantener el contacto. En la fase 4 y 5, estos autores postulan que los procesos emocionales pueden influir en la accesibilidad de respuestas necesarias para conseguir la meta propuesta. Una alta intensidad emocional puede dificultar la generación de respuestas. Los buenos reguladores emocionales consideran la situación desde múltiples perspectivas cognitivas y afectivas, facilitando el seleccionar una respuesta más competente (Saarni, 1999). Por último, en la fase 6, la intensidad de las emociones y la capacidad para regularlas puede influir en la puesta en marcha de la acción seleccionada. En condiciones de baja intensidad emocional, incluso personas que presentan desajuste social pueden llegar a mostrar un comportamiento adaptativo y no agresivo. Sin embargo, cuando la intensidad emocional es alta, algunas personas presentan más dificultades para poner en marcha dicha acción. En líneas generales, este modelo sugiere que la presencia de déficits en el procesamiento emocional dificulta el desarrollo de un comportamiento social competente. Al igual que con el modelo de Crick y Dodge (1994), existe evidencia empírica que apoya la relación entre la existencia de déficits en el procesamiento emocional a través de las fases del PIS y el comportamiento agresivo (Camodeca & Goosens, 2005; de Castro, Merk, Koops, Veerman, & Bosch, 2005), por ejemplo, la

presencia de déficits en la fase de codificación puede llevar a la detección de expresiones de ira en la otra persona durante una situación ambigua, facilitando una atribución hostil en los demás, e incrementando el riesgo de desarrollar una conducta agresiva (Dodge & Somberg, 1987; Lösel, Bliesener, & Bender, 2007; Schultz et al., 2004).

Modelo general de agresión (Anderson & Bushman, 2002)

Aunque son numerosos los modelos que se han propuesto en la literatura para explicar los comportamientos agresivos, el Modelo General de Agresión (MGA; Anderson & Bushman, 2002) destaca como uno de los más utilizados en la actualidad. Este modelo está formulado como un marco integrador de diferentes teorías de la conducta agresiva que permite unificar la aportación de todas ellas en un solo modelo, por tanto, abarca el estudio de la agresión desde distintas perspectivas.

El MGA explica la agresión conceptualizándola desde una definición amplia, como el intento intencionado de hacer daño a otra persona, sin hacer distinción del tipo de daño o forma o de a quién va dirigido el comportamiento. Este modelo intenta explicar las diferencias individuales en los distintos niveles de procesamiento implicados en el comportamiento agresivo, destacando tres aspectos o fases principales: la interacción persona y situación, el estado interno de la persona, y los procesos de evaluación y toma de decisiones (DeWall, Anderson, & Bushman, 2011).

En la primera fase, el MGA postula que las características de la situación y distintos factores de la persona interactúan entre sí. Entre los factores personales residen todas aquellas características de la persona que puedan influir en una determinada situación como, por ejemplo, predisposiciones genéticas, sexo, edad, rasgos de personalidad, actitudes, creencias, o metas a largo plazo. Por otra parte, los factores situacionales incluyen todos aquellos rasgos de la situación que pueda afectar al

comportamiento agresivo, como la presencia de una provocación, el bloqueo de metas, la existencia de altas temperaturas, o el consumo de drogas.

La interacción de ambos factores, personales y situacionales, converge en una segunda fase, en el estado interno de la persona, compuesto por unos determinados pensamientos, emociones, y un nivel de activación. Estos tres componentes se encuentran inter-relacionados, de forma que existen relaciones bidireccionales entre ellos. Por tanto, de forma previa a un comportamiento agresivo, interactuarían entre sí la presencia de pensamientos hostiles, una experiencia emocional negativa, especialmente de enfado, y la alta activación fisiológica.

Esta interrelación de los tres niveles que componen el estado interno muestra, a su vez, relaciones bidireccionales con la tercera etapa que plantea el MGA, que incluye los procesos de evaluación, re-evaluación y de toma de decisiones. En esta fase se desarrollan una variedad de procesos, algunos relativamente automáticos, como una evaluación inmediata o inicial, hasta otros más controlados y conscientes como la re-evaluación de la situación que requieren de suficientes recursos cognitivos disponibles para ser llevados a cabo. Durante el curso de esta fase se generan diferentes opciones de respuesta, se valoran los recursos disponibles para ejecutar dichas acciones, las posibles consecuencias, y por último, se toman decisiones, escogiendo una alternativa y poniendo en marcha una respuesta que puede ser agresiva o pacífica (Anderson & Bushman, 2002).

En definitiva, el GMA permite integrar la explicación de una amplia variedad de mecanismos que favorecen la presencia de comportamientos agresivos. La convergencia de diversos factores influirá en los proceso de valoración y toma de decisiones, cuyo producto determinada la acción final realizada.

Modelo de rumiación de la ira (Denson, 2009, 2013)

El modelo de rumiación de la ira propuesto por Thomas Denson (2009; 2013) enfatiza la importancia de la rumiación de la ira como una de las variables que potencia y aumenta la probabilidad de mostrar un comportamiento agresivo. Bajo los supuestos de esta perspectiva teórica, Denson plantea un mecanismo a través del cual la rumiación de la ira explica la agresión.

La rumiación de la ira puede conceptualizarse como un tipo de pensamiento repetitivo y perseverante asociado a un evento que genera ira. La persona se focaliza en recuerdos vinculados a la emoción de ira, a pensamientos y sentimientos de enfado e ideas de venganza. Estos pensamientos asociados a la ira pueden ir dirigidos hacia aspectos personales (e.g. ser insultado por alguien) o hacia eventos que no están relacionados estrictamente con la persona, pero que son importantes para ella (e.g. enfado ante una injusticia social) (Denson et al., 2006; Sukhodolsky, Golub, & Cromwell, 2001).

Para comprender los procesos que subyacen al hecho de que la rumiación de la ira incremente la probabilidad de actuar de forma agresiva, Denson destaca el papel del autocontrol y de los recursos cognitivos (Denson et al., 2011). Los procesos de autocontrol e inhibición de impulsos actúan gracias al trabajo del funcionamiento del control ejecutivo (Slotter & Finkel, 2011). Este sistema funciona mediante el consumo de los recursos cognitivos necesarios para realizar el esfuerzo de poner en marcha estos mecanismos. El funcionamiento ejecutivo cuenta con una limitada fuente de recursos, por lo que, en ocasiones, la capacidad ejecutiva puede verse mermada por no tener disponibles suficientes recursos con los que poder trabajar, lo que repercute en la efectividad de estos procesos.

Ante una situación de provocación, una persona puede utilizar la rumiación de la ira como estrategia de regulación. Estos pensamientos rumiativos mantienen y aumentan la emoción de ira y vienen acompañados de un intenso afecto negativo y de pensamientos intrusivos de carácter aversivo, requiriendo un esfuerzo por parte de la persona para poner en marcha mecanismos de autorregulación que disminuyan el impacto negativo que supone todo ello (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Hagger, Wood, Stiff, & Chatzisarantis, 2010). Estos procesos de autorregulación demandan un esfuerzo y un consumo de recursos, pudiendo llegar a saturar el sistema, y a resultar mermada la capacidad del control ejecutivo. Este agotamiento de recursos cognitivos que supone la rumiación de la ira imposibilita que los procesos de autocontrol de impulsos agresivos cuenten con los recursos disponibles necesarios para manejar de forma efectiva ese impulso, por lo que la persona tiene mayores dificultades en controlar esa tendencia a agredir, aumentando la probabilidad de que ponga en marcha la conducta agresiva.

Diferentes estudios realizados en contextos de laboratorio añaden evidencias empíricas a esta teoría, proponiendo a la rumiación de la ira y a la disponibilidad de recursos cognitivos como dos variables relevantes para explicar los comportamientos agresivos (Denson et al., 2011; Denson, DeWall, & Finkel, 2012).

EL ESTUDIO DE LAS HABILIDADES EMOCIONALES Y LA AGRESIÓN

Desde una línea centrada en el ámbito emocional, diferentes habilidades emocionales han sido estudiadas en relación con la conducta agresiva. Una de las habilidades que ha sido principalmente analizada desde el estudio de la agresión ha sido la percepción emocional. Una revisión sistemática de la literatura existente sobre el tema sugiere que, de forma general, las personas agresivas presentan dificultades en la percepción de expresiones emocionales en el rostro de otra persona. Este déficit ha sido identificado de forma consistente a través de diferentes tramos de edad, desde la infancia

hasta la edad adulta, y en diversos tipos de muestra, ya sea población normal, población clínica diagnosticada por un trastorno en cuya base se encuentre la agresión, o población delincuente condenada por llevar a cabo conductas agresivas (García-Sancho, Salguero, & Fernández-Berrocal, 2015a). Esta presencia de déficits a la hora de reconocer las expresiones emocionales de otra persona puede llevar a sesgos en el procesamiento de la información, por ejemplo, la percepción de ira en la otra persona durante una situación emocional ambigua, facilitando la interpretación de intenciones hostiles en otros (Dodge & Somberg, 1987).

Otros autores hacen énfasis en la importancia del conocimiento y la comprensión emocional. Diferentes trabajos han mostrado cómo las personas con tendencia a exhibir comportamientos agresivos presentan un menor conocimiento y comprensión acerca del funcionamiento de la emociones, de la existencia de emociones mixtas o simultáneas, o de las causas que originan una determinada agresión (Bohnert, Crnic, & Lim, 2003; Casey, 1996; Cook, Greenberg, & Kusche, 1994; Trentacosta & Fine, 2010).

La capacidad para regular las propias emociones es otra de las de las habilidades emocionales que más ha mostrado estar implicada en la conducta agresiva (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001; Eisenberg et al., 2001; Sullivan, Helms, Kliewer, & Goodman, 2010). Robertson, Daffern y Bucks (2012) realizaron una revisión teórica sobre el tema en la que argumentan que las personas incrementan la probabilidad de actuar de forma agresiva tanto si son incapaces de reducir la emoción como si lo hacen de forma excesiva. Una persona que no es capaz de regular y reducir sus niveles de ira u otras emociones negativas, puede llegar a actuar de forma agresiva en un intento por reparar, reducir o evitar ese estado emocional negativo. Sin embargo, un uso reiterado de la supresión de emociones puede tener también consecuencias negativas.

La sobre-regulación de las emociones negativas puede llevar a incrementar los niveles de afecto negativo, y este estado interno puede aumentar la activación fisiológica, y comprometer el proceso de toma de decisiones, reduciendo los procesos inhibitorios contra la agresión. Por tanto, para inhibir el impulso de responder de forma agresiva, es necesaria una adecuada regulación de las emociones.

Aunque estos y otros estudios han mostrado evidencias del papel que distintas competencias emocionales desempeñan en la conducta agresiva, pocos trabajos han explorado la influencia que todas las habilidades emocionales, anteriormente reseñadas, englobadas en un mismo concepto e integradas en un mismo modelo teórico, tienen sobre la agresión. Como hemos señalado anteriormente, en las últimas décadas, un nuevo acercamiento teórico ha aglutinado estas habilidades emocionales en un único constructo conocido como *inteligencia emocional*, una inteligencia genuina que ha mostrado estar relacionada con otras capacidades mentales, que se ha mostrado distinta a los rasgos de personalidad y con poder explicativo como constructo unitario, más allá del poder explicativo de cada uno de sus componentes. Por tanto, en el presente trabajo nos centraremos en analizar el papel de la inteligencia emocional, entendida como un constructo que engloba las diferentes habilidades emocionales, en el desempeño de las conductas agresivas.

OBJETIVOS

El objetivo general de esta Tesis Doctoral fue explorar la relación entre dos campos de investigación que en los últimos años han comenzado a asociarse de forma emergente, esto es, el estudio de la IE y el estudio de la agresión. Para ello, se han llevado a cabo 4 estudios, cuyos objetivos específicos contribuyen a cumplir este propósito general (ver Tabla 3).

- Estudio 1. En el primer estudio, el objetivo fue revisar de forma sistemática la literatura que se ha centrado en analizar las relaciones entre IE y agresión, incluyendo diferentes aproximaciones teóricas a la IE, entendiendo la agresión desde una amplia concepción y haciendo un recorrido a través de distintas edades, desde la niñez a la adultez. Todo ello con la finalidad de conocer el estado actual de esta cuestión.
- Estudio 2. Teniendo en cuenta la literatura revisada en el primer trabajo, el objetivo del segundo estudio fue ampliar esta línea de investigación centrándonos en la relación de la agresión y la IE como habilidad. Para ello se realizaron dos subestudios. La finalidad del primer subestudio fue explorar la relación transversal entre IEH y agresión en adultos y además, analizar la validez incremental de la IEH sobre los factores de personalidad en la explicación de conductas agresivas. El objetivo del segundo subestudio, fue corroborar los resultados encontrados en el estudio 1 en población adolescente y a nivel prospectivo.
- Estudio 3. La finalidad del tercer estudio fue la adaptación al español de una medida de agresión y de variables emocionales asociadas a la conducta agresiva,

con el fin de que el uso de esta escala posibilite el avance en este campo de estudio. Para ello, el objetivo del tercer estudio fue el desarrollo de la adaptación y validación al español del Cuestionario de Agresión Desplazada (Denson et al., 2006), compuesto por tres subescalas o dimensiones: agresión desplazada, rumiación de la ira y planificación de la venganza ante una situación de provocación.

- Estudio 4. El propósito del cuarto estudio fue profundizar en el conocimiento sobre la relación entre IEH y agresión. Los objetivos de este trabajo fueron: en primer lugar, aportar datos preliminares acerca de la asociación entre variables que no han sido estudiadas hasta la fecha, como la relación entre IEH y agresión indirecta, y entre IEH y rumiación de la ira. En segundo lugar, examinar el mecanismo a través del cual las habilidades emocionales ejercen su papel sobre las conductas agresivas, analizando el posible papel mediador de la rumiación de la ira en esta relación.

Tabla 3. Estudios que componen la Tesis Doctoral

Estudios	N = Total (hombres; mujeres) Media edad(M); Desviación típica(DT)	Variables estudiadas	Diseño	Análisis estadístico
1. Relationship between EI and Aggression: A Systematic Review.	19 Estudios	IE Agresión	Metodología sistemática	Revisión teórica
2. Relationship between EI and aggression in adults and adolescents: cross-sectional and longitudinal evidence using an ability measure	Subestudio 1: N= 474 (156; 318) M = 22.76, DT = 5.13 Subestudio 2: N= 151 (75; 76) M = 14.74, DT = .84	IEH Agresión (Física, Verbal) IEH Agresión (Física, Verbal)	Transversal Longitudinal	Análisis correlacional de Pearson Análisis de regresión jerárquica Análisis correlacional de Pearson Análisis de regresión jerárquica
3. Validity and reliability of the Spanish version of the Displaced Aggression Questionnaire	N = 429 (104; 325) M= 30.13, DT = 10.72)	Agresión (física, verbal, indirecta; desplazada) Rasgo de ira (rasgo de ira, control ira, expresión de ira) 5 grandes rasgos de personalidad Rumiación de la ira Estrategias de regulación emocional	Transversal Fiabilidad test-retest	Análisis factorial Análisis correlacional de Pearson
4. Angry rumination as a mediator of the relationship between ability emotional intelligence and various types of aggression	N= 243 (52; 191) M = 21.78, DT = 4.38	IEH Agresión (física, verbal, indirecta) Rumiación de la ira	Transversal	Correlación de Pearson Modelo de ecuaciones estructurales

CAPÍTULO 2

ESTUDIOS QUE COMPONEN LA TESIS DOCTORAL

ESTUDIO 1

RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND AGGRESSION: A SYSTEMATIC REVIEW

Abstract

Emotional Intelligence (EI), defined as a set of abilities for perceiving, using, understanding, and managing emotions, has been associated with a better psychosocial adjustment. Empirical studies have found a positive relationship of EI with social function and a negative one with conflicts in social relationships. The purpose of this study was to systematically review available evidence on the relationship between EI and aggression. PubMed, PsycINFO and Scopus were searched for relevant articles in English and Spanish, and 19 eligible studies were identified. Together, these studies provide strong evidence that emotional abilities and aggressive behavior are negatively related: people with higher EI show less aggression. This relationship appears to be consistent across ages (from childhood to adulthood), cultures, types of aggression, and EI measures. Few studies have assessed EI using ability tests, and none of the eligible studies was longitudinal or experimental. These findings are discussed in relation to future research on aggression and strategies to prevent and manage it based on EI.

Keywords: emotional intelligence, systematic review, aggression

Introduction

According to the World Report on Violence and Health (2002), each year more than 1.6 million people around the world die as a result of violent behavior. In fact, violent behavior is one of the major causes of death for people aged 15-44. The prevalence and frequency of violent behavior around the world are far greater if we take into account violence that does not lead to death.

Human aggression is defined as any behavior directed toward another individual that is carried out with the *proximate* (immediate) intent to cause harm. In addition, the perpetrator must believe that the behavior will harm the target, and that the target is motivated to avoid the behavior (Anderson & Bushman, 2002).

Aggressive behavior produces negative effects not only in the victims, but also in the aggressors. More aggressive adolescents show clear psychosocial maladjustment, low academic performance, absenteeism from school, involvement in delinquent acts, substance abuse, and various mental health problems, including higher levels of depression (Moffitt, 2006; Ostrov & Godleski, 2009; Piquero et al., 2007). More aggressive adults are more likely than less aggressive ones to exhibit psychiatric problems and criminal behavior as well as experience poor marital relations and unemployment (Alsaker & Olweus, 2002; Asberg, 1994; Coccaro et al., 2009; Farrington, 1991). Victims of aggression, for their part, suffer myriad negative consequences, including depression, anxiety, low self-esteem, and stress effects such as headaches, difficulty sleeping, and a desire to skip school in the case of children and adolescents (Cava et al., 2010; Crick & Bigbee, 1998; O'Moore & Kirkham, 2001).

The strong influence of aggression on psychosocial adjustment and mental health outcomes highlights the importance of identifying variables that can increase or inhibit aggressive behavior. Knowledge of such variables is critical not only for understanding the mechanisms of aggression in greater detail, but also for designing effective programs for violence prevention and aggression management. Numerous studies have sought to understand processes that can affect aggression, including behavioral inhibition and control, empathy, and anger management (Barnett & Mann, 2013; Denson et al., 2011; Pedersen et al., 2011; Van der Graaff et al., 2012; Vasquez et al., 2012; Wallace, Barry, Zeigler-Hill, & Green, 2012).

Among processes thought to influence aggressive behavior, emotional intelligence (EI) has emerged as a potentially relevant variable (Brackett, Mayer, & Warner, 2004). Several studies have generated substantial evidence of an important association. However each study by itself has analyzed only a small part of the overall association, either because of a relatively small sample size or because participants were limited to one age group or culture. In order to examine the field as comprehensively as possible, and provide reliable conclusions based on the largest sample sizes, we have performed a systematic review of studies that analyze the relationship between EI and aggression.

Emotional intelligence

EI is defined as “the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10). EI has been conceptualized primarily from two theoretical approaches: as a trait or as a mental ability. Trait EI, considered a personality trait, refers to the tendency or proclivity of a person to

manage his or her emotions. Trait EI is usually measured using self-report instruments, such as the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009), which asks the respondent to estimate the degree to which he or she possesses certain emotional abilities (Petrides et al., 2007).

In the second theoretical approach, EI is defined as a set of abilities that support the adaptive use of emotions as part of our cognitive processes. In other words, EI is genuinely considered a form of intelligence. Ability EI is usually assessed using performance test, such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002). This instrument is a performance test because it requires individuals to solve tasks, and it is an objective test because there are better and worse answers on it, as determined by consensus or expert scoring (Brackett et al., 2011; Mayer et al., 2000).

EI theory predicts that people who are better at perceiving, understanding, using, and managing their own emotions and others' emotions are more likely to be psychosocially adjusted (Mayer et al., 2008). This prediction is well supported by empirical studies that demonstrate a positive relationship of EI with social function and quality of social relationships, and a negative relationship of EI with number of negative interactions and conflicts in social relationships (Brackett et al., 2011).

Emotional intelligence and aggression

In light of the relationship between EI and variables related to social function, several authors have begun to investigate whether the inability to manage emotions is associated not only with conflict behaviors in relationships but also with more serious behaviors problems as aggressive conducts (Lomas, Stough, Hansen, & Downey, 2012). Some studies have investigated possible associations between EI and different

manifestations of aggression (e.g., physical, verbal) in different contexts (e.g., in school, with a partner, during sex) (Moriarty, Stough, Tidmarsh, Eger, & Dennison, 2001; Siu, 2009).

The objective of the present work was to systematically review the literature on EI and aggression in order to gain a comprehensive understanding of the relationship across different theoretical conceptualizations of EI, different types of aggression, and different ages and cultural contexts. This should allow us to develop a clear picture of the current state of research and propose future lines of investigation to complement existing gaps in the field.

Method

MEDLINE, PsycINFO and Scopus databases were carefully searched over the period of 5-9, November 2012 for articles published in English or Spanish in scientific journals, without regard for the year of publication. Relevant articles were tagged when they contained “emotional intelligence” as a keyword or as a term in the title or abstract, together with one or more additional search terms. In PsycINFO, these additional terms were “aggressive behavior”, “aggressiveness”, and “behavior problems”; in MEDLINE, they were the MeSH terms “social behavior”, “aggression”, and “social problem”. Articles were also tagged if they contained, as keywords or in the title or abstract, a combination of the phrases “emotional intelligence” and one or more of the following terms: “aggress*”, “antisocial behavior”, “social behavior”, “behavior problem”, or “social problems”.

Inclusion and exclusion criteria

The first criterion for inclusion in our systematic review was that it be an empirical study about the relationship between EI and aggression, leading us to exclude theoretical studies, reviews, and meta-analyses. Studies had to evaluate EI based on a model of EI as a set of specific, interrelated emotional abilities. This led us to exclude studies that relied on evaluation measures not grounded in EI theory, such as those that related aggression to emotional perception or regulation using instruments not grounded in an EI framework. We included studies even if they evaluated only one emotional competency, as long as they evaluated it within an EI framework.

Given the broad range of subtly different concepts understood under the term "aggression", including aggressivity, violence, and bullying; and given the diversity of empirical approaches to analyze aggression, we decided to restrict ourselves to studies examining aggression as defined by Anderson and Bushman (2002). Thus, we included only studies that examined an association between EI and a variable that presupposed the proximate (immediate) intention to cause harm to another individual, regardless of the specific type of harm involved. We excluded studies based on variables that did not presuppose such an intention, such as Machiavellianism, which measures the tendency of a person to exhibit manipulative behaviors in order to advance his or her own interests (Christie & Geis, 1970), but not necessarily in order to cause harm to another.

Literature searches

Database searches identified 446 relevant studies: 191 in Scopus, 93 in MEDLINE and 162 in Psycinfo. Elimination of duplicates gave 240 potentially eligible studies, the titles and abstracts of which were screened against the inclusion and exclusion criteria.

This screening was performed independently by two investigators; in case of disagreement about study eligibility, a third researcher was consulted.

Most publications at this stage were excluded because they did not include EI and aggressive behavior as variables, leading to a set of 58 studies (Figure 1). These studies were read in full and 18 were included. Most of studies excluded in this step were papers that did not meet our definition of aggression. In this way, we excluded studies that analyzed disruptive behaviors, misconduct and aspects of social interaction that did not necessarily involve the intention to harm another. Consultation with experts led us to identify and include another eligible study (Plugia, Stough, Carter, & Joseph, 2005), giving a final set of 19 studies that empirically analyzed the relationship between EI and human aggression.

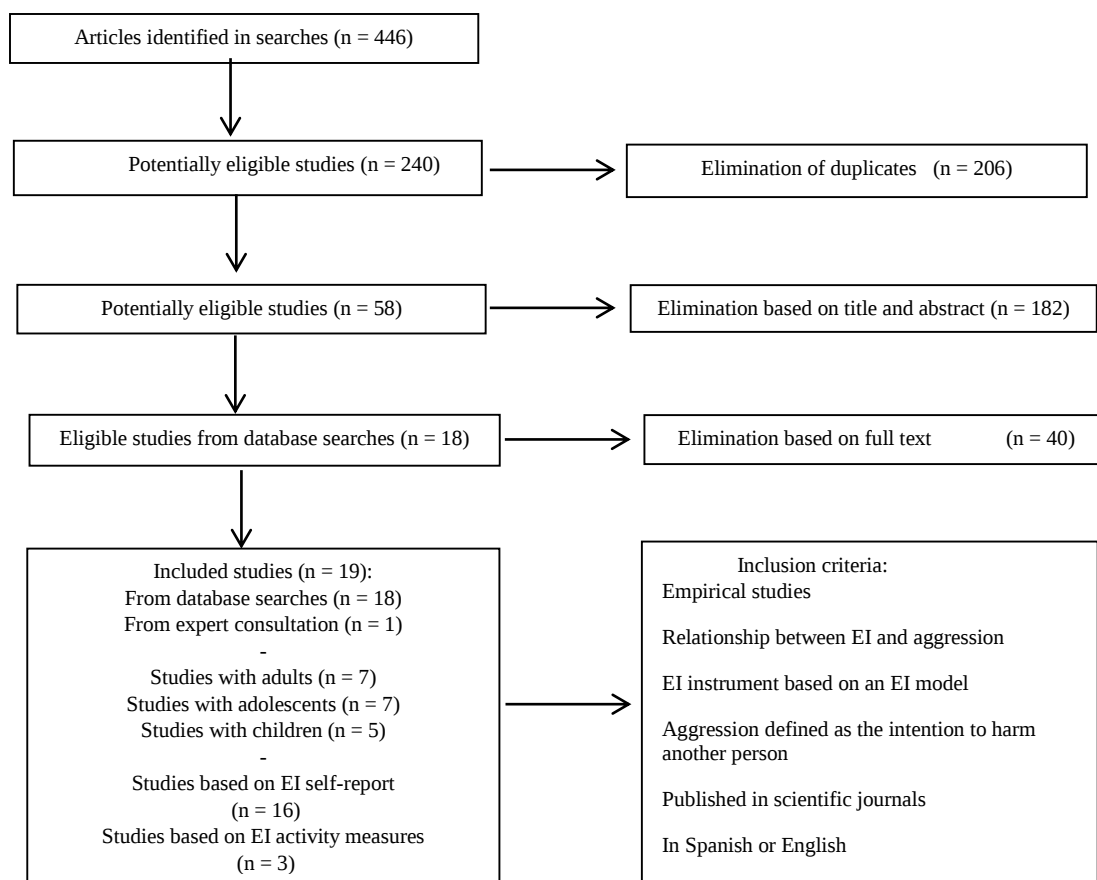


Figure 1. Flowchart of study selection.

General characteristics of included studies

Key information about the studies included in this review is shown in Table 4 (studies with children), Table 5 (studies with adolescents) and Table 6 (studies with adults). These tables describe the variables analyzed, the size and characteristics of the sample, and the principal findings of each study. All 19 included studies used a cross-sectional design; none followed the cohort longitudinally. Three studies were carried out on people convicted of committing crimes, and one study was performed with participants in an anger management therapy program. Of the 19 studies, 16 evaluated EI using self-report instruments, and 3 using ability EI measures. Among the studies based on self-report, four were carried out with adults, seven with adolescents and five with children. All three studies based on ability EI involved adults.

To present the results systematically, we will consider separately the studies performed with children, adolescents or adults. Within each set of age-specific studies, we will consider separately studies based on self-report evaluations of EI and studies based on evaluation of ability EI.

Results*Results in children*

We identified five studies that examined the association between EI and aggression in children (Table 4).

Esturgó-Deu and Sala-Roca (2010) examined the possible relationship between emotional abilities and disruptive behavior in primary school students. Teachers were asked to identify which aggressive behaviors were present in each of their students. At the same time, the Reuven Bar-On's Emotional Quotient Inventory test Youth Version

(EQI:YV; Bar-On & Parker, 2000) was used to assess EI levels in the students. Results showed that students who exhibited disruptive behaviors, including physical or verbal attacks on their classmates, showed lower EI than students who did not. In other words, students with higher EI engaged in fewer aggressive behaviors against their classmates.

Table 4. Studies of EI and aggression in children.

Study	EI scale	Aggression type	Sample (N)	Principal results
Esturgo-Deu & Sala-Rosa (2010)	EQ-i:YV	Physical and verbal	1421 (743 boys, 678 girls) and 69 teachers (14 men, 55 women)	Children showing aggressive physical and verbal behavior had lower EI scores than children who did not show such behavior.
Petrides et al. (2006)	TEIQue-ASF	Physical	160 (77 boys, 83 girls)	Children with higher EI were less likely to be characterized as "aggressive" than children with lower EI.
Santesso et al. (2006)	EQ-i- Y.V.-O.	Type not reported	40 (21 boys, 19 girls)	EI was negatively associated with aggression.
Kokkinos & Kipritsi (2012)	TEIQue-ASF	Bullying	206 (95 boys, 111 girls)	EI was negatively related to bullying behaviors. EI explained some of the variance in bullying.
Mavroveli & Sanchez-Ruiz (2011)	TEIQue-CF	Bullying	565 (274 boys, 286 girls)	Children with higher EI scores were less likely to be described as "bullying". EI was associated negatively with self-reported bullying behavior.

Abbreviations: Bar-On EQ-YV, *Bar-On Emotional Quotient Inventory Youth Version* (Bar-On and Parker, 2000); TEIQue-ASF, *Trait Emotional Intelligence Questionnaire—Adolescent Short Form* (Petrides, 2009); EQ-i:YV-O, *Bar-On Emotional Quotient Inventory: Youth Version—Observer Form* (Bar-On and Parker, in press); TEIQue-CF, *Trait Emotional Intelligence Questionnaire-Child Form* (Mavroveli et al., 2008).

Similar results were obtained by Petrides, Sangareau, Furnham, and Frederickson (2006), who surveyed not only teachers, but also the students about the presence of aggressive behaviors in their classmates. Children with higher EI, as assessed using the Trait Emotional Intelligence Questionnaire—Adolescent Short Form (TEIQue-ASF;

Petrides et al., 2006), were rated less often by their teachers and classmates as showing aggressive behavior and more often as showing prosocial behavior, such as collaboration.

These results were further supported by Santesso, Reker, Schmidt, and Segalowitz (2006), who examined the relationship between EI and externalizing behavior. EI of the participating children was assessed by their parents using the BarOn Emotional Quotient Inventory: Youth Version—Observer Form (EQ-i-YV-O; Bar-On & Parker, in press). The parents were provided with a list of behaviors, among them aggressive ones, and asked to indicate which behaviors their children exhibited. The results showed that, again, higher EI was associated with less aggressive conduct.

While these studies in children suggest that EI contributes to the manifestation of aggressive acts in general, other studies also implicate EI in aggressive acts persistently committed against certain classmates, i.e., bullying. Kokkinos and Kripritsi (2012) and Mavroveli and Sánchez-Ruiz (2011) examined this relationship using various versions of the TEIQue to evaluate EI (Mavroveli, Petrides, Shove, & Whitehead, 2008; Petrides et al., 2006). These studies showed a negative relationship between emotional competencies and self-reported levels of bullying. In addition, children with higher EI were reported by their classmates to engage in less aggressive behavior (Mavroveli & Sánchez-Ruiz, 2011). The variance in bullying behavior was explained by EI, gender, and self-reported levels of cognitive empathy. Male gender, lower EI, and greater difficulty in understanding others' perspective, were associated with active involvement in bullying behaviors (Kokkinos & Kripritsi, 2012).

Results with adolescents

We identified seven studies analyzing the relationship between emotional competencies and aggression levels in adolescents (Table 5).

Siu (2009) examined the relationship between self-reported EI and various behavioral problems, including aggressive conduct, in Chinese adolescents. EI was evaluated using the self-report scale of Schutte (EIS; Schutte et al., 1998). The results showed that poor use of emotions was associated with aggressive behavior. A similar study with another sample of Malaysian adolescents (Liau, Liau, Teoh, & Liau, 2003) came to similar results after taking into account several additional variables frequently associated with aggression, such as parental control over their children. These latter authors also found that EI level, as assessed using the EIS (Schutte et al., 1998), moderated the relationship between parental control and aggression. Among adolescents whose parents exerted a high degree of control over them, those with high EI showed fewer aggressive behaviors than those with low EI.

Lomas et al. (2012) studied the relationship between EI and bullying in Australian adolescents. EI was assessed using the Adolescent Swinburne University Emotional Intelligence Test (SUEIT; Luebbers, Downey, & Stough, 2007), while bullying behavior by each adolescent was assessed by surveying classmates. The results showed that adolescents with greater difficulties in understanding others' emotions were more likely to bully their classmates. Similar results were reported by Downey, Johnston, Hansen, Birney, and Stough (2010), who found that Australian adolescents with low emotional understanding as well as low emotional control and management exhibited more aggressive behavior. This negative relationship was mediated by the use of non-productive coping strategies (e.g., strategies that not focus on resolving the problem): Adolescents with high ability to manage and regulate their emotions were less likely to use non-productive coping strategies and, therefore, less likely to engage in aggressive behavior.

Oluyinka (2009) examined the emotional abilities and bullying behaviors in high school students in Nigeria, and reported a negative relationship between EI, as assessed using the EIS (Schutte et al., 1998), and bullying. Similarly, EI mediated the relationship between bullying and adolescent misconduct, defined as transgressing norms at school, in the home or in the community.

Elipse, Ortega, Hunter, and del Rey (2012) assessed the relationship between emotional abilities, as measured using the Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), and involvement as victim and/or aggressor in bullying, telephone bullying, and cyberbullying. Male gender, younger age, lower ability to repair emotions, and higher attention to feelings were associated with greater bullying behavior. A tendency to take on the role of aggressor in bullying interactions was associated with male gender, younger age, lower emotional clarity, and higher attention to feelings.

These results suggest a negative relationship between EI and aggression towards peers in adolescence. To determine whether these findings also applied to more serious aggressive behavior, Moriarty et al. (2001) compared EI, as assessed by self-report using the TMMS (Salovey et al., 1995), between two groups of male adolescents: one group of sexual aggressors who were attending a positive sexuality program, and another group of adolescents who had never committed any crime. The group of sexual aggressors showed lower levels of ability to understand their feelings and to repair negative emotions and prolong positive ones. On the other hand, the sexual aggressors showed significantly higher attention to feelings, indicating a greater tendency to monitor their emotions.

Table 5. Studies of EI and aggression in adolescents.

Study	EI scale	Type of aggression	Sample (N)	Principal results
Elipe et al. (2012)	TMMS	Bullying, telephone bullying, cyberbullying	5754 (2923 young men, 2831 young women)	EI was negative related to bullying. Emotional attention and emotional repair were negative related to bullying.
Downey et al. (2010)	Adolescent SUEIT	Type not reported	145 (60 young men, 85 young women)	Emotional understanding and emotional management and control were negatively related with aggressive behaviors. The use of non-productive coping strategies mediated the relationship between emotional management and aggression.
Liau et al. (2003)	EIS	Type not reported	203 (106 young men, 97 young women)	Adolescents with higher EI showed less aggressive behavior. EI moderated the relationship between parental control and aggression.
Lomas et al. (2012)	Adolescent SUEIT	Bullying	68 (31 young men, 37 young women)	Better understanding of others' emotions was negatively associated with tendency to engage in bullying.
Moriarty et al. (2001)	TMMS	—	64 (15 male sexual aggressors, 49 male non-aggressor students)	The sexual aggressor group showed lower emotional clarity and repair than the non-aggressor group. Sexual aggressors paid higher attention to feelings.
Oluyinka (2009)	EIS	Bullying	215 (106 young men, 109 young women)	EI was negatively related to bullying. EI mediated the relationship between misbehavior and bullying.
Siu (2009)	EIS	Physical and verbal	325 (167 young men, 158 young women)	Poor use of emotions predicted aggressive behaviors.

Abbreviations: TMMS, *Trait Meta-Mood Scale* (Salovey et al., 1995); Adolescent SUEIT, *Swinburne University Emotional Intelligence Test* (Luebbbers, Downey & Stough, 2007); EIS, *Schutte Emotional Intelligence Scale* (Schutte et al., 1998).

Results with adults

Our search identified seven studies examining the relationship between EI and aggression in adults. Four of those studies evaluated EI using self-report instruments, while three assessed it using an ability measure (Table 6).

Studies based on self-reported EI

Gardner and Qualter (2010) examined the validity, both concurrent and incremental, of three EI instruments for various criterion variables, including physical and verbal aggression. The three instruments were EIS (Shutte et al., 1998), the Multidimensional Emotional Intelligence Assessment (MEIA; Tett, Fox, & Wang, 2005), and TEIQue (Petrides, 2009). Results with all three instruments indicated a negative relationship of EI with physical and verbal aggression; the relationship was stronger when the TEIQue was used.

Similar results were obtained by Mansfield, Addis, Cordova, and Lynn (2009), who examined the relationship of EI, as assessed using the TMMS, with physical and verbal aggression in adults participating in a treatment program for emotional regulation and anger management. Various analyses showed that, in men, EI mediated the relationship between aggression and insecure attachment, as well as the relationship between aggression and presence of symptoms characteristics of post-traumatic stress. In women, by contrast, EI mediated only the relationship between aggression and the presence of trauma symptoms.

Vernon et al. (2009) focused on a different type of aggression. They found that EI, as assessed using the TEIQue (Petrides, 2009), was negatively associated with aggressive humor, which involves using sense of humor to harm another person.

Winters, Clift, and Dutton (2004) published one of the few studies on EI and spouse abuse. They evaluated EI using the EQ-i (Bar-On, 1997). In Study 1, adult males with at least one conviction for spouse abuse were found to have lower EI scores compared with the normative scores. Their low EI levels correlated with propensity to abuse their partners. Study 2 replicated Study 1 with male and female university students, demonstrating that the results in Study 1 also applied to the general population. The results of Study 2 also showed a negative relationship between EI and propensity to abuse a partner; this relationship was observed in both the women and men in the sample. Together these studies indicate a relationship between deficits in emotional competencies and the tendency to commit aggressive acts against a romantic partner.

Studies based on ability measures of EI

All the three studies based on ability measures of EI used the MSCEIT. Plugia et al. (2005) compared EI among three groups of adult men: sexual aggressors, non-sexual aggressors, and matched control individuals with no criminal record. EI levels in the sexual aggressor group were similar to those in the control group, but both these groups differed significantly from the non-sexual aggressor group. Non-sexual aggressors showed significantly lower emotional perception than the other two groups.

The negative relationship between EI and use of aggressive sense of humor, which Vernon et al. (2009) reported based on a self-report EI assessment, was also observed in a study (Yip & Martin, 2006) whose results shown that people who used aggressive humor to a greater extent had lower emotional perception, suggesting that the use of this negative humor may reflect a deficit in the perception of one's own emotions and those of others. Côte, DeCelles, McCarthy, Van Kleed, and Hideg (2011) examined the relationship of emotional management, as assessed using the MSCEIT, with a self-

reported measure of deviant behavior (e.g., embarrass someone at work) and related variables (Machiavellianism). The results did not demonstrate a direct association between emotional management and deviant conduct. They did, however, show that the level of emotional regulation moderated the association between Machiavellianism and deviant conduct: among individuals with a strong Machiavellian trait, those showing high emotional management exhibited more deviant behaviors than did those showing low emotional management.

Discussion

Conclusions

The present systematic review analyzed the literature on EI and aggression, identifying 19 relevant studies, of which 18 reported a negative relationship between the two constructs. In other words, people with high EI exhibited fewer aggressive behaviors than those with low EI. These results were consistent across different ages, from childhood to adulthood, and across cultural contexts, including the US, Spain, China, Malaysia, Canada, Australia, and the UK. These results also appear to be independent of the type of aggression (e.g., physical, sexual or humor-based) as well as independent of whether EI was assessed by self-report or ability measure.

Studies in children, adolescents, and adults point to a negative association between emotional abilities and aggression. In studies in children, this finding was robust to whether the assessment of aggressive behavior came from the parents, classmates or the study participant himself. The included studies suggest that the negative relationship between EI and aggression does not depend on the type of aggression or on its severity. People with higher EI were less involved in aggressive actions of all types, including aggressive humor, pushes, punches, shouting, threats, partner abuse, and sexual violence.

Indeed, the negative relationship between EI and aggression was observed both in the normal population and in people convicted of criminal aggression.

Table 6. Studies of EI and aggression in adults.

Study	EI scale	Type of aggression	Sample (N)	Principal results
Gardner & Qualter (2010)	EIS, TEIQue, MEIA	Physical and verbal	310 (74 men, 236 women)	EI was related to physical and verbal aggression, anger and hostility.
Mansfield et al. (2009)	TMMS	Physical and verbal	92 members of an emotional regulation therapy group (49 men, 43 women)	EI was negatively related to aggression in women and men.
Vernon et al. (2009)	Study 1: TEIQue	Study 1: Aggressive humor	Study 1: 862 (261 men, 601 women)	Study 1: Individuals using aggressive humor showed lower EI.
	Study 2: TEIQue SF	Study 2: Aggressive humor	Study 2: 3936 (332 men, 3604 women)	Study 2: Individuals with higher EI showed lower use of aggressive humor.
Winters et al. (2004)	Study 1: EQ-i	Study 1: Propensity to abuse	Study 1: 44 adults convicted of spouse abuse	Study 1: Abusers showed low EI scores.
	Study 2: EQ-i	Study 2: Propensity to abuse	Study 2: 76 university students (33 men, 43 women)	Study 2: EI was negatively related with the propensity to abuse, in women and men.
Yip & Martin (2006)	MSCEIT	Aggressive humor	111 (45 men, 66 women)	Emotional perception was negatively related to use of aggressive humor.
Puglia et al. (2005)	MSCEIT	—	56 (19 sexual delinquents, 18 non-sexual delinquents, 19 non-delinquent controls)	Sexual aggressors and non-delinquent controls perceived others' emotions better than did the non-sexual aggressors. There were no significant differences between the sexual aggressors and the controls.
Côté et al. (2011)	MSCEIT	Deviant interpersonal behavior	252 (69 men, 183 women)	Emotional regulation was not directly associated with deviant conduct. The interaction between Machiavellianism and emotional management positively predicted deviant conduct.

Abbreviations: EIS, *Schutte Emotional Intelligence Scale* (Schutte et al., 1998); TEIQue, *Trait Emotional Intelligence Questionnaire* (Petrides, 2009); MEIA, *Multidimensional Emotional Intelligence Assessment* (Tett et al., 2005); TMMS, *Trait Meta-Mood Scale* (Salovey et al., 1995); MSCEIT, *Mayer-Salovey-Caruso Emotional Intelligence Test* (Mayer et al, 2002); TEIQue, *Trait Emotional Intelligence Questionnaire Short Form* (Petrides, 2009); EQ-I, *Emotional Quotient Inventory* (Bar-On, 1997).

All but three studies in our review assessed EI using self-report instruments. Their results were consistent with the remaining three studies based on ability measures of EI. The fact that studies based on ability measures reported a negative relationship between EI and aggression highlights the importance of emotional perception in aggression. This is consistent with previous research suggesting that difficulties in the ability to perceive others' emotions can lead to hostile attribution bias, engendering a reactive and aggressive attitude (Crick & Dodge, 1994). At the same time, one study of our review that assessed EI by ability measures highlight how sometimes emotional abilities facilitate rather than inhibit aggressive behavior. Côte et al. (2011) showed that individuals with high Machiavellianism and emotionally skilled can initiate aggressive or deviant behaviors to obtain his or her objectives. These findings provide an important counterbalance to the many studies describing how emotional ability management can protect against aggressive conduct and highlight the role of personality traits to use emotional skills.

Research has sought to examine more deeply the relationship between EI and aggression by analyzing the ability of EI to mediate or moderate the association between aggression and related variables. For example, EI mediates the relationship between adolescent misconduct and aggressive actions (Oluyinka, 2009), the relationship between post-traumatic symptoms and aggression in adult men and women, and the relationship between insecure attachment and aggression in adult men (Mansfield et al., 2009). In addition, among adolescents under strong control of their parents, those with high EI exhibit less aggressive conduct than those with low EI (Liau et al., 2003). Moreover, Downey et al. (2012) explored whether other variables may influence the relationship between EI and aggression. They found that, when faced with a problem, people with lower EI are more likely to use non-productive coping strategies, focus on reducing one's

own distress instead of solving the problem. These is according to previous research showing that aggression is positively associated with regulation strategies focusing on only emotion, such as anger rumination, after a conflict (Denson, 2013).

Limitations of the included studies

While the studies in this review have allowed us to identify a relationship between EI and aggression, they suffer from certain limitations. First, none of the studies involved a longitudinal design. Second, none examined the relationship between EI and aggression experimentally, limiting our ability to draw causal inferences from the results. Third, most studies assessed EI using self-report instruments, with only three assessing it using ability tests. In addition, these three tests involved only adults and particularly severe types of aggression less prevalent in the general population. Fourth, the participants in most investigations presented only low to medium levels of aggression, raising the question of whether the findings also apply to more serious aggressive behavior.

Future research

The insights from the included studies, as well as their limitations, immediately suggest several lines of research to fill gaps in the literature and extend current knowledge. Longitudinal, experimental studies are urgently needed to verify and extend these findings about the relationship between EI and aggression. Studies in children and adolescents that assess EI using ability measures are also needed. Indeed, studies should seek to confirm the observed relationship between EI and aggression in adults using ability measures and exploring additional types of aggression, such as physical, verbal and relational.

Some authors have shown in others studies gender differences in the relationship between EI and variables such as depression, substance abuse, and social conduct

(Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Lishner, Swin, Hong, & Vitacco, 2011; Salguero, Extremera, & Fernández-Berrocal, 2012). Possible gender effects were not systematically addressed in the studies in our review, highlighting the need for future work on this question. Other variables, such as coping styles, have already been shown to mediate the relationship between EI and aggression. Future work should explore what non-productive coping strategies, such as anger rumination, specifically mediate this relationship.

Increased knowledge of the variables that affect aggression will allow better understanding of this phenomenon and will facilitate the design of more effective prevention and treatment programs. For example, better knowledge of the role of emotional abilities in aggressive behaviors will help create programs focused on precisely those aspects of EI most strongly related to aggression. The goal would be to increase those abilities in individuals, enabling them to manage their emotions better and inhibit aggressive conduct (Castillo, Salguero, Fernández-Berrocal, & Balluerka, 2013).

ESTUDIO 2

**RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND
AGGRESSION IN ADULTS AND ADOLESCENTS: CROSS-SECTIONAL AND
LONGITUDINAL EVIDENCE USING AN ABILITY MEASURE**

Abstract

Emotional intelligence (EI) has been associated with several indicators of psychosocial adjustment, including aggressive behavior, but the relevant research has been mostly cross-sectional, focused on adults, and limited to trait EI measures. The present work examined in the Study 1 the incremental validity of EI beyond personality traits in adults, showing incremental validity in the case of physical aggression, but not in the case of verbal aggression. Study 2 was a longitudinal analysis of the relationship between EI and aggression in adolescents. EI predicted physical aggression over time, but it did not predict verbal aggression. Results from both studies suggest a negative relationship between ability EI and physical aggression, highlighting the important explanatory role of emotional abilities in aggressive behavior.

Keywords: emotional intelligence, aggression, longitudinal, personality

Introduction

The construct of emotional intelligence (EI) has been used in recent decades to explain and understand individual differences in the ability to process emotional information (Mayer et al., 2008). EI can be defined as “the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10).

EI has traditionally been conceptualized from two theoretical approaches that are related but different: EI as a trait (TEI) (Petrides et al., 2007) and EI as an ability (AEI) (Mayer & Salovey, 1997). TEI, also called emotional self-efficacy, is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides et al., 2007). TEI concerns an individual’s perceptions of his or her own emotional abilities and is evaluated using self-report questionnaires such as the Schutte Emotional Intelligence Scale (SEIS, Schutte et al., 1998). AEI, in contrast, refers to a set of abilities that permit our cognitive functions to use emotions adaptively. AEI considers EI as a genuine form of intelligence that is distinct from other forms of intelligence or personality traits (Matthews et al., 2002). AEI is assessed in maximum performance tests that evaluate actual EI performance (Petrides & Furnham, 2000a), such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2003).

Individuals with high EI, who have a strong ability to perceive, use, understand and manage their own and others’ emotions, tend to show better social and psychological adjustment than those with low EI (Ciarrochi, Chan, Caputi, & Roberts, 2001; Mayer et al., 2008). In fact, empirical studies suggest a direct relationship between EI and mental

health (Martins et al., 2010), as well as between EI and various indicators of social adjustment (Ciarrochi et al. 2001), including social functioning and quality of social interactions (Brackett et al., 2006).

EI may also correlate with aggressive behavior. Current literature on aggression has focused on the General Aggression Model (GAM; Anderson & Bushman, 2002) for explaining individual differences in processing that may give rise to aggressive behavior (DeWall et al., 2011). The GAM postulates that the characteristics of the situation (e.g. provocative stimulus) interact with various personal factors (e.g. personality traits, gender) and which together create a specific internal state composed of thoughts, emotions and arousal. This internal state influences how an individual evaluates the situation and makes decisions, leading to behavior that is aggressive or pacific (Anderson & Bushman, 2002). Numerous studies have pointed out the possible influence of emotions and emotional processing on aggression (Lemerise & Arsenio, 2000), raising the question of whether EI may also play a role. For example, emotional perception deficits may lead individuals to make erroneous attributions about the other person in social interaction (for review, see García-Sancho et al., 2015). As another example, individuals with lower ability to regulate their emotions may, when in an extreme emotional state, find it more difficult to imagine alternative courses of action and decide how to behave, increasing the likelihood that they will act aggressively (Lemerise & Arsenio, 2000).

If deficits in emotional processing play a role in aggression, then the emotional abilities that form part of EI may help explain individual differences in aggressive behaviors. A systematic review of 19 studies concluded the existence of a negative relationship between EI and aggression (García-Sancho, Salguero, & Fernández-

Berrocal, 2014). This relationship appears to hold for different ages (Downey et al., 2010; Gardner & Qualter, 2010), contexts (Esturgó & Sala-Roca, 2010; Siu, 2009) and nationalities (Lomas et al., 2012; Moriarty et al., 2001). Most of these studies have focused on TEI. Of the three studies on AEI featured in the systematic review, one found a significant negative relationship between AEI and use of aggressive humor (Yip & Martin, 2006). Another study compared sexual aggressors, nonsexual aggressors and non-aggressor controls (Plugia et al., 2005). No significant differences were found between sexual aggressor and control group. However, nonsexual aggressors showed significantly less emotional perception than the other two groups. The third study on AEI failed to find a direct association between the emotional management component of AEI and deviant interpersonal behavior (Côte et al., 2011); in this type of behavior, an individual benefits from infringing on norms and harming the interests of others. Nevertheless, emotional regulation ability was found to moderate the association between Machiavellianism and deviant behavior. Thus, among individuals exhibiting a high level of Machiavellianism, individuals with a high level of emotional management showed greater deviant conduct than those with low emotional management.

The available literature therefore reports substantial evidence of an association between EI and aggressive behavior. That work, however, shows substantial limitations in that most studies have focused on TEI, published studies on AEI have looked only at adults, and no published study has employed a longitudinal design. This leaves open the question of whether the relationship between AEI and aggression in adolescents is similar to that in adults, as has already been documented with TEI. Other open questions are whether the relationship between AEI and aggression can change over time, and whether AEI shows incremental validity for predicting aggression even after controlling for

various factors well known are related to aggression, such as personality traits (Barlett & Anderson, 2012; Grumm & von Collani, 2009).

To begin to fill these gaps in the literature, we undertook two studies in the present work. In Study 1, we explored the relationship between AEI and aggression in adults, and we analyzed the incremental validity of AEI over personality factors for explaining physical and verbal aggressive behavior. In Study 2, we aimed to verify the results of Study 1 in an adolescent population, and we did so using a longitudinal design to assess the influence of AEI on aggression over a 9-month period.

Study 1

Method

Participants and procedure

Participants were 474 undergraduate students (156 men, 318 women) aged 19-60 years ($M = 22.76$, $SD = 5.13$). They completed the MSCEIT in one classroom session, and aggression and personality measures in another session. Participants were asked to complete the measures honestly and were informed that their responses would remain anonymous. Participants were volunteers who, in return for taking part in the study, received extra credit in an undergraduate course.

Measures

Emotional Intelligence. Emotional Intelligence was measured using the *Mayer–Salovey–Caruso Emotional Intelligence Test Version 2.0* (MSCEIT; Mayer et al., 2003). The test contains 141 items and assesses the four branches of the theoretical model of EI of Mayer and Salovey (1997): emotional perception, emotional facilitation, emotional understanding and managing emotions. We used a total EI score composed of the four branch scores. The psychometric properties of the MSCEIT version 2.0 are appropriate,

and convergent and discriminant validity has been demonstrated (Mayer et al., 2002). The Spanish version of this instrument showed satisfactory psychometric properties and a factorial structure similar to the original version (Extremera, Fernández-Berrocal, & Salovey, 2006).

Physical and verbal aggression. Physical and verbal aggression were assessed separately using the subscales of physical aggression (9 items) and verbal aggression (5 items) of the Aggression Questionnaire (AQ; Buss & Perry, 1992). This questionnaire evaluates aggression on a five-point Likert scale (1 = “extremely uncharacteristic of me” to 5 = “extremely characteristic of me”). The two subscales showed adequate internal consistency in the original sample (Buss & Perry, 1992), and the same is true for the Spanish version (Rodríguez, Peña, & Graña, 2002).

Personality traits. Personality was assessed using the Spanish version of the Big-Five Inventory (BFI-44; Benet-Martinez & John, 1998). The BFI-44 is a 44-item Likert scale of five points (1 = strongly disagree, 5 = strongly agree) that assesses the big five personality factors (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). Both the original and Spanish versions showed high internal consistency, and both samples showed good test-retest reliability (Benet-Martinez & John, 1998).

Results

Means, standard deviations, reliability, and Pearson correlations for the study variables are presented in Table 7. As expected, MSCEIT scores showed significant negative correlation with physical aggression ($r = -.21, p = .001$) and verbal aggression ($r = -.12, p = .007$). Significant correlations were found between physical aggression and conscientiousness ($r = -.17, p = .0001$), agreeableness ($r = -.41, p = .001$) and neuroticism

($r = .23, p = .001$). Verbal aggression showed a significant negative correlation with ($r = -.39, p = .001$) and neuroticism ($r = .22, p = .001$). Finally, MSCEIT scores correlated significantly with agreeableness ($r = .13, p = .004$), extraversion ($r = .12, p = .006$), and conscientiousness ($r = .09, p = .044$).

	1	2	3	4	5	6	7	8
1. EI	-							
2. Physical aggression	-.21**	-						
3. Verbal aggression	-.12**	.34**	-					
4. Openness to experience	.04	.01	.08	-				
5. Conscientiousness	.09*	-.17**	-.09	.06	-			
6. Extraversion	.12**	-.06	.01	.34**	.15**	-		
7. Agreeableness	.13**	-.41**	-.39**	.15**	.12	.29**	-	
8. Neuroticism	-.05	.023**	.22**	-.13**	-.14**	-.21**	-.32**	-
M (SD)	99.55 (14.56)	1.83 (.60)	2.75 (.65)	.38 (.06)	.39 (.07)	.43 (.10)	.42 (.06)	.35 (.10)
α	.66	.78	.68	.84	.78	.86	.67	.87

Table 7. Means, standard deviations, reliabilities, and correlations of the variables of interest

Note: * $p < .05$; ** $p < .01$

Two hierarchical regressions were conducted to assess the incremental contribution of AEI to predictions of physical and verbal aggression, after controlling for personality traits. Research has indicated gender differences in aggression (Baxendale, Cross, & Johnston, 2012; Card et al., 2008), so we entered gender as a control variable in those regressions in which it showed a significant relationship with the type of aggression in question. Then we entered those personality traits into the model that correlated significantly with the type of aggression in question. Lastly, we entered AEI into the regression model.

In the test of the incremental validity of AEI in physical aggression (Table 8), gender was entered in the first step and found to account for 4% of the observed variance. Subsequently, agreeableness, conscientiousness, and neuroticism were entered, altogether explaining 24% of variance ($\Delta R^2 = .20$). In the last step, AEI was entered, and

it showed incremental validity beyond gender and personality ($\beta = -.12, p = .004; \Delta R^2 = .01, p \leq .004$).

In the test of the incremental validity of AEI in verbal aggression (Table 8), gender was not included because it did not correlate significantly with that outcome. In the first step, agreeableness and neuroticism were entered and found to account for 16% of variance. In the second step, the AEI score was entered. Contrary to our expectations, AEI did not contribute significantly to explaining verbal aggression levels ($\beta = -.07, p = .08; \Delta R^2 = .001, p = .09$).

Table 8. Hierarchical regression of gender, personality and AEI on physical and verbal aggression

Physical aggression					Verbal aggression				
	R^2	ΔR^2	F	β		R^2	ΔR^2	F	β
Step 1	.04	.04**	23.88		Step 1	.16	.16**	45.59	
Gender				-.22**	Agreeableness				-.35**
					Neuroticism				.11*
Step 2	.24	.20**	38.02		Step 2	.16	.00	31.50	
Gender				-.23**	Agreeableness				-.34**
Agreeableness				-.34**	Neuroticism				.10*
Conscientiousness				-.06	EI				-.07
Neuroticism				.18**					
Step 3	.25	.01**	32.53						
Gender				-.21**					
Agreeableness				-.33**					
Conscientiousness				-.05					
Neuroticism				.17**					
EI				-.12**					

Note: * $p < .05$; ** $p < .01$

Study 2

Method

Participants and procedure

A total of 151 adolescents (75 males, 76 females) aged 13-17 years ($M = 14.74$, $SD = .84$) were recruited from secondary schools. Participants completed the measures in two sessions spaced 9 months apart: in one session at the start of the academic year (Time 1), they completed the measures of AEI and of physical and verbal aggression; at another session 9 months later (Time 2), they completed the measure of physical and verbal aggression. Measures were completed during the normal school day. The consent of participants and their parents or legal guardians was obtained prior to participation in the study. All were assured that participant responses would remain anonymous.

Measures

Physical and verbal aggression. We administered the Spanish version of the AQ (Buss & Perry, 1992); the internal consistency of each factor and of the total score is satisfactory in Spanish adolescents (Santisteban, Alvarado, Recio, & 2007).

Emotional Intelligence. We used the *Test de Inteligencia Emocional de la Fundación Botín para Adolescentes* (TIEFBA; Fernández-Berrocal, Extremera, Palomera, Ruiz-Aranda, & Salguero, 2015). This is a maximum performance test that assesses emotional intelligence based on the Mayer and Salovey theoretical model (1997). The TIEFBA comprises 8 emotion-eliciting scenes in which four tasks proposed in each scene evaluate the four branches of the Mayer and Salovey model (1997): perceiving emotions, facilitating thought, understanding emotions and managing emotions. The instrument gives four scores referring to the four branches as well as a global score that

comprises the four branches. In the present study, only the total score was used, after correcting based on expert consensus. The TIEFBA was developed originally for a Spanish adolescent sample, and its factorial structure is consistent with the Mayer and Salovey model. It showed good internal consistency: perceiving emotions, $\alpha = .86$; facilitating thought, $\alpha = .76$; understanding emotions, $\alpha = .76$; managing emotions, $\alpha = .74$; and overall AEI score, $\alpha = .91$. The instrument showed low correlations with personality traits, ranging from $r = .01$ with neuroticism to $r = .08$ with extraversion; overall AEI score showed moderate association with verbal intelligence ($r = .39$).

Results

Table 9 reports means, standard deviations, reliabilities and correlations between the variables at Time 1 and Time 2. Similar to the results in Study 1, AEI scores in Study 2 showed a significant negative correlation with physical aggression, both at Time 1 ($r = -.30, p = .001$) and at Time 2 ($r = -.35, p = .001$). AEI scores did not correlate significantly with verbal aggression at Time 1 ($r = -.10, p = .21$), but they did show a correlation at Time 2 ($r = -.17, p = .03$).

Table 9. Means, standard deviations, reliabilities, and correlations of the variables of interest

	1	2	3	4	5
1. AEI	-				
2. Physical aggression at Time 1	-.30**	-			
3. Verbal aggression at Time 1	-.10	.51**	-		
4. Physical aggression at Time 2	-.35**	.67**	.23**	-	
5. Verbal aggression at Time 2	-.17*	.37**	.51**	.46**	-
M (SD)	.36 (.09)	2.43 (.84)	2.60 (.82)	2.50 (.83)	2.66(.72)
α	.93	.83	.74	.83	.66

Note: * $p < .05$; ** $p < .01$

In order to examine the predictive validity of AEI for physical and verbal aggression in adolescents, two hierarchical regression analyses were conducted for each

type of aggression. As in Study 1, we introduced gender as a covariate in the first step of the regression when it correlated significantly with the type of aggression in question. To determine the unique contribution of AEI scores to physical aggression, we controlled for baseline levels of physical aggression at Time 1, and then we entered the AEI score. High AEI levels at Time 1 predicted lower physically aggressive behavior at Time 2 in adolescents over and above the significant contribution of baseline levels of physical aggression at Time 1 ($\beta = -.15$, $p = .019$, $\Delta R^2 = .02$). On the other hand, contrary to our expectations, the longitudinal model for predicting verbal aggression from AEI was not significant ($\beta = -.10$, $\Delta R^2 = .01$, $p = .15$; Table 10).

Table 10. Hierarchical regression analyses showing the variance in physical and verbal aggression at Time 2 that was accounted for by baseline levels of physical and verbal aggression and AEI at Time 1

Physical aggression at Time 2					Verbal aggression at Time 2				
	R^2	ΔR^2	F	β		R^2	ΔR^2	F	β
Step 1	.13	.13**	23.9		Step 1	.03	.03	4.95	
Gender				-.37**	Gender				-.18*
Step 2	.46	.33**	66.43		Step 2	.26	.24	27.17	
Gender				-.17**	Gender				-.11
Physical aggression at Time 1				.61**	Verbal aggression at Time 1				.50**
Step 3	.48	.02*	47.52		Step 3	.26	.01	18.90	
Gender				-.15*	Gender				-.10
Physical aggression at Time 1				.57**	Physical aggression at Time 1				.49**
AEI				-.15*	EI				-.10

Note: * $p < .05$; ** $p < .01$

Discussion

The present study aimed to address important gaps in the research literature on the relationship between EI and aggression by focusing on AEI, assessing the incremental validity of AEI beyond personality factors and including adolescents in the study

population in a longitudinal study. The results of both Study 1 in adults and Study 2 in adolescents indicate a negative association between AEI and physical aggression. The results in Study 1 further suggest incremental validity of AEI even after adjusting for personality factors already known to influence aggressive behavior.

Our observation of a negative association between AEI and physical aggression in adults and adolescents alike is consistent with previous studies showing higher incidence of aggressive behavior in individuals with lower AIE (Plugia et al., 2005; Yip & Martin, 2006). Our findings are also consistent with studies based on EI self-report measures showing a negative relationship between TEI and aggressive behavior in different age groups (García-Sancho et al., 2014). The fact that our both studies have given consistent results despite relying on different AEI measures suggests the robustness of the findings. Our results nuance this association by suggesting that while it is strong in the case of physical aggression, it is weak in the case of verbal aggression.

To our knowledge, this is the first study to examine the incremental validity of AEI for predicting aggression over and above the influence of personality, which has long been known to influence aggressive behavior (Barlett & Anderson, 2012; Grumm & von Collani, 2009). Our results in Study 1 suggest that AEI does indeed explain some variance in physical aggression beyond what personality factors explain. These findings extend the list of outcomes for which AEI has shown incremental validity beyond personality traits; this list already includes alcohol use, the existence of positive adult relationships, and various mental and social health indicators, such as disruptive behavior (Davis & Humphrey, 2012; Rossen & Kranzler, 2009). Taken together, these studies point to AEI as an important construct capable of significantly predicting variables related to social functioning independently of personality traits.

In fact, our results with adolescents in Study 2 showed that AEI measured at one time predicted some variance in physical aggression 9 months later, even after controlling for the criterion variable at baseline and for gender, which has been associated with aggressive behavior in numerous studies (Card et al., 2008). The present findings, which to our knowledge are the first longitudinal results linking AEI and aggression, suggest that emotional abilities can prevent individuals from engaging in physically aggressive conduct, such as striking or pushing another.

The association between AEI and physical aggression appears to be much stronger than that between AEI and verbal aggression. In addition, AEI did not show incremental validity beyond personality in adults, nor did it predict verbal aggression levels at Time 2 in adolescents. It is difficult to compare these findings with the literature or to propose explanations for the observed difference between physical and verbal aggression, since most previous studies used a general index of direct aggression that aggregates physical and verbal aggression. Nevertheless, one study analyzing the two types of aggression separately showed that TEI was significantly and negatively associated with physical aggression, but not with verbal aggression (Gardner & Qualter, 2010). Another study reported that TEI did not show incremental validity in the case of verbal aggression (Petrides, 2009). Some authors have showed that use of AEI may facilitate both prosocial and interpersonally deviant behavior, depending on individual's personality traits, the type of goals and the motivation to achieve a specific aim (e.g. inhibit or not aggression behavior) (Côte et al., 2011). Thus, in case the person have the aim to inhibit aggressive behavior, high level of AEI may help to achieve it. Given that verbal aggression is considered more socially acceptable than physical aggression in most cultures (Fujihara, Kohyama, Andreu, & Ramirez, 1999; Ramirez, 2007), we speculate that individuals who

believe that verbal aggression is justified may not feel the need to activate their AEI in order to inhibit such behavior, whereas they do rely on AEI to inhibit less socially acceptable physical aggression. This may help explain why we observed such a weak association between verbal aggression and AEI.

Our findings implicating emotional processing in aggressive behaviors can be integrated into the GAM, which continues to guide most of the literature on aggression (Anderson & Bushman, 2002). AEI may operate in the GAM on multiple levels. First, it may influence the interaction between situational and person factors. In this sense, AEI may form part of the repertory of competencies, different from personality traits that interact with the situation to give rise to an internal state. This may help explain the observation by many authors that a deficit in the ability to perceive one's own and others' emotions can lead individuals to make a hostile attribution in a socially ambiguous situation. In this case, the individual interprets the situation erroneously, generating an internal state of hostile cognition, negative affect and elevated arousal, facilitating an aggressive response (Crick & Dodge, 1994; de Castro et al., 2005). AEI may also operate on other processing levels within the GAM. AEI may participate in processes of appraisal and decision-making, bringing to bear abilities to understand one's own and others' emotions as well as regulation strategies that together can reduce negative affect, facilitating a choice to behave non-aggressively. Indeed, various studies have demonstrated how the use of effective emotion regulation strategies can reduce the probability of acting aggressively (Robertson et al., 2012).

While the present work fills several important gaps in the literature, it has several limitations of its own. First, aggression was assessed using self-report measures, increasing risk of bias. Second, we did not address others types of aggression, such as relational

aggression, which numerous studies have suggested is the most frequent type of adult aggression and is associated with women in particular (Björkqvist, Osterman, & Kaukiainen, 1992). It would be interesting, for example, to examine whether the same differential relationship we observed between AEI and physical or verbal aggression is also true for relational and other types of aggression. Third, our longitudinal study involved only adolescents, so it would be important to verify the findings in adults.

Despite these limitations, the present findings open the door to future studies of EI and aggressive behavior to elucidate how the two interact. For example, using emotion regulation strategies that are normally ineffective, such as anger rumination, is strongly associated with aggression (Vasquez et al., 2012). Future work should explore the relationship among EI, anger rumination and aggression. Finally, we highlight that EI comprises several emotional abilities, each of which may play different roles in explaining aggressive behavior, and future studies should aim to tease apart their different contributions.

Ultimately one of the most important goals of understanding the role of emotional abilities is to develop better interventions, and preliminary evidence suggests that training in such abilities can reduce the incidence of aggressive behavior (Castillo et al., 2013; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger; 2011). A better understanding of emotional abilities in aggression may help in designing more effective prevention and intervention programs that promote the ability to inhibit such behavior.

ESTUDIO 3

VALIDITY AND RELIABILITY OF THE SPANISH VERSION OF THE DISPLACED AGGRESSION QUESTIONNAIRE

Abstract

Displaced aggression occurs when a person is provoked, is unwilling or unable to retaliate against the original provocateur, and subsequently aggresses against a seemingly innocent target. Personality differences exist in the tendency to engage in displaced aggression. The Displaced Aggression Questionnaire (DAQ) is a scale used to assess them. This scale is composed for three factors: an affective dimension (angry rumination), a cognitive dimension (revenge planning) and a behavioral dimension (a general tendency to behave aggressively toward those other than the source of the initial provocation). This study examined the validity and reliability of the Spanish version of the DAQ in a non-clinical sample of 429 adults. The results from confirmatory factor analyses showed a clear three-factors structure, identical with the English version. The results showed a good internal consistency and appropriate test-retest reliability. The correlations between scores on the Spanish version of the DAQ and associated variables such as trait anger and expression, affectivity, personality traits, angry rumination and physical and verbal aggression were in the expected direction. Further, preliminary data about associations between DAQ scores and indirect aggression and emotion regulation strategies are shown. In summary, our results showed evidence of the validity and reliability of the DAQ in a Spanish population. We discuss the utility of this scale for research on different types of aggression (e.g., domestic abuse). Finally, practical recommendations and futures lines of research are suggested.

Keywords: aggression, displaced aggression, angry rumination, revenge, Spanish validation

Introduction

Aggression is defined as any behavior carried out with the proximal (i.e., immediate) intention of inflicting harm on another person who is motivated to avoid the harm (Anderson & Bushman, 2002). Most research in this area has focused on *direct* aggression, which involves situations when a person is provoked, and in retaliation, he or she inflicts harm against the source of this provocation. Sometimes, however, this retaliation is constrained or inhibited for several reasons: the person who did the provocation is unavailable, the source of provocation is intangible (e.g., bad weather ruined a vacation), or because a possible retaliation or punishment induced by the direct aggression from a provoking agent (Miller, 1941). Given these situations, a person can instead *displace* an aggressive response to another target (Miller, Pedersen, Earleywine, & Pollock, 2003). The term *displaced aggression* refers to situations when a person is provoked, is prevented from retaliating against the original provocateur, and subsequently aggresses against a seemingly innocent target (Dollard et al., 1939; Hovland & Sears, 1940).

Displaced aggression has been the focus of different laboratory studies (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005; Pedersen et al., 2011). A meta-analysis of experimental literature on this topic indicated that when individuals are provoked and unable to retaliate, they are more aggressive toward an innocent other than those not previously provoked (Marcus-Newhall et al., 2000). This meta-analytic examination provided evidence suggesting displaced aggression as a highly reliable phenomenon across studies. Moreover, this construct has several practical implications, having been associated with other types of aggression, such as domestic abuse and road rage (Denson et al., 2006).

Prior to the decade of 2000, research on displaced aggression was focused on experimental designs. Denson et al. (2006) introduced the study of individual differences in the general tendency to exhibit displaced aggression, and proposed *trait displaced aggression* as a construct that can be explained by three components: angry rumination (as affective dimension), revenge planning (as cognitive dimension), and general tendency to engage in displaced aggression (as a behavioral dimension). Angry rumination is conceptualized as perseverative thinking about a personally meaningful anger-inducing event (Denson, 2013). Angry rumination can maintain and intensify the experience of anger and hostile thoughts, activate arousal responses, and increase the likelihood to act aggressively (Pedersen et al. 2011). Moreover, angry rumination may be associated to thoughts and fantasies about revenge (Sukhodolsky et al., 2001). Revenge planning is a cognitive component that refers to engaging in thoughts about retaliation for a prior provocation (Denson et al. 2006; Sukhodolsky et al. 2001). Finally, the behavioral aspect of displaced aggression involves a tendency to behave aggressively toward those other than the original source of a provocation (Denson et al., 2006).

To assess individual differences in displaced aggression, Denson et al. (2006) developed the Displaced Aggression Questionnaire (DAQ). This scale is currently the only available instrument that measures the tendency to direct aggressive behavior towards innocent targets. The questionnaire consists of 31 items, which participants are asked to respond using a seven-point Likert-type scale (1 = *extremely uncharacteristic of me*, 7 = *extremely characteristic of me*). The measure has a three factor structure consisting of affective (10 items), cognitive (11 items), and behavioral (10 items) elements: angry rumination (“I keep thinking about events that angered me for a long time”), revenge planning (“When somebody offends me, sooner or later I retaliate”), and behavioral displaced aggression (“If someone made me angry I would likely vent my

anger on another person”). Across several samples composed of college students and a national community sample of Internet participants, the DAQ showed high levels of internal consistency for the total scale ($\alpha = .95$) and subscales (angry rumination $\alpha = .92$, revenge planning $\alpha = .93$, and behavioural displaced aggression $\alpha = .92$), good test-retest reliability at an interval of 4-weeks (ranged from .75 to .80) and 11-weeks (ranged from .78 to .89), and evidences of convergent (e.g. physical and verbal aggression, anger coping styles) and discriminant validity (e.g. impulsivity, extroversion) (Denson et al., 2006). Finally, the DAQ predicted important outcomes, such as road rage, domestic abuse, and displaced aggression (in a laboratory paradigm) (Denson et al., 2006).

To the best of our knowledge, only one adaptation of the DAQ has been carried out, to Romanian population. It confirmed the three-factor structure of the original scale and showed good psychometric properties (Sârbescu, 2013). However, no additional adaptations in others languages, such as Spanish, have been published, which poses an obstacle to advances in research. Further transcultural research and adaptations are needed to confirm the construct validity of the DAQ in community populations of different cultures and countries.

Although scores on the DAQ have been related to various forms of aggression, such as physical and verbal aggression, and are even linked to gang affiliation (Vasquez et al., 2012), no data are available about their relation to other types of aggression, including indirect aggression (a common and damaging type of aggression that includes gossiping and social exclusion (Anguiano-Carrasco & Vigil-Colet, 2011; Björkqvist, 2001). In addition, little is known about the relationships between displaced aggression and other emotion regulation strategies other than angry rumination.

The present research sought to develop and examine the validity and reliability of the Spanish version of DAQ. Our first aim was to confirm the three-factor structure in a different cultural sample and to provide evidence of psychometric properties of the Spanish version of the DAQ. The second objective was to confirm the convergent and discriminant validity showed in the original scale examining the relationships between the Spanish DAQ and related variables, such as trait anger and anger expression, negative and positive affect, personality traits, angry rumination and physical and verbal aggression (Denson et al. 2006). The third objective was to provide preliminary analyses about the relationship between the three dimensions of DAQ and hitherto unexamined variables, including indirect aggression and a wide range of cognitive and emotional regulation strategies (e.g. other-blame, catastrophizing, positive reappraisal).

Method

Participants

A total of 429 participants (24.2% males, 75.8% females), ranging in age from 18 to 69 (mean = 25.31, SD = 08.74), completed the Spanish version of the DAQ. Participants consisted of undergraduate students (N = 249), ranging in age from 19 to 54 (mean = 21.83, SD = 4.49), and non-students (N = 165), (27.2% males, 72.8% females), ranging in age from 18 to 69 (mean = 30.13, SD = 10.72). The subset of students completed additional tests to evaluate trait anger and anger expression and control, different forms of aggressive behaviour, affective style and personality traits. The subset of non-students participants completed additional tests to evaluate anger rumination and other cognitive and emotional regulation strategies. Finally, to evaluate test-retest reliability, 131 students participants of the initial sample (15.3% males, 84.7% females),

ranging in age from 20 to 54 (mean = 24, SD = 7.03), completed the measure a second time, approximately 1 month after the first administration.

Measures

The Displaced Aggression Questionnaire (DAQ; Denson et al., 2006) is a self-report questionnaire of trait displaced aggression and includes three subscales: angry rumination (affective dimension), planning revenge (cognitive dimension) and displaced aggression (behavioral dimension). The scale consists of 31 items and participants respond using a 7-point Likert scale (1 = *extremely unlike me*, 7 = *extremely uncharacteristic/characteristic of me*). The Spanish translation of the DAQ was created using a back translation procedure involving two independent translators (native Spanish speaker and native English speaker), both of whom were experts in the topic.

State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999). This self-report scale evaluates the general predisposition to feel anger, and the tendency to express anger. The items are measured using a four-point scale (1 = “not at all”, to 4 = “very much so”). Five of the subscales from the STAXI-2 were administered: trait anger (10 items), anger expression-out (6 items), anger expression-in (6 items), anger control-out (6 items), and anger control-in (6 items). The STAXI-2 is a widely used and well-validated anger assessment instrument that has demonstrated good psychometric properties with alphas ranged from .84 to .86 in normal adults (Spielberger, 1999). The Spanish version also showed acceptable coefficients of internal consistency (alphas ranged from .69 to .89) (Miguel-Tobal, Casado, Cano-Vindel, & Spielberger, 2001).

The Big-Five Inventory (BFI-44; John, 1991) consisted of 44-item assessing Big Five personality factors. The items are rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) and consisting in 5 dimensions or subscales: neuroticism,

extraversion, openness, agreeableness, and conscientiousness. The psychometric properties of this scale have been well demonstrated with adequate alphas reliabilities for the English version (range from .69 to .77). The Spanish version shows adequate to high internal consistency similar to the English version (alphas ranged from .66 to .89; Benet-Martinez & John, 1998).

The Aggression Questionnaire (AQ; Buss & Perry, 1992) is a self-report that provides a global measure of aggression and four subscales across a five-point Likert scale (1 = “extremely uncharacteristic of me” to 5 = “extremely characteristic of me”). We used two subscales: physical aggression (9 items), and verbal aggression (5 items). The AQ is one of the most used questionnaires of aggression and has been well validated with adequate internal consistency as well as convergent and discriminative validity. The Spanish version showed an adequate internal consistency of each subscale ($\alpha = .86$ for physical aggression and $\alpha = .68$ for verbal aggression) (Rodríguez et al., 2002).

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item self-report scale that evaluates affective style, being one of the most widely used measures of affectivity. The PANAS require to indicate the extent to which people feel positive and negative emotional states using a 5-point format (from 1= very slightly or not at all, to 5= extremely). We measure how the people usually feel. The scale has two factors: positive affect (active, alert, attention, determined, enthusiastic, excited, inspired, interested, proud, and strong) and negative affect (afraid, ashamed, distressed, guilty, hostile, irritable, jittery, nervous, scared, and upset). Psychometric properties of the original version were satisfactory, with internal consistency ranging from $\alpha = .87$ to $\alpha = .91$. We used the well-validated Spanish version of the PANAS which has shown adequate psychometric properties as well (alphas ranged from .87 to .91; Sandín et al., 1999).

The Indirect Aggression Scale (IAS; Forrest, Eatough, & Shevlin, 2005) assesses indirect aggression in adults. IAS is a 25-item self-report that use a five-point Likert scale (1 = never experience this behavior to 5 = regularly). The scale has two versions: the indirect aggression scale aggressor version (measuring usage of indirect aggression towards someone else), target version (IAS measuring the experience of being the victim of indirect aggression). We used the aggressor version (e.g., “Talked about them behind their back”). The original version proposed a three-factor structure with Cronbach’s alphas ranging from .81 to .84, but the Spanish version showed a clear one-dimensional structure for indirect aggression from aggressor perspective containing good psychometric properties and high reliabilities as well ($\alpha = .87$; Anguiano-Carrasco & Vigil-Colet, 2011).

The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski, Kraaij, & Spinhoven, 2001) is a 36-items self-report questionnaire assessing the cognitive emotional regulation strategies a person tends to use after experiencing negative life events. The questionnaire uses a 5-point Likert response format (from 1 almost never to 5 almost always) and has nine subscales grouped into adaptive (acceptance, positive refocusing, refocus on planning, positive reappraisal, and putting into perspective) and maladaptive regulation strategies (self-blame, rumination, catastrophizing and blaming others). Both the original version, with alphas ranged from .68 to .83, and the Spanish version, with alphas ranged from .61 to .89, showed adequate psychometric properties (Domínguez-Sánchez, Lasa-Aristu, Amor, & Holgado-Tello, 2013).

Angry Rumination scale (ARS; Sukhodolsky et al., 2001). The ARS is a self-report scale consisting of 19 items rated on a 4-point Likert type scale from 1 (almost never) to 4 (almost always) that assess the tendency to think about anger-provoking situations and to recall anger episodes from the past. The scale has four subscales: angry

afterthoughts, thoughts of revenge, angry memories, and understanding of causes. The English version has a good internal consistency ($\alpha = .93$) and adequate test-retest reliability ($r = .77$). A Spanish version was used that has shown similar psychometrics properties (alphas ranged from .69 to .83) and that confirmed the original four-factor structure (Kannis-Dymand, Salguero, & Ramos-Cejudo, 2014).

Procedure

Participation was voluntary and anonymous. Student respondents received course credit for their participation. Non-student respondents were recruited using a snowball-sampling technique. They were offered the opportunity to go into a draw to win one shopping voucher (€50.00). The questionnaires were administered electronically, completed individually, and with instructions given in writing.

Data analysis

The SPSS statistical package was used to compute descriptive statistics, correlation analyses, and internal consistency. EQS 6.1 (Bentler, 1995) was used to perform confirmatory factor analysis (CFA) using the maximum likelihood (ML) method. Since departures from multivariate normality can have a significant impact on maximum-likelihood estimation, we calculated descriptive analytical measures prior to conducting CFA analysis. Univariate and multivariate kurtosis statistics were found to indicate non-normality, so the Satorra-Bentler scaled ML correction was used to adjust the model chi-square (Hu, Bentler, & Kano, 1992). Given the sensitivity of the chi-square statistic to sample size, additional measures of model fit were used (Schweizer, 2010): the root mean square error of approximation (RMSEA), the Bentler comparative fit index (CFI), and the standardized root mean square residual (SRMR). RMSEA values below 0.08 are considered a reasonable fit, whereas values below 0.05 indicate good fit. CFI values

above 0.90 indicate good fit and SRMR values are expected to be below 0.10 (Schweizer, 2010).

Results

Factor structure and reliability

The hypothesized three factor model showed the following fit indices: $S-B\chi^2$ ($df = 431$) = 1089.05, $p < .001$; normed $\chi^2 = 2.53$; RMSEA = .06 (90% CI = .055–.064); CFI = .91; SRMR = .06. These indices indicate a good fit to the data, showing that the three-factor solution is acceptable. All factor loadings were statistically significant ($p < .05$) and higher than .45 (see Table 11), with the exception of the item 31, that showed a loading of small magnitude (.26).

Cronbach's alpha coefficients for the subscales were .91 for angry rumination, .92 for revenge planning and .94 for displaced aggression. Correlations between DAQ subscales were positive and statistically significant, $r = .48$ between angry rumination and revenge planning, $r = .48$ between angry rumination and displaced aggression, and $r = .31$ between revenge planning and displaced aggression. We also assessed reliability using test-retest correlation. Test-retest reliability over 1 month was $r_{tt} = .78$ for angry rumination, $r_{tt} = .87$ for revenge planning, and $r_{tt} = .83$ for displaced aggression.

Table 11. DAQ items and their confirmatory factor loadings

Item #	English item original and Spanish translation (in italics)	Standardized factor loadings
Angry Rumination		
1.	I keep thinking about events that angered me for a long time <i>Cuando algo me enfada, sigo pensando en ello durante mucho tiempo</i>	.72
2.	I get “worked up” just thinking about things that have upset me in the past <i>Me enfurezco solo de pensar en cosas que me han molestado en el pasado</i>	.79
3.	I often find myself thinking over and over about things that have made me angry <i>A menudo pienso una y otra vez en cosas que me han indignado</i>	.76
4.	Sometimes I can't help thinking about times when someone made me mad <i>A veces no puedo evitar pensar en situaciones en las que alguien me ha enfurecido</i>	.79
5.	Whenever I experience anger, I keep thinking about it for a while <i>Cada vez que experimento ira no dejo de pensar en ello durante un tiempo</i>	.78
6.	After an argument is over, I keep fighting with this person in my imagination <i>Después de que una discusión con alguien haya terminado sigo peleando con esa persona en mi imaginación</i>	.60
7.	I re-enact the anger episode in my mind after it has happened <i>Recreo en mi mente un episodio de ira después de que haya ocurrido</i>	.69
8.	I feel angry about certain things in my life <i>Me siento enfadado/a por ciertas cosas de mi vida</i>	.59
9.	I think about certain events from a long time ago and they still make me angry <i>Pienso en determinados acontecimientos ocurridos hace tiempo y que todavía consiguen enfadarme</i>	.73
10.	When angry, I tend to focus on my thoughts and feelings for a long period of time <i>Cuando estoy enfadado/a, suelo centrarme en mis pensamientos y sentimientos durante mucho tiempo</i>	.74
Displaced Aggression		
11.	When someone or something makes me angry I am likely to take it out on another person <i>Cuando alguien o algo me enfada, suelo tomarla con otra persona</i>	.87
12.	When feeling bad, I take it out on others <i>Cuando me siento mal, la tomo con otros</i>	.91
13.	When angry, I have taken it out on people close to me <i>Cuando estoy enfadado/a, la tomo con personas cercanas a mí</i>	.90
14.	Sometimes I get upset with a friend or family member even though that person is not the cause of my anger or frustration <i>A veces me altero con un amigo o familiar incluso cuando esa persona no es la causa de mi ira o frustración</i>	.87
15.	I take my anger out on innocent others <i>Pago mi enfado con personas inocentes</i>	.92
16.	When things don't go the way I plan, I take my frustration out at the first person I see <i>Cuando las cosas no salen como las he planeado, descargo mi frustración en la primera persona que veo</i>	.73
17.	If someone made me angry I would likely vent my anger on another person <i>Si alguien me enfada, probablemente descargue mi ira con otra persona</i>	.80
18.	Sometimes I get so upset by work or school that I become hostile toward family or friends <i>A veces me altero por algo en el trabajo o en clase y me pongo hostil con familiares o amigos</i>	.79
19.	When I am angry, I don't care who I lash out at <i>Si estoy enfadado/a, no importa contra quien arremeta</i>	.66
20.	If I have had a hard day at work or school, I'm likely to make sure everyone knows about it <i>Si he tenido un día duro en el trabajo o en clase, tiendo a hacer que todos lo sepan</i>	.46
Revenge Planning		
21.	When someone makes me angry I can't stop thinking about how to get back at this person <i>Cuando alguien me enfada, no puedo parar de pensar como devolvérsela a esa persona</i>	.77
22.	If somebody harms me, I am not at peace until I can retaliate <i>Si alguien me hace daño, no me siento tranquilo hasta que consigo vengarme</i>	.82
23.	I often daydream about situations where I'm getting my own back at people <i>A menudo sueño con situaciones donde consigo vengarme de personas</i>	.69
24.	I would get frustrated if I could not think of a way to get even with someone who deserves it <i>Podría llegar a frustrarme si no pienso en el modo de ajustar cuentas con alguien que se lo merece</i>	.80
25.	I think about ways of getting back at people who have made me angry long after the event has happened <i>Pienso en la forma de tomar represalias con alguien que me ha hecho enfadar pasado un tiempo de que haya ocurrido</i>	.85
26.	If another person hurts you, it's alright to get back at him or her <i>Si alguien te hace daño es justo devolvérsela</i>	.77
27.	The more time that passes, the more satisfaction I get from revenge <i>Cuanto más tiempo pasa, más satisfacción obtengo de vengarme</i>	.77
28.	I have long living fantasies of revenge after the conflict is over <i>Cuando un conflicto ha terminado, tengo durante mucho tiempo fantasías de venganza</i>	.79
29.	When somebody offends me, sooner or later I retaliate <i>Si alguien me ofende, tarde o temprano tomaré represalias</i>	.82
30.	If a person hurts you on purpose, you deserve to get whatever revenge you can <i>Si una persona te hace daño a propósito, tienes derecho a poder vengarte de ella</i>	.70
31.	I never help those who do me wrong <i>Nunca ayudo a quien se porta mal conmigo</i>	.26

Associations between DAQ and related variables

We assessed the validity of the DAQ by analysing relationships between their three subscales and measures of related constructs (trait anger, anger expression and control, aggressive behavior, affective style, personality traits, anger rumination and other cognitive and emotional regulation strategies) (Table 12).

DAQ subscales correlated in the expected direction with both trait anger and anger expression and anger control variables, with positive associations between the three subscales of the DAQ and trait anger and anger expression (in and out) and negative ones with control anger (in and out). The highest correlations were found between angry rumination and trait anger ($r = .56$), revenge planning and trait anger ($r = .55$), and between revenge planning and anger control-out ($r = -.51$). With respect to affect style, whereas a pattern of positive correlations was found between the three subscales of the DAQ and negative affect (where the highest correlation was observed with angry rumination, $r = .58$), the contrary pattern was observed in the relationship with positive affect, with angry rumination and revenge planning subscales being significant and negatively associated (although with a lower magnitude as compared with negative affect) with positive affect. Associations in the expected direction were also found between DAQ subscales and different forms of aggressive behavior, with the three DAQ subscales being positively correlated with physical aggression, verbal aggression and indirect aggression. In this case, the highest correlations were found for displaced aggression ($r = .58$, with physical aggression, and $r = .41$, with indirect aggression). With respect to personality traits, analyses showed that the highest magnitude correlations were observed in the associations between angry rumination and revenge planning with

neuroticism ($r = .56$ and $r = .48$ respectively). The others traits showed correlations between $r = .16$ and $r = .39$ with the Three DAQ subscales.

We also analysed the associations between DAQ and another measure of angry rumination, the ARS. As expected, positive and significant correlations were found between the three subscales of the DAQ and all of the subscales of the ARS. Angry rumination was strong linked to angry afterthoughts ($r = .77$) and angry memories ($r = .72$), and displaced aggression was strong linked to thoughts of revenge ($r = .80$).

Table 12. Means, standard deviations, alpha reliabilities and correlations between the DAQ subscales and other related variables.

Related variable	N	M(SD)	α	Angry rumination (N=429; $M=3.65$, SD=1.24; $\alpha=.91$)	Revenge Planning (N=429; $M=2.04$, SD=1.03; $\alpha=.92$)	Displaced Aggression (N=429; $M=2.77$, SD=1.27; $\alpha=.94$)
Trait Anger	249	2.17(.52)	.84	.56**	.55**	.36**
Anger Expression-Out	249	1.98(.54)	.73	.37**	.44**	.34**
Anger Expression-In	249	2.13(.64)	.76	.36**	.12	.18**
Anger Control-Out	249	2.82(.70)	.90	-.37**	-.51**	-.21**
Anger Control-In	249	2.46(.77)	.87	-.31**	-.39**	-.20**
Positive Affect	249	3.43(.57)	.79	-.27**	-.17**	-.08
Negative Affect	249	1.93(.66)	.85	.58**	.39**	.25**
Physical Aggression	249	1.77(.55)	.76	.35**	.10	.55**
Verbal Aggression	249	2.87(.62)	.67	.28**	.31**	.32**
Indirect Aggression	249	1.54(.33)	.84	.27**	.22**	.41**
Extroversion	249	.42(.10)	.86	-.22**	-.10	-.06
Neuroticism	249	.38(.10)	.85	.56**	.48**	.23**
Openness	249	.37(.06)	.81	-.18**	-.34**	-.06
Agreeableness	249	.42(.06)	.66	-.35**	-.31**	-.39**
Conscientiousness	249	.40(.07)	.81	-.16**	-.07	-.17**
Angry Afterthoughts	165	1.68(.64)	.87	.77**	.40**	.54**
Thoughts of Revenge	165	1.38(.56)	.84	.51**	.33**	.80**
Angry Memories	165	1.75(.46)	.72	.72**	.43**	.56**
Understanding of causes	165	2.28(.62)	.70	.53**	.24**	.35**
Self-Blame	165	2.47(.77)	.65	.20*	-.01	.05
Acceptance	165	3.10(.82)	.66	.01	-.07	-.01
Rumination	165	3.07(.84)	.68	.28**	.01	.06
Positive Refocusing	165	2.95(.95)	.85	-.20*	-.22**	-.14
Refocus on Planning	165	3.91(.87)	.84	-.21**	-.22**	-.18*
Positive Reappraisal	165	3.94(.90)	.82	-.35**	-.35**	-.28**
Putting into Perspective	165	3.57(.96)	.84	-.19*	-.26**	-.15
Catastrophizing	165	1.60(.70)	.83	.51**	.40**	.45**
Blaming Others	165	1.77(.63)	.81	.54**	.35**	.53**

Note = * $p < .05$; ** $p < .01$

Finally, relationships between DAQ and other cognitive and emotional regulation strategies (as measured by CERQ) were examined. In general, a pattern of negative correlations (of low magnitude) was found between DAQ subscales and different adaptive strategies, with the highest magnitude correlations found for positive reappraisal ($r = -.35$ with angry rumination, $r = -.35$ with revenge planning, and $r = -.28$ with displaced aggression); non-significant correlations were found between any subscale of the DAQ and acceptance. With respect to maladaptive strategies, low or non-significant correlations were found between DAQ subscales and self-blame or rumination (the correlation between angry rumination and rumination was of .28), whereas stronger (and positive) correlations appeared in the associations between DAQ subscales and catastrophizing and blaming others (see Table 12).

Discussion

The present study assessed the validity and reliability of the Spanish version of the DAQ. Towards this goal, it had three aims: to confirm the factor structure and to examine the psychometric properties of the Spanish DAQ; to confirm discriminant and convergent validity of DAQ proposed by Denson et al. (2006) in Spanish speaking groups; to provide preliminary associations among the three dimensions of Spanish DAQ and theoretical relevant variables not previously investigated, namely indirect aggression and cognitive and emotional regulation strategies.

First, our data confirmed the hypothesized three-factor structure for the Spanish version of the DAQ. The three factors correspond to the dimensions of angry rumination (affective dimension), revenge planning (cognitive dimension), and behavioral displaced aggression (behavioral dimension) according to the original structure of the scale. All factor loadings were statistically significant and higher than .45 with the exception of the

item 31 that showed a factor loading of small magnitude (.26). In the original version, this item also obtained the slowest factor loading. It is possible that the content of this item ("I never help those who do me wrong") measures the tendency to not commit prosocial and positive behaviors toward someone who misbehaved, rather than revenge planning. Further research about the factor structure of the DAQ in other populations is needed to assess the utility of this item. Results also showed that the DAQ subscales have good reliability, with both adequate internal consistencies, displaying Cronbach's alpha coefficients similar to those reported for the original version, and evidences of test-retest stability over a 1 month period.

With respect to our second goal, DAQ subscales correlated in the expected direction with several theoretically related variables. Most relevant results are discussed below. With respect to trait anger and anger expression, the results showed a pattern of positive correlations between DAQ subscales and trait and expression of anger. Also, a negative pattern between DAQ and control anger was found. These findings indicate individuals with high levels of trait anger and with difficulties to manage this emotional state show a high tendency to displace aggression. Besides, the results highlight the associations between anger trait and the tendency to engage in angry rumination and plan a potential vengeance. In relation to the affective style, negative correlations with positive affect and positive associations with negative affect were found, being the correlations of strongest magnitude with negative affect. This association between negative affect and aggression is consistent with the results found with other types of aggression (Burt, Mikolajewski, & Larson, 2009). Regarding the associations between the DAQ and the personality traits, we found evidence of discriminant validity of the DAQ, with low to moderate correlations between its three subscales and the Big Five factors.

The present study provides new data about the associations between DAQ subscales and angry rumination, as assessed by the ARS (Sukhodolsky et al., 2001). Angry rumination showed a general pattern of positive relationships with all the three subscales of DAQ. However, contrary our expectations, low associations were found between thoughts of revenge subscale (ARS; Sukhodolsky et al., 2001) and Revenge Planning (DAQ; Denson et al. 2006). These unexpected low associations may be explained by revenge planning being composed of items that focus on retaliation and attitudes about retaliation (“If somebody harms me, I am not at peace until I can retaliate”) as opposed to thoughts of revenge subscale, which include items from several natures referring to revenge, thoughts about violent nature (“I have day dreams and fantasies of violent nature”) and difficulties to forgive o tendency to feel resentment (“I have difficulty forgiving people who have hurt me”). Finally, the results showed a positive pattern of correlations with others types of aggression (physical and verbal), suggesting that individuals who tend to attack physically or to use verbal aggression also possess a tendency to displace the aggressive behavior against an innocent target.

Our third aim was to provide preliminary evidence of hitherto unexamined relationships between DAQ and indirect aggression, and several cognitive and emotional regulation strategies. Regarding indirect aggression, DAQ subscales displayed similar associations to the correlations with verbal and physical aggression. Besides, indirect aggression showed the strongest relationship with the displaced aggression subscale. Indirect aggression requires the ability to inhibit a direct confrontation, postponing the impulse to attack at the moment, and aggressing later through the purposeful manipulation and damage of peer relationships (Crick & Grotpeter, 1995). This aspect of postponing the aggressive response is shared with displaced aggression. Further research is needed to explore potential common mechanism between both types of aggression.

Finally, we examined the correlations between the subscales of DAQ and cognitive and emotion regulation strategies. With respect to adaptive strategies, negative associations with several types of strategies were found. The highest magnitude correlation was with positive reappraisal. It is possible that individuals who obtain an alternative and positive interpretation of the situation consider it unnecessary to engage in rumination, planning about a potential revenge, or using displaced aggression against others. For the other hand, positive correlations with maladaptive strategies were found. Mainly, catastrophizing and blaming others were negatively related to angry rumination, displaced aggression and revenge planning. Given a provocation situation, some individuals may hold innocent others responsible because it may be safer and more feasible to avoid the negative consequences of blaming the real source of a provocation.

The angry rumination subscale of the DAQ was weakly related to rumination subscale of CERQ as well. These results are in line with previous research suggesting the presence of a higher-order factor of rumination. This general rumination factor refers to a general tendency to engage in repetitive, pervasive thinking in a variety of contexts and is associated with different emotions. In addition to general rumination factor, specific different factors exist as distinct constructs, which each type of rumination (e.g. sadness rumination or angry rumination) have unique associations with specific variables. People who engage in anger rumination may not tend to use rumination associated to different emotions (Gilbert, Cheung, Irons, & McEwan, 2005; Peled & Moretti, 2010). This may be because anger rumination focuses on negative aspects of others (Vansteelandt & Van Mechelen, 2006) and action-oriented active responses, such as retaliation. Other types of rumination, such as sadness rumination, are more likely to focus on negative aspect on the self and are oriented to passive conduct and inhibited response (Nolen-Hoeksema, 1998).

It is important to consider some limitations of the current study. First, the sample of participants was primarily female, and the results might not be generalize to men who are more aggressive than women (Card et al., 2008). More heterogeneous samples are required for generalizing our results to the Spanish population. Second, our use of self-report measures, which are associated with social desirability, may lead participants to under estimate their aggression. Future research should control that effect, as previous work has done with other types of aggression (Ruiz-Pamies, Lorenzo-Seva, Morales-Vives, Cosi, & Vigil-Colet, 2014). Third, a cross- sectional design was used to analyse the relationships with other variables, restricting conclusions about the direction of causality of our results.

Despite these limitations, our results encourage the instrument's use for measuring individual differences in displaced aggression in the Spanish population. The Spanish DAQ will allow further research on trait displaced aggression and related processes, and the examination of its predictive role in important contexts, such as domestic abuse and road rage (Denson et al., 2006). Individuals who reported a tendency to aggress against undeserving others, tend to take it out on individuals close to them or to display an aggressive attitude to small disturbances on the road. These processes and behaviors have important implications for the quality of interpersonal and intra-familial relationships. Further research is necessary on these fields, and the use of DAQ may help to deep in it.

ESTUDIO 4

**ANGRY RUMINATION AS A MEDIATOR OF THE RELATIONSHIP
BETWEEN ABILITY EMOTIONAL INTELLIGENCE AND VARIOUS TYPES
OF AGGRESSION**

Abstract

Ability Emotional Intelligence (AEI) has been negatively associated with aggressive behavior. There is, however, no evidence about the associations between AEI and indirect aggression or angry rumination, although several studies have reported that people with low AEI tend to use depressive rumination as an emotional regulation strategy. The purposes of this study were to provide preliminary evidence on the relationships between AEI and angry rumination and between AEI and indirect aggression, and to examine the role of angry rumination as a mediator of the relationship between AEI and different types of aggression (physical, verbal and indirect aggression). We used a cross-sectional design; 243 undergraduate students completed questionnaires assessing the variables of interest. The results provided evidence for negative associations between AEI and both angry rumination and indirect aggression. Analysis also indicated that angry rumination was a significant mediator of the relationship between AEI and all three types of aggression. These findings are discussed in the light of aggression models and their practical implications for work on prevention or treatment of aggressive behavior are considered.

Keywords: emotional intelligence, aggression, angry rumination, indirect aggression

Introduction

Emotional Intelligence (EI) is defined as the set of abilities involved in perception, usage, understanding, management and regulation of emotions (Mayer & Salovey, 1997). EI can be conceptualized as a trait or as a mental ability. Trait EI (TEI) or trait emotional self-efficacy is a set of emotional self-perceptions located at the lower levels of the personality hierarchy (Petrides et al., 2007) and is assessed with self-report measures (Petrides, 2009) whereas ability emotional intelligence (AEI) is defined as a set of abilities related to processing emotional information (Mayer & Salovey, 1997) and is measured in terms of maximum performance (Mayer, Salovey, Caruso, & Sitarenios, 2003).

People with lower EI tend to be characterized by conflict and aggressive behavior (García-Sancho et al., 2014). The most of research on this field has focused on TEI. TEI and AEI have been conceptualized like two different constructs and have shown different associations with related variables (Petrides & Furnham, 2003). Therefore this study extends previous research by focusing on the association between AEI and aggression and exploring the role of angry rumination as a mediator of the relationships between these variables.

Emotional intelligence and aggression

Aggression has been defined as any form of behavior intended to harm or injure another individual (Anderson & Bushman, 2002) and can be classified as overt or indirect. Overt aggression is behavior which is intended to have a direct negative effect on the victim's well-being; overt aggression can be physical or verbal (Coie & Dodge, 1998). Physical aggression encompasses behaviors such as hitting or pushing, whilst verbal

aggression encompasses verbal attacks in the form of name calling, taunting or threats. Indirect aggression is behavior which causes harm indirectly, by damaging social relationships and it encompasses behaviors such as gossiping, excluding the victim from social groups or spreading rumors (Björkqvist, 2001; Card et al., 2008). In recent years there has been an increased interest in indirect aggression as it is the most common form of aggressive behavior in adulthood (Anguiano-Carrasco & Vigil-Colet, 2011).

Various theories of aggressive behavior have been put forward. These have been integrated into the General Aggression Model (GAM; Anderson & Bushman, 2002). The GAM provides a parsimonious account of why people act aggressively in terms of three levels: personal and situational factors, internal states and outcomes of appraisal and decision-making processes. In this model personal factors (e.g. personality traits, gender, attitudes) interact with situational factors (e.g. insults, presence of guns, alcohol) to create an internal state which influences behavior. Internal state, which is a composite of cognitions (hostile thoughts, aggressive scripts), affect (anger, general negative affect) and arousal (physiological and psychological arousal) influences appraisals and decision-making processes which may or may not result in an aggressive response.

A number of studies have highlighted the role of emotional variables on aggressive behavior (Denson, 2013; Denson et al., 2011; Dollar et al., 1939). Lemerise and Arsenio (2000) proposed that emotion processes may have a relevant role during information processing in a social situation. For instance, deficits in recognition of facial emotions may result in a tendency to attribute anger to others and react aggressively (see García-Sancho, Salguero, & Fernández-Berrocal, 2015a). Similarly, individuals who are unable to manage strong emotions may be overwhelmed by them during appraisal and decision-making processes, and therefore generate a smaller range of responses, most of which are related to their affective state (e.g. aggressive responses when they feel angry)

(Lemerise & Arsenio, 2000). This perspective suggests that EI may have a role in reducing and managing aggressive behavior.

García-Sancho et al., (2014) systematically reviewed research on the relationship between EI and aggression and concluded that there was strong evidence that EI and aggressive behavior are negatively associated (García-Sancho et al., 2014); the association was consistent across populations, ages and indicators. Few studies, however, have analyzed the association between AEI and aggression (Plugia et al., 2005). An investigation of the relationship between AEI and aggression which was intended to address this gap in the literature (García-Sancho, Salguero & Fernández-Berrocal, 2015b) revealed negative associations between AEI and physical and verbal aggression in both adult and adolescent samples. Also, AEI showed incremental validity on physical aggression after controlling traits personality in adults and AEI predicted physical aggression nine months later in adolescents (García-Sancho et al., 2015b). In contrast, verbal aggression was only weakly associated with AEI in both adults and adolescents, suggesting that the extent to which AEI influenced aggression might depend on the type of aggression. No other forms of aggression were explored in this study, leaving open the question of how indirect aggression, one of the most common aggressive behaviors in adulthood, is related to AEI (Anguiano-Carrasco & Vigil-Colet, 2011). This study explored the associations between AEI and all three types of aggression (physical, verbal and indirect).

Angry rumination as mediator

Angry rumination is potential contributor to aggression. Angry rumination is the term used for repetitive, negative cognitions about an anger-inducing event, such as anger-inducing memories, angry thoughts and feelings, and plans for revenge (Denson et al., 2006; Sukhodolsky et al., 2001). A substantial body of empirical evidence suggests

that angry rumination following a provocation increases aggression towards the provocateur (Bushman, 2002), and even towards other targets (Bushman et al., 2005).

According to the GAM, rumination after an anger-inducing provocation maintains or increases the activation of all three aspects of internal state leading to aggression: angry affect, aggressive cognitions and physiological arousal (Pedersen et al., 2011). Internal state influences appraisal and decision-making processes by increasing the likelihood that they will result in aggressive behavior (Anderson & Bushman, 2002). Denson's (2013) multiple system model of angry rumination posits that when one experiences angry feelings, aggressive thoughts and high arousal it takes more effort to self-regulate one's internal state and this effort consumes cognitive resources. Given that executive functioning is a limited yet renewable resource, it is possible that angry rumination temporarily depletes executive functioning resources (Slotter & Finkel, 2011) thus impairing appraisal and decision-making processes and increasing the risk of impulsive behavior such as retaliatory aggression (Denson et al., 2011). Additionally, other associated type of rumination, hostile rumination, defined as tendency to have repetitive thoughts related to desire for retaliation and vengeance (Caprara, 1968), mediated the relationship between traits of personality associated to negative affect (emotional stability) and violent behavior (Caprara et al., 2013).

Little is known about the relationship between EI and angry rumination. To the best of our knowledge, there has been only one study investigating the association between TEI and angry rumination, and it reported a negative association (Sukhodolsky et al., 2001). EI has been associated with emotional regulation (see Peña-Sarrionandia, Mikolajczak, & Gross, 2015, for a review). Several studies have shown that people with lower AEI tend to use depressive rumination, as an emotional regulation strategy (Curci, Lanciano, Soletti, Zammuner, & Salovey, 2013; Lanciano, Curci, Kafetsios, Elia, &

Zammuner, 2012). Some authors have suggested that people with low EI may be overwhelmed by their emotions when they experience an event with high negative emotional impact; their difficulties perceiving, understanding and regulating sadness and related negative emotions may mean that they experience these emotions as threatening and use rumination as an avoidant coping strategy (Salguero, Extremera, & Fernández-Berrocal, 2013; Smith & Alloy, 2009). It seems plausible that EI should also be associated with other forms of rumination, such as angry rumination, but to date no study has investigated this. Given that angry rumination is an explanatory factor in models of aggression, and that AEI has been associated with other forms of rumination and aggressive behavior, angry rumination may mediate the relationship between AEI and aggression.

This research

In summary, there is evidence of an association between AEI and aggression; however, the magnitude of this association depends on the type of aggression involved (physical or verbal) and there is no evidence on the relationship between AEI and other forms of aggression such as indirect aggression. There is evidence that people who engage in angry ruminative thinking are more likely to act aggressively, but although AEI has been linked with ruminative thinking there has been no research investigating its relationship with angry rumination. Finally, given what is known about the relationships among AEI, aggression and angry rumination it seems plausible that angry rumination mediates the association between AEI and aggression. The objectives of this study were therefore 1) to analyze the association between AEI and different types of aggression, namely physical, verbal and indirect aggression; 2) to examine the relationship between

AEI and angry rumination; 3) to determine whether angry rumination mediates the relationship between AEI and aggression.

Method

Participants and Procedure

The participants were 243 undergraduate students (52 men and 191 women) at public university in South of Spain aged between 19 and 54 years old ($M = 21.78$, $S.D. = 4.38$). Participation was in exchange for extra course credit and was entirely voluntary and anonymous. The participants completed the AEI measure individually in a group format during a normal lesson day and the rest of the scales were completed individually as part of an electronic survey.

Measures

Physical and verbal aggression (Aggression Questionnaire, AQ; Buss & Perry, 1992). The AQ is a self-report questionnaire containing of two subscales assessing physical aggression (nine items) and verbal aggression (five items). All items are rated on a five-point Likert scale (1= extremely uncharacteristic to 5=extremely characteristic). The original scale has adequate internal consistency for both subscales (Buss & Perry, 1992); we used a Spanish version which has also shown good internal consistency and reliability (Rodríguez et al., 2002).

Indirect Aggression Scale (IAS; Forrest et al., 2005). The IAS is a self-report scale for adults. It evaluates indirect aggression using 25 items which are rated using a five-point Likert scale (1 = never do this to 5 = do this regularly). There are two versions (aggressor and target) which provide an indication of an individual's tendency to practice or suffer indirect aggression. We used the aggressor version. All items of the original aggressor version of the scale demonstrated internal consistency (Forrest et al., 2005).

The Spanish aggressor version showed good psychometric properties, high reliabilities and a fairly clear one-dimensional structure (Anguiano-Carrasco & Vigil-Colet, 2011).

Angry rumination (Displaced Aggression Questionnaire, DAQ; Denson et al., 2006). Angry rumination was measured with the angry rumination subscale of The Displaced Aggression Questionnaire. It is 10-item self-report measure with responses given on a seven-point Likert scale (1 = extremely unlike me to 7 = extremely like me). It assesses tendency to think about anger-inducing events and their causes and the experience of anger. The original version has high levels of internal consistency and test-retest reliability (Denson et al., 2006). Its factorial structure is equivalent to the original English version and has good psychometric properties (García-Sancho, Salguero, Vasquez, & Fernández-Berrocal, in press).

Emotional intelligence was assessed using the Mayer–Salovey–Caruso Emotional Intelligence Test Version 2.0 (MSCEIT; Mayer et al., 2003). The MSCEIT assesses AEI through the performance on eight tasks and emotional problems. The test comprises 114 items and evaluates the four branch or aspects of EI specified in Mayer and Salovey's (1997) theoretical model: perception of emotions, emotional facilitation, understanding of emotion and management of emotion. Previous work has supported the validity of construct of EI factor and has demonstrated that the EI construct is broader than any one of its subcomponents (MacCann et al., 2013). Therefore in this study we used the global EI score, which is a global score on the sum of the four aspect of EI. The MSCEIT has shown satisfactory psychometric properties and has convergent and discriminant validity (Mayer et al., 2003). The Spanish version has shown similar psychometric properties (Extremera et al., 2006).

Results

Descriptive statistics and correlations

Descriptive statistics, reliability and zero-order correlation coefficients for the study variables are shown in Table 13. Overall, total AEI was negatively correlated with angry rumination ($r = -.20$) and with all three types of aggression (physical aggression $r = -.23$; verbal aggression $r = -.15$; indirect aggression $r = -.20$). Angry rumination was positively correlated with physical aggression ($r = .35$), verbal aggression ($r = .30$) and indirect aggression ($r = .27$). Finally there were positive correlations between all pairs of types of aggression (r ranged from .39 to .40). Because previous research have identified gender differences in aggressive behavior we assessed gender differences in the strength of the correlations between AEI, angry rumination and all three types of aggression using Fisher r -to- z transformation. However, no significant gender differences were shown between AEI and angry rumination ($z = -.79, p = .42$), AEI and physical ($z = .38, p = .69$) verbal ($z = -1.78, p = .07$) and indirect aggression ($z = -1.02, p = .30$) and between the correlations coefficients between angry rumination and physical ($z = -.07, p = .94$), verbal ($z = -.47, p = .63$) and indirect aggression ($z = .001, p = 1.00$).

Table 13. Means, standard deviations, reliabilities and intercorrelations among measures.

	1	2	3	4	M (SD)	α
1.EI					100 (14.28)	.85
2.Angry rumination	-.20**				36.49 (12.06)	.91
3.Physical aggression	-.23**	.35**			16.44(5.35)	.78
4.Verbal aggression	-.15*	.30**	.40**		14.24(3.28)	.70
5.Indirect aggression	-.20**	.27**	.39**	.40**	39.99(10.03)	.88

Note: ** $p < .01$, * $p < .05$

Mediation analyses

We test the mediation hypothesis using structural equation modelling (SEM) with latent variables in EQS 6.1 (Bentler, 1995), using the maximum likelihood estimation procedure (ML), to control for measurement error. Scores of each of the four branches of the MSCEIT were used as indicators of the EI latent factor. We averaged items subset into three parcels for the latent factors of angry rumination, physical aggression and indirect aggression, and into two parcels for the latent factor of verbal aggression. Since univariate and multivariate kurtosis statistics were found to indicate non-normality, the Satorra-Bentler scaled ML correction was used to adjust the model chi-square (Hu, Bentler, & Kano, 1992). The following measures of model fit were used (Schweizer, 2010): the root mean square error of approximation (RMSEA), the Bentler comparative fit index (CFI), and the standardized root mean square residual (SRMR). CFI values above .90 indicate good fit. RMSEA values below .08 are considered a reasonable fit, whereas values below .05 indicate good fit. SRMR values are expected to be below .10.

We tested the proposed model in which EI is related to different types of aggression via the mediation effect of angry rumination. A fully-saturated model was tested, including all possible paths of the mediation model. The model showed the following fit indices: S-B $\chi^2 = 109.56$, $df = 80$, $p = .016$; normed χ^2 (χ^2/df) = 1.4; RMSEA = 0.04 (90% CI = 0.02– 0.06); CFI = 0.97; SRMR = 0.06. Globally, these indices indicate a good fit to the data. As presented in Figure 2, angry rumination was positively related with the all types of aggression and EI was negatively related with angry rumination. A significant direct effect of EI on physical and indirect aggression was found, whereas the direct effect of EI on verbal aggression was non-significant. In the mediation model, EI was significantly indirectly related with the all types of aggression toward angry

rumination (-.08 for verbal aggression, -.09 for physical aggression, and -.05 for indirect aggression; all coefficients were significant at $p < .05$). The absent of direct effect of EI on verbal aggression indicates that angry rumination fully mediated this relationship.

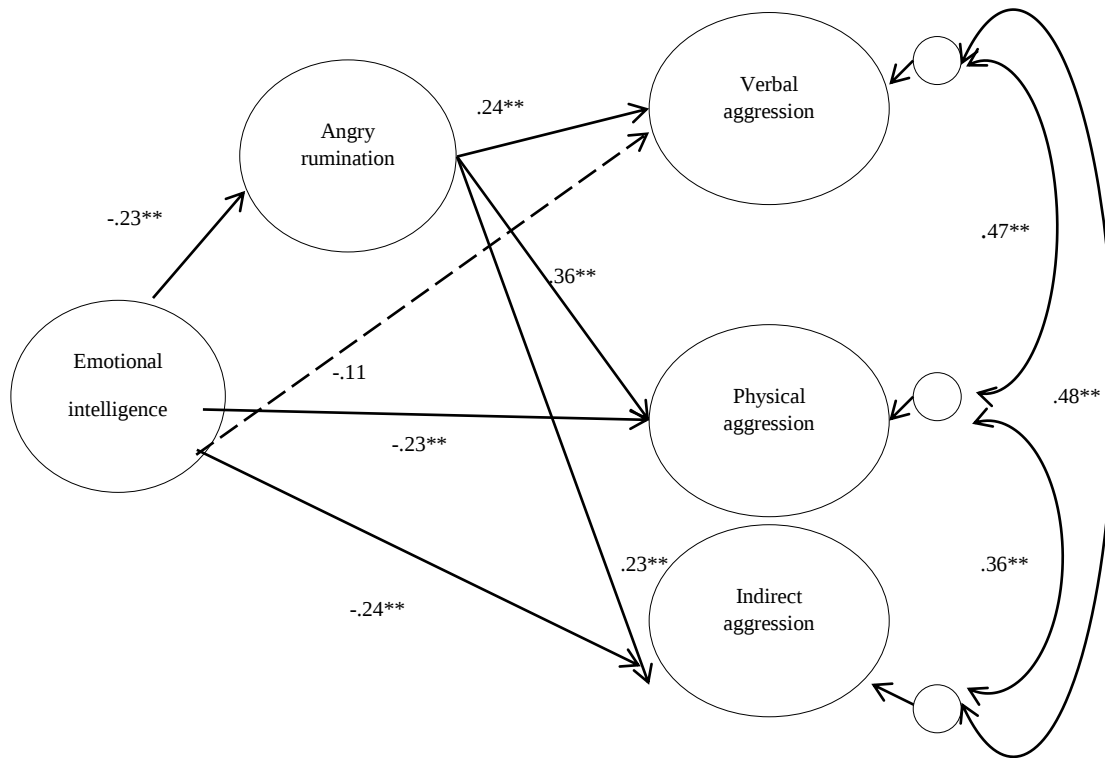


Figure 2. Mediation model of relationships between emotional intelligence and types of aggression through angry rumination. Note: Standardized beta coefficients are shown. Dashed paths represent non-significant relationships. $^{**}p < .01$

Discussion

This research examined the relationship between AEI, angry rumination and aggression. First, we analyzed the associations between AEI and three different types of aggression: physical, verbal and indirect aggression. Second, we analyzed the relationship between AEI and the tendency to ruminate on angry feelings. Third, we investigated angry rumination as a mediator of the relationship between AEI and the three different types of aggression.

We found that people with higher AEI reported using all the types of aggressive behavior we studied less frequently. This result is consistent with previous research (García-Sancho et al., 2014) and suggests that people who manage their emotions effectively are less likely to harm or injure others.

Our results provide evidence for a negative relationship between AEI and indirect aggression; people with low AEI showed a tendency to use social relationships to harm others through gossiping, spreading rumors or social exclusion. Similar results have been found in studies with TEI; children with low self-efficacy for emotional abilities received more nominations from their classmates for being a bully (Mavroveli, Petrides, Sangareau, & Furnham, 2009) and were more likely to be involved in indirect bullying as aggressors than people with high TEI (Kokkinos & Kipritsi, 2012). In adulthood aggression between women often takes an indirect form (Anguiano-Carrasco & Vigil-Colet, 2011), and indirect aggression is frequent in everyday conflicts and may affect the quality of social interactions. Although preliminary, our results suggest that EI should be considered as a factor in explanatory models of indirect aggression.

The second aim of this research was to provide the first empirical data on the relationship between AEI and angry rumination. We found that individuals with lower AEI were more likely to ruminate about anger-inducing events. This corroborates previous results using self-report measures of EI (Sukhodolsky et al., 2001) and is consistent with studies showing an association between AEI and depressive rumination (Curci et al., 2013; Lanciano et al., 2012). This pattern of results provides support for the idea that people with low EI have an emotional regulation style characterized by a perseverative focus on thoughts and feelings associated with negative emotion-eliciting situations (Peña-Sarrionandia et al., 2015). It is possible, as some authors have proposed in the case of depressive rumination (Salguero et al., 2013; Smith & Alloy, 2009), that

when faced with an event with high emotional impact, people who have difficulty perceiving, using, understanding and regulations are overwhelmed by negative emotions and use rumination as a regulation strategy in an attempt to avoid this.

Finally, we investigated the mediation of the relationship between AEI and aggression by angry rumination. As hypothesized, angry rumination mediated this relationship in the case of all the types of aggression studied. Our findings indicate that people with low AEI engage in aggressive behavior more frequently partly due to their tendency to use angry rumination to regulate their emotions. We have offered an account of low AEI people could use angry rumination to avoid negative affect following an anger-inducing provocation above. However, angry rumination does not regulate or attenuate negative emotional states; in fact the opposite, it sustains or enhances anger, aggressive cognitions and physiological arousal and thus increases the likelihood of aggressive behavior (Bushman, 2002; Pedersen et al., 2011).

Several limitations of this study should be noted. First, all three types of aggression were assessed using self-report indicators, so data on tendency to act aggressively is based entirely on respondents' perceptions and may over or underestimate aggression. Second, the cross-sectional design means that we cannot establish causal relationships. Third, only undergraduate students participated in this study and the results may not generalize to the general population. Finally, the majority of the sample was female; previous research indicates that men are more physical aggressive than women (Card et al., 2008) and it is possible that the relationship between EI and aggression varies according to gender.

Despite these limitations the study provides preliminary evidence of associations among AEI, angry rumination and aggression and suggests future lines of research. Previous studies have also found that ruminating about anger increases aggression in an

experimental context (Pedersen et al., 2011). Future research should be replicate our results in a behavioral experiment which measures EI as this would provide more reliable evidence to support our findings. It would also be useful to replicate these results in a longitudinal design in order to clarify the causal relationships between AEI, angry rumination and aggression.

In summary, this research has several theoretical and practical implications. From a theoretical perspective, it provides preliminary evidence about the relationship between AEI and indirect aggression. Our results also extend knowledge in this area as they have uncovered a potential psychological mechanism – angry rumination - through which low EI might lead to aggression. Our findings about the associations between AEI, angry rumination and aggressive behavior have some practical implications for development of programs to reduce or prevent aggression. Given the associations between aggression and AEI and angry rumination, intervention programs could include EI training or techniques for reducing angry rumination. An emotional learning program for children and adolescents was found to reduce aggressive behavior (Castillo et al., 2013); it would interesting to investigate whether this was because they learned to restrain a tendency to ruminate.

CAPÍTULO 3

DISCUSIÓN

El propósito general de esta Tesis Doctoral fue el de ampliar el conocimiento acerca del papel que la Inteligencia Emocional (IE) desempeña en la explicación de las conductas agresivas. Para ello, se plantearon 4 estudios, cuyos resultados, de forma general, han arrojado evidencias de la existencia de una relación negativa entre IE y agresión, es decir, las personas que presentan dificultades para percibir, usar, comprender y regular sus emociones y la de los demás, muestran una mayor incidencia en el uso de comportamientos agresivos que aquellas personas con mayores niveles de IE. Con la intención de facilitar la integración de todos los resultados obtenidos, a continuación discutiremos los datos más relevantes de cada uno de los 4 estudios llevados a cabo, por orden de exposición en el apartado anterior.

El objetivo de nuestro primer estudio fue examinar el estado en el que se encontraba la investigación acerca de la relación entre IE y agresión. Para ello, realizamos una revisión sistemática de la literatura existente que obtuvo como resultado 19 trabajos empíricos que presentaban relaciones empíricas entre ambos constructos. Estos 19 trabajos, de forma general, muestran la existencia de una asociación negativa entre la IE y la realización de conductas agresivas. Además, esta relación se ha mostrado de forma consistente en muestras de diferentes edades y contextos culturales y parece independiente del tipo de agresión estudiada (por ejemplo agresión física, agresión sexual, agresión en la pareja o humor agresivo), así como de la metodología utilizada para evaluar la IE. No obstante, la mayoría de los trabajos revisados analizaron la relación entre agresión e IE rasgo, evaluada con pruebas de autoinforme, siendo tan solo 3 los estudios que hasta la fecha habían evaluado la IE como habilidad, a través de medidas de rendimiento máximo, y no existiendo estudios realizados con un diseño longitudinal. La

escasez de trabajos realizados con medidas de habilidad pone en relieve la necesidad de continuar en esa línea de estudio para corroborar las hipótesis planteadas con la IE rasgo.

Partiendo de los resultados de esta revisión sistemática surgió el segundo objetivo de esta Tesis Doctoral, contribuir a profundizar en el conocimiento sobre la relación entre agresión e IE, tratando de superar algunas de las limitaciones señaladas anteriormente en el primer estudio. Para ello, nos centramos en el estudio de la IE como Habilidad (IEH), y llevamos a cabo dos trabajos. En el primer subestudio exploramos la relación entre IEH y agresión en adultos a nivel transversal y analizamos la validez incremental de la IEH sobre los factores de personalidad en la explicación de conductas agresivas de tipo físico y verbal. En el segundo trabajo, nuestros objetivos fueron corroborar los resultados encontrados en el subestudio 1 en una muestra de población adolescente y analizar la relación temporal entre ambas variables en un estudio longitudinal. Los resultados obtenidos en ambos subestudios muestran de forma consistente una clara relación entre la IEH y la agresión física, y una asociación más débil en el caso de la agresión verbal.

Para poder seguir avanzando en esta línea de conocimiento, como tercer objetivo de esta Tesis Doctoral nos propusimos la adaptación y validación al español del Cuestionario de Agresión Desplazada (Denson et al. 2006). Esta escala evalúa una forma de agresión diferente a otros tipos de agresión que usualmente se han explorado en este campo de estudio. El propósito de adaptar esta escala surgió de la necesidad de completar carencias en la literatura sobre el tema, y de la inexistencia de escalas en español que permitieran evaluar dichas variables. Por un lado, la adaptación al castellano del Cuestionario de Agresión Desplazada nos permitió evaluar la relación entre la subescala de comportamiento agresivo desplazado y diferentes estrategias de regulación emocional. Por otro lado, la subescala de rumiación de la ira posibilitó analizar la relación entre IEH

y rumiación de la ira, cuya relación no había sido estudiada hasta la fecha. Los resultados de este estudio corroboran la estructura de tres factores propuesta por la escala original y aportan relaciones similares a las encontradas por la versión inglesa respecto a la validez convergente y discriminante del constructo. Además, este tercer estudio ha presentado datos de relaciones que no habían sido analizadas hasta la fecha, como la relación entre las tres subescalas del cuestionario y la agresión indirecta, y diferentes estrategias de regulación emocional.

Por último, partiendo del conocimiento que la revisión sistemática aporta, teniendo en cuenta los datos obtenidos en el segundo estudio sobre las relaciones entre IEH y agresión, y gracias a la adaptación al español del cuestionario de agresión, que posibilita la evaluación de variables no estudiadas hasta entonces, surgió el propósito del cuarto estudio: profundizar en la relación entre IEH y agresión analizando posibles variables mediadoras que expliquen el mecanismo que las asocia. Los resultados de este último estudio sugieren el papel mediador que la rumiación de la ira ejerce en la relación entre las habilidades emocionales y los distintos tipos de agresión.

En conjunto, los cuatro trabajos presentados añaden evidencias sobre la existencia de una relación negativa entre IEH y tres diferentes tipos de agresión, física, verbal e indirecta, evidencias de validez incremental más allá del poder explicativo de los 5 grandes factores de personalidad en adultos, evidencias del papel predictor de la IEH sobre los niveles de agresión en adolescentes, y por último, evidencias de un posible mecanismo que explique esta relación, la rumiación de la ira. Todo ello nos permite conocer con mayor profundidad la implicación de las habilidades emocionales en la explicación de las conductas agresivas y, además, suponen una repercusión en el campo de estudio de estas variables que merece ser considerada.

Inteligencia emocional

Respecto al estudio de la IE, en primer lugar, los resultados de este trabajo contribuyen a proporcionar nuevas evidencias del poder explicativo de la IE, de forma independiente a la otorgada por parte de los rasgos de personalidad. En el segundo trabajo de esta Tesis Doctoral comprobamos cómo el conjunto de habilidades emocionales evaluado en población adulta mostraba validez incremental sobre los rasgos de personalidad en la explicación de conductas agresivas. Estos resultados avalan una vez más la idea de que la IEH evalúa algo diferente a los rasgos de personalidad, y que las competencias emocionales están asociadas a variables relacionadas con la interacción social. En esta línea, otros trabajos han mostrado también cómo la IE presenta validez incremental sobre los factores de personalidad en la explicación de otras importantes variables criterio como el consumo de alcohol, la existencia de relaciones positivas en adultos o diferentes indicadores de salud mental y social, como por ejemplo la existencia de síntomas depresivos o los comportamientos disruptivos (Brackett et al., 2004; Davis & Humphrey, 2012; Rossen & Kranzler, 2009).

Además, este trabajo introduce nuevos datos a nivel longitudinal sobre la IEH, añadiendo evidencias de la influencia temporal de la IEH en diferentes variables criterio relacionadas con el ajuste psicológico y social. Entre las variables criterio que se han asociado en la literatura con la IEH, diferentes indicadores de salud mental, ajuste psicológico y rendimiento académico han mostrado estar relacionadas con las competencias emocionales a nivel prospectivo (Palomera, Salguero, & Ruiz-Aranda, 2012; Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012; Williams, Daley, Burnside, & Hammond-Rowley, 2010), aunque algunos de estos trabajos lo han hecho evaluando solo alguna de las habilidades emocionales sin proporcionar resultados con un índice

global de IEH (Palomera et al., 2012; Williams et al., 2010). Estos trabajos han mostrado la importancia de la IEH como predictor del ajuste psicosocial y los resultados de esta Tesis Doctoral añaden evidencias en este sentido.

Siguiendo el modelo de habilidad, los estudios se han centrado principalmente en población adulta, siendo escasos los trabajos que han evaluado la IEH en adolescentes. Aunque otros trabajos han evaluado la IEH en adolescentes en población española (Mestre, Guil, Lopes, Salovey, & Gil- Olarte, 2006), éste es el primer estudio que utiliza una medida de rendimiento máximo creada, de forma específica, para población española adolescente (TIEFBA; Fernández-Berrocal et al., 2015). Los resultados de nuestro estudio van en línea con los obtenidos por otros autores en relación a otras variables criterio, mostrando así una clara relación de la IEH con algunas otras variables relevantes para la adaptación en la adolescencia (Resurrección et al., 2014).

Los resultados obtenidos muestran una consistencia en la relación entre las variables objeto de estudio en diferentes edades y a través del uso de diferentes medidas de habilidad. Esta consistencia a través de población adulta y población adolescente da respaldo a la asociación de las habilidades emocionales con el desempeño de conductas agresivas. Además, este trabajo aporta evidencia empírica del TIEFBA (Fernández-Berrocal et al., 2015). Esta medida de rendimiento máximo se presenta como una potente alternativa para evaluar los niveles de IEH en población española adolescente. Por otra parte, el uso de diferentes medidas de ejecución, en este caso, el MSCEIT (Mayer et al., 2003) y el TIEFBA, aporta soporte empírico al constructo de IEH, mostrando la existencia de un concepto con capacidad de mostrar relaciones con otras variables, independientemente del instrumento utilizado para ello.

Por último, este trabajo presenta nuevos datos acerca de la relación entre IE y un tipo de estrategia de regulación, la rumiación de la ira. Un meta-análisis publicado recientemente (Peña-Sarrionandia et al., 2015), muestra las relaciones positivas y negativas entre la tendencia al uso de ciertas estrategias de regulación emocional y los niveles de IE. Respecto a la rumiación, son diferentes los estudios que muestran cómo las personas con una baja capacidad para percibir, comprender y regular sus emociones ante situaciones con un cierto impacto emocional negativo, tienden a presentar una reiterada producción de pensamientos rumiativos. Hasta nuestro conocimiento, todos los estudios realizados con IEH y rumiación han estado focalizados en la rumiación de pensamientos de carácter depresivos, no existiendo datos sobre la rumiación de la ira y siendo este trabajo el que añade los primeros datos en este sentido. Los resultados de la asociación de ambas variables van en línea con los encontrados por otros autores con rumiación depresiva. Aunque en los últimos años ha comenzado a surgir una línea de trabajo focalizada en no identificar las estrategias de regulación como adaptativas o desadaptativas en sí mismas (Ford & Tamir, 2012; Tamir, Ford, & Gilliam, 2013), sino en relación al carácter útil o no de hacer uso de ellas de cara a conseguir un determinado objetivo, parece consolidada la idea de que un uso habitual e indistinto de ciertas estrategias, como es el caso de la rumiación, está asociada a un menor nivel de las habilidades emocionales intra e inter personales y a una mayor presencia de consecuencias negativas.

En definitiva, los resultados de este trabajo contribuyen al estudio de la IEH presentándola como un importante constructo unitario, compuesto por diferentes habilidades emocionales, que ha mostrado consistencia a través de diferentes medidas de

habilidad y que se muestra como una variable coherente y con poder explicativo sobre comportamientos relacionados con la adaptación social del individuo.

Agresión

En relación al campo de la agresión, este trabajo también ofrece importantes contribuciones a su estudio. El compendio de trabajos realizados en esta Tesis Doctoral incluye la adaptación y validación del Cuestionario de Agresión Desplazada en población española. Esto permite su uso en población hispano-hablante y la inclusión de estas variables en futuros estudios que permitirá el avance en esta línea de investigación. En este sentido, este trabajo aporta los primeros datos sobre rumiación de la ira en población española. Hasta la fecha, solo escalas de rumiación general o depresiva habían sido adaptadas al español, imposibilitando obtener evidencias empíricas acerca de la rumiación de este tipo de afecto negativo, tan asociado en la literatura con la agresión. Los datos presentados en esta Tesis Doctoral son los primeros publicados en población española sobre la tendencia a tener pensamientos rumiativos asociados a la ira y al evento que ha originado esa emoción.

Por otro lado, hasta la fecha, en la literatura no había sido analizada la relación entre la rumiación de la ira y la agresión indirecta. Nuestros datos señalan una relación positiva entre ambas similar a la encontrada entre rumiación de la ira y otros tipos de agresión, como la física o la verbal. La agresión indirecta es un tipo de agresión en la cuál la persona es capaz de inhibir de forma inicial su impulso a agredir para cometer el daño de forma intencionada más adelante en el tiempo, a través del uso de las interacciones sociales con los demás. Es posible que las personas que son capaces de postergar su deseo de agresión utilicen la rumiación de la ira como estrategia de regulación ante la situación de provocación, y que este tipo de pensamientos rumiativos impida el desvanecimiento

de la intensidad de ira sentida y fomento que la persona continúe con el deseo de agredir. Además, los resultados de este trabajo incluyen datos preliminares acerca de la relación entre rumiación de la ira, planificación de la venganza y agresión desplazada, con una amplia gama de estrategias cognitivas de regulación emocional (como por ejemplo la catastrofización, la reevaluación positiva o la tendencia a culpar a otros) que tampoco habían sido analizadas hasta ahora. El estudio de estas variables nos permite profundizar en el posible mecanismo que explica cómo las personas, ante una situación que origina un impacto emocional intenso de carácter negativo, ponen en marcha el uso de diferentes estrategias de regulación emocional, adaptativas en unos casos, como la reevaluación positiva, que se ha asociado a menores niveles de agresión desplazada, o el uso de estrategias usualmente desadaptativas, como la catastrofización o la tendencia a culpar a otros, que se muestran fuertemente asociadas a la rumiación de la ira y al desempeño de conductas agresivas desplazadas, es decir, hacia personas que no son responsables de la provocación inicial.

Por último, desde una perspectiva teórica, los datos obtenidos dan soporte empírico al modelo del procesamiento de información social (PIS), y de forma más específica, a la revisión del modelo propuesta por Lemerise y Arsenio (2000), con la inclusión de las variables emocionales como un componente esencial en el procesamiento de la información en las interacciones sociales. Este modelo integrado de factores cognitivos y emocionales defiende, a través de las distintas fases propuestas por el PIS, la influencia que el procesamiento emocional tiene en un comportamiento socialmente competente. Este trabajo ha mostrado la asociación de la IE, evaluada como un constructo compuesto por diferentes habilidades emocionales: percepción, facilitación, comprensión y manejo emocional, con la realización de un comportamiento agresivo. Por tanto, los

resultados obtenidos avalan la idea propuesta por el PIS, sugiriendo la importancia del procesamiento emocional, desde fases tempranas del modelo, con un importante papel de la percepción emocional en el reconocimiento de las emociones de los demás, para evitar por ejemplo errores de atribución de ira en otras personas, hasta fases más avanzadas, como el proceso de gestión emocional, cuyo déficit podría saturar emocionalmente a la persona e interferir en su proceso de generar respuestas alternativas y tomar decisiones sobre si responder de forma agresiva o no.

Desde los modelos teóricos de la agresión no solo el PIS ha otorgado importancia a las variables emocionales. También el Modelo General de Agresión (MGA) destaca el papel del estado interno afectivo. Para el MGA, la interacción entre la persona y la situación produce un estado interno específico, compuesto por unas determinadas cogniciones, un estado afectivo y un nivel de arousal concreto. Dado este estado interno, la persona realiza una valoración y un proceso de toma de decisiones acerca de la conducta que va a ejecutar. Tomando en cuenta esto, el estado interno de la persona determinará en gran medida la valoración y elección de respuesta, por lo que se deduce de ello la importancia que reside en el estado emocional que experimente la persona y en el modo en que éste se gestione. En el siguiente apartado se expondrá una posible explicación del papel de la IEH dentro del marco integrador del MGA.

En definitiva, nuestros resultados son coherentes y van en consonancia con los principales modelos teóricos de agresión que se utilizan en la actualidad, resaltando el papel del procesamiento emocional y de las habilidades emocionales a la hora de explicar por qué unas personas tienden a actuar de forma más agresiva que otras.

Inteligencia emocional y agresión

En lo que respecta al estudio de la relación entre inteligencia emocional y agresión, nuestro trabajo presenta también importantes aportaciones. En primer lugar, los resultados obtenidos se encuentran en la línea de la literatura revisada, es decir, las personas con una menor percepción, uso, comprensión y manejo de las emociones propias y de los demás, presentan una mayor tasa de conductas agresivas.

Hasta donde alcanza nuestro conocimiento, este trabajo ofrece los primeros resultados relacionando la IEH y la agresión en población adolescente. El estudio de la agresión y de las variables que la fomentan o inhiban durante el periodo de la adolescencia es especialmente relevante. Son diversos los autores que destacan esta etapa, principalmente entre los 14 y 16 años, como una de las más conflictivas (Cerezo, 1999; Cohen et al., 1993), y donde puede encontrarse además una mayor tasa de comportamientos agresivos, produciéndose tras este periodo un descenso en los niveles de comportamientos agresivos, o evolucionando desde formas más simples, como la agresión directa, a un tipo de agresión más elaborada, como la agresión indirecta (Pakaslathi & Keltikangas-Järvinen, 2000; Woods & White, 2005). Nuestros resultados muestran el mismo tipo de relación tanto en adultos como en adolescentes sugiriendo una robusta asociación entre ambos constructos, y la importancia de las competencias emocionales en la agresión desde edades tempranas.

Esta consistencia en los resultados se ha mantenido en los dos tipos de población estudiados, adultos y adolescentes. Sin embargo, de forma contraria a la idea surgida de la revisión sistemática de una relación consistente, de forma independiente al tipo de comportamiento agresivo evaluado, los resultados de nuestro estudio muestran diferencias en la magnitud de las relaciones entre agresión física y agresión verbal, tanto

en población adulta como en adolescente. Esta diferencia entre ambos tipos de agresión quizá puede deberse a otros factores que influyan en la toma de decisiones final. En los últimos años, ha comenzado a surgir una línea de trabajo en este sentido, considerando la IEH como un recurso que facilita la consecución de objetivos, y siendo otras variables las que determinan la calidad y dirección de éstos. Por ejemplo, el trabajo de Côte et al. (2011) pone de manifiesto la importancia de considerar los rasgos de personalidad a la hora de analizar las habilidades emocionales, desechando la idea de considerarlas buenas y beneficiosas para el propio individuo y para los demás por sí mismas, sino en función de los objetivos marcados. En este trabajo, Côte et al. (2011) muestran cómo aquellas personas con puntuaciones altas en maquiavelismo y con un buen manejo emocional presentan mayores conductas desviadas, incluyendo entre ellas conductas agresivas. Por lo tanto, no solo poseer un alto nivel de IEH es necesario para inhibir la agresión, sino que debemos tener en cuenta otras variables que determinen la intención del individuo de querer inhibir esa conducta. Por ejemplo, la presencia de ciertos factores cognitivos como algunas creencias sobre agresión o la justificación de comportamientos agresivos puede hacer que la persona no estime necesario poner en marcha sus habilidades emocionales para un inhibir un comportamiento que pueden considerar justificado. Estudios transculturales muestran cómo las personas consideran en mayor grado aceptable la emisión de conductas agresivas de tipo verbal, que comportamientos que implican agresión física (Fujihara et al., 1999; Ramirez, 2007). Esto podría explicar que las personas consideren hacer uso de estas habilidades emocionales para prevenir ejecutar una agresión de tipo físico, pero no lo estimen necesario en el caso de la agresión verbal.

Por otra parte, nuestros resultados aportan resultados sobre una variable mediadora en la relación entre IEH y agresión. Estos resultados van en línea con el trabajo

de Downey et al. (2010) que proponen el papel mediador del uso de un afrontamiento no productivo, centrado exclusivamente en la emoción, en la relación entre IE rasgo y problemas de comportamiento. La rumiación de la ira puede ser considerada un tipo de afrontamiento no productivo, por las consecuencias negativas que comporta este tipo de estrategia, como el mantenimiento e incluso incremento del nivel de ira experimentada, y por su alta relación con la agresión. Ambos estudios ponen de manifiesto la importancia de un adecuado afrontamiento para la inhibición de conductas agresivas.

En este sentido, la relación entre IEH, rumiación de la ira y agresión nos lleva a plantearnos en qué fases del modelo del MGA tiene una mayor influencia la IEH. Siguiendo este modelo, la IEH podría estar influyendo en diferentes niveles. En primer lugar, en la interacción entre factores situacionales y personales. La IEH forma parte del repertorio de competencias de la persona (diferente a los rasgos de personalidad), que al interactuar con la situación, facilita la aparición de un estado interno u otro. Diferentes autores han mostrado cómo un déficit en la habilidad para percibir emociones, dada una situación social ambigua, puede favorecer la aparición de una atribución hostil en el otro, interpretando de forma errónea la situación y provocando un estado interno de cogniciones hostiles, afecto negativo y elevación del arousal que facilitan y energizan una posible respuesta agresiva (Crick & Dodge, 1994; de Castro et al., 2005; García-Sancho et al., 2015a). En segundo lugar, la IEH puede actuar en otros niveles del procesamiento. Dado un estado interno compuesto por un tipo de cognición, emoción y arousal determinado, la IEH también puede mostrar su papel en los procesos de evaluación y valoración en los cuáles pueden aplicarse las habilidades de comprensión emocional intra e interpersonal y estrategias de regulación dirigidas a reducir el afecto negativo, lo que facilita la elección de una respuesta no agresiva. Diferentes trabajos han mostrado cómo

el uso de estrategias de regulación eficaces, dirigidas a regular la emoción, pueden reducir la probabilidad de actuar de forma agresiva (Robertson et al., 2012). Una baja IEH está asociada al uso de rumiación de la ira, por lo que la IEH desempeñaría un factor relevante en el proceso de toma de decisiones al elegir este tipo de estrategia y no regular de forma efectiva la emoción negativa.

En lo que respecta a la rumiación de la ira, Denson (2012) postula en su modelo que el uso de este tipo de estrategias produce un consumo adicional de recursos cognitivos, lo que limita la disponibilidad de éstos. Este agotamiento de recursos cognitivos repercute en el funcionamiento del control ejecutivo central, y como consecuencia de ello, afecta al proceso de valoración y toma de decisiones. El MGA enfatiza el proceso de evaluación y toma de decisiones como una fase esencial para explicar por qué las personas actúan de forma agresiva o pacífica (Anderson & Bushman, 2002). Una persona con suficientes recursos cognitivos puede, en esta fase, reevaluar la situación de una forma no hostil, lo cual contribuye a disminuir la tendencia agresiva. La rumiación de la ira puede temporalmente agotar esos recursos, alterando estos procesos y disminuyendo la capacidad de autocontrol e inhibición (Denson et al., 2011).

Desde esta perspectiva, la IEH podría estar implicada en esta fase no solo en su papel de elegir una estrategia de regulación efectiva, sino también en relación a la disponibilidad de recursos cognitivos. Cuando una persona domina una habilidad, el esfuerzo por llevarla a cabo es mucho menor que cuando comienza a adquirirla. Una persona con un alto nivel de IEH procesa de forma efectiva la información emocional, y puede necesitar menos esfuerzo y menos recursos para llevar a cabo este proceso que aquellas personas que no cuentan con esa destreza. Por tanto, las personas con alta IEH pueden necesitar un menor consumo de recursos cognitivos ante una situación de impacto

emocional alto. Este consumo menor de recursos permite dejar disponibles una mayor cantidad de recursos cognitivos para otras tareas del funcionamiento ejecutivo, como por ejemplo los procesos de evaluación y toma de decisiones. De esta manera, las personas con más IEH podrían requerir el uso de menos recursos cognitivos que aquellas personas con menor nivel en esta habilidad, permitiendo una mayor disponibilidad de recursos para otros procesos, como la valoración, toma de decisiones, autocontrol e inhibición de la agresión.

En resumen, este trabajo proporciona nuevos datos como el poder predictivo de la IEH en la agresión, y esta relación se ve apoyada en la consistencia de resultados obtenida tanto en adultos como adolescentes. Además, presenta la rumiación de la ira como un posible mecanismo explicativo a través del cuál las habilidades emocionales ejercen su influencia en el comportamiento agresivo.

Limitaciones

A pesar de la relevancia de los resultados encontrados, este trabajo adolece de algunas limitaciones que merecen ser consideradas. En primer lugar, los estudios se han llevado a cabo con una muestra compuesta de forma mayoritaria por estudiantes universitarios y participantes del sexo femenino. Los resultados con población universitaria ofrecen una aproximación al análisis del papel de la IEH en la agresión, pero la homogeneidad de la muestra obstaculiza la generalización de resultados a otros tipos de población. Además, los participantes adultos de nuestros estudios fueron principalmente personas del sexo femenino. A lo largo de la literatura se han encontrado diferencias de género en algunos tipos de agresión, como por ejemplo la agresión física (Card et al., 2008), mostrándose una prevalencia mayor en hombres que en mujeres. Aunque en nuestros estudios hemos incluido el sexo como una variable a controlar, es

necesario ampliar la muestra de hombres para comprobar si la relación entre IEH y agresión varía en función del sexo como ocurre en otras variables como por ejemplo la depresión, donde la IEH se relaciona con síntomas depresivos en hombres pero no en mujeres (Salguero et al., 2012).

Por otro lado, la evaluación de las conductas agresivas se ha llevado a cabo con pruebas de autoinforme, con las desventajas que ello supone. Este tipo de medidas pueden resultar imprecisas y su uso conlleva el riesgo de sesgo por deseabilidad social de los participantes o una imprecisa estimación de la persona acerca de la frecuencia con la que comete ciertos comportamientos.

La mayor parte de los datos obtenidos en este trabajo son de carácter transversal, contando solo con datos a nivel longitudinal en una muestra de adolescentes. Esto impide obtener conclusiones contundentes acerca de la relación temporal entre ambas variables en población adulta, siendo necesario corroborar estos resultados a nivel prospectivo.

Además, en este trabajo no se han controlado algunas variables que han mostrado asociadas con la IEH, como por ejemplo los niveles de inteligencia verbal (Mayer, Caruso, & Salovey, 1999). Es recomendable que futuras investigaciones incluyan la inteligencia como una variable a controlar. Por último, solo se ha utilizado una medida de IEH en adultos, el MSCEIT (Mayer et al., 2002). Quizás también sería interesante corroborar estos resultados con otras medidas de ejecución, como el STEM o STEU (MacCann & Roberts, 2008), o utilizar medidas de evaluación más modernas que incorporan los avances en tecnología para evaluar la IEH a través de plataformas multimedia, como el Multimedia Emotion Management Assessment (MEMA; MacCann, Lievens, Libbrecht, & Roberts, 2015).

Líneas futuras de investigación

Pese a estas limitaciones, la IEH se presenta como una variable útil a la hora de comprender las conductas agresivas, por lo que consideramos que futuras investigaciones deben continuar el estudio en este campo abordando las limitaciones comentadas anteriormente y con la inclusión de nuevas propuestas. Dentro de esta labor, a continuación se sugieren algunas posibles líneas futuras de investigación.

En primer lugar, para superar el riesgo que suponen los instrumentos de autoinforme, futuras investigaciones en este campo deberán incorporar formas implícitas de evaluar la agresión, como por ejemplo el Test de Asociación Implícita (Greenwald, McGhee, & Schwartz, 1998), que ha demostrado un efectivo uso en la evaluación de conceptos agresivos (Uhlmann, & Swanson, 2004). Otra línea de investigación que sería interesante continuar es aquella centrada en población delincuyente. El trabajo de Plugia et al. (2005), mostró que las personas que habían cometido un delito de tipo agresivo no sexual, mostraron menos IEH que el grupo compuesto por personas condenadas por abuso sexual o el grupo control. Futuros trabajos deben analizar las diferencias entre distintos tipos de delito para comprobar si existen diferencias en relación al uso de las habilidades emocionales.

Los datos obtenidos en este trabajo sugieren una relación entre IE y agresión, sin embargo, ningún estudio hasta la fecha ha analizado la relación en una situación experimental, existiendo solo datos obtenidos a través del informe de los participantes o de observadores externos. Futuras investigaciones deberán explorar esta relación en diseños experimentales, que permitan realizar inferencias de causalidad entre ambos constructos. Dentro de esta línea de trabajo sobre la agresión en contextos experimentales, la disponibilidad de recursos cognitivos ha mostrado ser un factor relevante para poder

inhibir de forma efectiva la agresión (Slotter & Finkel, 2011). Como señalábamos anteriormente, la rumiación de la ira ha mostrado su relación con un agotamiento de estos recursos cognitivos y un incremento en los niveles de conductas agresivas (Denson et al., 2011; Denson et al., 2012). Sería interesante que futuros trabajos comprobaran, en este sentido, si un alto nivel de IEH podría estar implicado también en un ahorro de recursos cognitivos y en una mayor capacidad de inhibición de la agresión en contextos experimentales.

Por otra parte, en la revisión sistemática podemos encontrar un estudio que exploró la relación entre IE rasgo y agresión en la pareja, tanto en personas que habían sido acusadas de cometer un delito violento contra su pareja, como la tendencia a mostrar conductas de abuso en una muestra universitaria. Los resultados en ambos casos mostraron una relación negativa entre IE y abuso en la pareja (Winters et al., 2004). Además, la violencia en las relaciones de pareja también ha mostrado estar asociada, tanto de forma teórica como práctica, con la agresión desplazada (Denson et al. 2006). Sería interesante comprobar si esta relación se da también con IEH y qué tipo de relación existe entre IEH, agresión desplazada y abuso en la pareja. Por otra parte, hemos estudiado la relación entre IEH y diferentes tipos de agresión (física, verbal e indirecta), pero no hemos analizado la relación entre IEH y agresión desplazada. Futuras investigaciones deberán incluir esta variable y comprobar si existen diferencias respecto a otros tipos de agresión.

Por último, como se señalaba anteriormente, diferentes estudios ponen de manifiesto la necesidad de tener en cuenta variables adicionales que expliquen la decisión del individuo de poner en marcha o no el manejo de sus emociones hacia un determinado fin. Un consolidado cuerpo de investigación sugiere que la realización de comportamientos agresivos de tipo criminal puede ser explicado en parte por las creencias

que esas personas tienen de ellos mismos, del mundo y de la violencia (Beech, Fisher, & Ward, 2006; Polaschek & Gannon, 2004) (e.g. “la creencia es algo normal”, “siempre tengo razón”, “nadie es de fiar”). Futuros trabajos deberán incluir estas variables cognitivas asociadas a las creencias, actitudes y justificación de la violencia, para poder explicar su interacción con las habilidades emocionales y con la conducta agresiva.

Implicaciones prácticas

Además de las aportaciones de carácter teórico, este trabajo conlleva también algunas implicaciones prácticas. Existe evidencia preliminar que apunta a que un entrenamiento en las habilidades emocionales reduce la incidencia de comportamientos agresivos (Castillo et al., 2013; Durlak et al., 2011). Un mejor conocimiento de la implicación de las habilidades emocionales en la agresión facilitará el diseño de programas de prevención e intervención más eficaces, centrados en aquellos aspectos más asociados con la agresión, de forma que estos programas permitan desarrollar competencias necesarias para inhibir la conducta agresiva. Por tanto, tomando en consideración los datos de este trabajo, una intervención dirigida a reducir y prevenir las conductas agresivas debe mostrar especial interés en el uso de estrategias de regulación, como la rumiación de la ira. Además, teniendo en cuenta la relación entre IE y rumiación de la ira, es interesante analizar si el entrenamiento y mejora de la IE puede suponer una reducción significativa del uso de la rumiación de la ira, lo que podría contribuir a disminuir la agresión, dado el carácter mediador de ésta entre IE y agresión.

Por otra parte, de cara a una terapia psicológica centrada en reducir comportamientos agresivos, las consideraciones teóricas de integración de ambas variables dentro del marco del MGA pueden suponer también implicaciones a nivel práctico. La posibilidad de ofrecer a las personas que reciban este tipo de intervención

una explicación de los mecanismos implicados (e.g. influencia de la relación entre pensamientos, emociones y activación fisiológica, importancia de la valoración y toma de decisiones) les permite, en primer lugar, aumentar el conocimiento y comprensión de una posible explicación de por qué actúan de forma agresiva, y qué variables están interactuando. Dada la relevancia de la IE en la fase de valoración y toma de decisiones, un entrenamiento centrado en esta etapa permitirá una mayor auto observación, dirigida a identificar y monitorizar este proceso, permitiendo una re-evaluación que garantice valorar las estrategias de regulación que se están poniendo en marcha y las consecuencias, negativas o positivas, de ello. Por tanto, utilizando como estructura el MGA, una intervención psicológica centrada en hacer más deliberado este proceso de valoración y el entrenamiento y uso de las habilidades emocionales en él, disminuyendo los niveles de automaticidad, pueden contribuir a reducir los comportamientos agresivos.

En conclusión, los resultados obtenidos en los 4 estudios contribuyen al intento de responder a la pregunta de qué papel tienen las habilidades emocionales en la conducta agresiva. El escritor y científico Isaac Asimov (1951) hacía alusión a la violencia como el último recurso del incompetente; en nuestro deseo está que esta Tesis Doctoral permita avanzar en el estudio de la IE y la agresión de forma que podamos encontrar la forma de dotar de las competencias emocionales necesarias a las personas e impedir que la violencia sea cada vez menos una opción o recurso.

CONCLUSIONES [CONCLUSIONS]

- AEI is negatively related to aggression. People with high EI exhibit fewer aggressive behaviors than those with low EI. This relationship is consistent across different ages from adolescents to adults, and across different performance maximum test.
- AEI contribute to explain levels of physical aggression beyond personality in adults. AEI appears as an important construct capable of significantly predicting aggressive behavior independently of personality traits. Also, AEI is a good predictor of physical aggression in adolescents over a 9 month time period.
- The magnitude of relationship between AEI and aggression depend on the type of aggression. AEI is stronger related to physical and indirect aggression than verbal aggression.
- The Spanish version of Displaced Aggression Questionnaire is a useful instrument to measure individual differences in displaced aggression in Spanish population. The Spanish version showed good validity and reliability and confirmed the three-factor structure of the original scale.
- Angry rumination is a potential psychological mechanism through which low AEI might lead to aggression. The role of angry rumination as mediator of the relationship between ability emotional intelligence and aggression is consistent across different types of aggression: physical, verbal and indirect aggression.

ENGLISH SUMMARY [RESUMEN EN INGLÉS]

Introduction

Emotional intelligence

The construct of emotional intelligence (EI) has been used in recent decades to explain and understand individual differences in the ability to process emotional information (Mayer et al., 2008). EI can be defined as “the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10).

EI has been conceptualized primarily from two theoretical approaches: as a trait or as a mental ability. Trait EI (TEI), considered a personality trait, refers to the tendency or proclivity of a person to manage his or her emotions. Trait EI is usually measured using self-report instruments such as the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009), which asks the respondent to estimate the degree to which he or she possesses certain emotional abilities (Petrides et al., 2007).

In the second theoretical approach, EI is defined as a set of abilities that support the adaptive use of emotions as part of our cognitive processes. In other words, EI is genuinely considered a form of intelligence. Ability EI (AEI) is usually assessed using performance test, such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002). These instrument is a performance test because it requires individuals to solve tasks and it is an objective test because there are better and worse

answers on it, as determined by consensus or expert scoring (Brackett et al., 2011; Mayer et al., 2000).

EI theory predicts that people who are better at perceiving, understanding, using and managing their own emotions and others' emotions are more likely to be psychosocially adjusted (Mayer et al., 2008). This prediction is well supported by empirical studies that demonstrate a direct relationship between EI and mental health (Martins et al., 2010), as well as a positive relationship of EI with social function and quality of social relationships, and a negative relationship of EI with number of negative interactions and conflicts in social relationships (Brackett et al., 2011).

In light of the relationship between EI and variables related to social function, several authors have begun to investigate whether the inability to manage emotions is associated not only with conflict behaviors in relationships but also with more serious behaviors problems as aggressive conducts (Lomas et al., 2012). This study extends focused on the association between AEI and aggression.

Aggression

Human aggression is defined as any behavior directed toward another individual that is carried out with the *proximate* (immediate) intent to cause harm. In addition, the perpetrator must believe that the behavior will harm the target, and that the target is motivated to avoid the behavior (Anderson & Bushman, 2002).

Aggression can be classified as overt or indirect. Overt aggression is behavior which is intended to have a direct negative effect on the victim's well-being; overt aggression can be physical or verbal (Coie & Dodge, 1998). Physical aggression encompasses behaviors such as hitting or pushing, whilst verbal aggression encompasses verbal attacks in the form of name calling, taunting or threats. Indirect aggression is

behavior which causes harm indirectly, by damaging social relationships and it encompasses behaviors such as gossiping, excluding the victim from social groups or spreading rumors (Björkqvist, 2001; Card et al., 2008). In recent years there has been an increased interest in indirect aggression as it is the most common form of aggressive behavior in adulthood (Anguiano-Carrasco & Vigil-Colet, 2011).

Also, aggression can be classified as direct or displaced aggression. Most research in this area has focused on *direct* aggression, which involves situations when a person is provoked, and in retaliation, he or she inflicts harm against the source of this provocation. Sometimes, however, this retaliation is constrained or inhibited for several reasons: the person who did the provocation is unavailable, the source of provocation is intangible (e.g., bad weather ruined a vacation), or because a possible retaliation or punishment induced by the direct aggression from a provoking agent (Miller, 1941). Given these situations, a person can *displace* an aggressive response (Miller et al., 2003). The term *displaced aggression* refers to situations when a person is provoked, is prevented from retaliating against the original provocateur, and subsequently aggresses against a seemingly innocent target (Dollard et al., 1939; Hovland & Sears, 1940).

Aggressive behavior produces negative effects not only in the victims but also in the aggressors. More aggressive adolescents show clear psychosocial maladjustment, low academic performance, absenteeism from school, involvement in delinquent acts, substance abuse and various mental health problems, including higher levels of depression (Moffitt, 2006; Ostrov & Godleski, 2009; Piquero et al., 2007). Aggressive adults are more likely than non-aggressive ones to exhibit psychiatric problems and criminal behavior as well as experience poor marital relations and unemployment (Alsaker & Olweus, 2002; Asberg, 1994; Coccaro et al., 2009; Farrington, 1991). Victims

of aggression, for their part, suffer myriad negative consequences, including depression, anxiety, low self-esteem, and stress effects like headaches, difficulty sleeping, and a desire to skip school in the case of children and adolescents (Cava et al., 2010; Crick & Bigbee, 1998; O'Moore & Kirkham, 2001).

The strong influence of aggression on psychosocial adjustment and mental health outcomes highlights the importance of identifying variables that can increase or inhibit aggressive behavior. Knowledge of such variables is critical not only for understanding the mechanisms of aggression in greater detail, but also for designing effective programs for violence prevention and aggression management. Numerous authors have sought to understand processes that can affect aggression, including behavioral inhibition and control, empathy and anger management (Barnett & Mann, 2013; Denson et al., 2011; Pedersen et al., 2011; Van der Graaff et al., 2012; Vasquez et al., 2012; Wallace et al., 2012).

Recently, numerous studies have pointed out the possible influence of emotions and emotional processing on aggression (Lemerise & Arsenio, 2000), raising the question of whether EI may also play a role. There has been a lot of interest in the role of emotional variables in aggressive behavior and several models highlight emotional processes as a key to explain aggressive behavior. Three of these theoretical models are explained below.

An integrated model of emotion processes and cognition in social information processing (Lemerise & Arsenio, 2000) proposed that emotion processes may have a relevant role during information processing in a social situation. For instance, deficits in on the other hand recognition of facial emotions may result in a tendency to attribute anger to others and react aggressively (see García-Sancho et al., 2015a). Similarly,

individuals who are unable to manage strong emotions may be overwhelmed by them during appraisal and decision-making processes, and therefore generate a smaller range of responses, most of which are related to their affective state (e.g. aggressive responses when they feel angry) (Lemerise & Arsenio, 2000). From this perspective, EI may have a role in reducing and managing aggressive behavior.

On the other hand, mostly current literature on aggression has focused on the General Aggression Model (GAM; Anderson & Bushman, 2002) for explaining individual differences in processing that may give rise to aggressive behavior (DeWall et al., 2011). The GAM provides a parsimonious, account of why people act aggressively in terms of three levels: personal and situational factors, internal states and outcomes of appraisal and decision-making processes. In this model personal factors (e.g. personality traits, gender, attitudes) interact with situational factors (e.g. insults, presence of guns, alcohol) to create an internal state which influences behavior. Internal state, which is a composite of cognitions (hostile thoughts, aggressive scripts), affect (anger, general negative affect) and arousal (physiological and psychological arousal) influences appraisals and decision-making processes which may or may not result in an aggressive response (Anderson & Bushman, 2002).

Finally, the Model of Angry Rumination (Denson 2012; 2013), proposed angry rumination as a risk factor for aggression. Angry rumination is the term used for repetitive, negative cognitions about an anger-inducing event, such as anger-inducing memories, angry thoughts and feelings, and plans for revenge (Denson et al., 2006; Sukhodolsky et al., 2001). A substantial body of empirical evidence suggests that angry rumination following a provocation increases aggression towards the provocateur (Bushman, 2002), and even towards other targets (Bushman et al., 2005). According to

the GAM, rumination after an anger-inducing provocation maintains or increases the activation of all three aspects of internal state leading to aggression: angry affect, aggressive cognitions and physiological arousal (Pedersen et al., 2011). Internal state influences appraisal and decision-making processes by increasing the likelihood that they will result in aggressive behavior (Anderson & Bushman, 2002). Denson's (2013) multiple system model of angry rumination posits that when one experiences angry feelings, aggressive thoughts and high arousal it takes more effort to self-regulate one's internal state and this effort consume cognitive resources. Given that executive functioning is a limited yet renewable resource, it is possible that angry rumination temporarily depletes executive functioning resources (Slotter & Finkel, 2011) thus impairing appraisal and decision-making processes and increasing the risk of impulsive behavior such as retaliatory aggression (Denson et al., 2011).

In summary, if deficits in emotional processing play a role in aggression, then the emotional abilities that form part of EI may help explain individual differences in aggressive behaviors.

Aims:

The general purpose of the present work was to examine the relationship between AEI and aggression. In order to achieve this aim, this PhD Thesis is based on data assessment obtained from the four scientific studies that comprises this work, with four specific aims:

1. The objective of the first work was to systematically review the literature on EI and aggression in order to gain a comprehensive understanding of the relationship across different theoretical conceptualizations of EI, different types of aggression, and different ages and cultural contexts. This should allow us to develop a clear picture

of the current state of research and propose future lines of investigation to complement existing gaps in the field.

2. The aim of the second work was fill these gaps in the literature of AEI and aggression. In sub-study 1, we explored the relationship between AEI and aggression in adults, and analyzed the incremental validity of AEI over personality factors for explaining physical and verbal aggressive behavior. In sub-study 2, we aimed to verify the results of sub-study 1 in an adolescent population, and we did so using a longitudinal design to assess the influence of AEI on aggression over a 9-month period.
3. The objective of the third work was to develop and examine the validity and reliability of the Spanish version of DAQ. Also, we aimed to provide preliminary analyses about the relationship between the three dimensions of DAQ and others variables have not been yet analysed as indirect aggression and a wide range of cognitive and emotional regulation strategies (e.g. other-blame, catastrophizing, positive reappraisal).
4. Given what is known about the relationships among AEI and aggression in the all three previous studies, the objectives of fourth study were therefore to analyze the association between AEI and different types of aggression (physical, verbal and indirect aggression); to examine the relationship between AEI and angry rumination; and to determine whether angry rumination mediates the relationship between AEI and aggression.

Study 1. Relationship between emotional intelligence and aggression: a systematic review

The purpose of this study was to systematically review available evidence on the relationship between EI and aggression. MEDLINE, PsycINFO and Scopus databases were carefully searched over the period of 5-9 November 2012 for articles published in English or Spanish in scientific journals, without regard for the year of publication.

19 eligible studies were identified, of which 18 reported a negative relationship between the two constructs, people with high EI exhibited fewer aggressive behaviors than those with low EI. This relationship appears to be consistent across ages (from childhood to adulthood), cultures, types of aggression, and EI measures. All but three studies in our review assessed EI using self-report instruments, and their results were consistent with the remaining three studies based on ability measures of EI. The fact that studies based on ability measures reported a negative relationship between EI and aggression highlights the importance of emotional perception in aggression. At the same time, one study of our review that assessed EI by ability measures highlight how sometimes emotional abilities facilitate rather than inhibit aggressive behavior. Côte et al. (2011) showed that individuals with high Machiavellianism and emotionally skilled can initiate aggressive or deviant behaviors to obtain his or her objectives. These findings provide an important counterbalance to the many studies describing how emotional ability management can protect against aggressive conduct and highlight the role of personality traits to use emotional skills. None of the studies involved a longitudinal design and none examined the relationship between EI and aggression experimentally.

Study 2. Relationship between emotional intelligence and aggression in adults and adolescents: cross-sectional and longitudinal evidence using an ability measure

This study aimed to address important gaps in the research literature on the relationship between EI and aggression by focusing on AEI, assessing the incremental validity of AEI beyond personality factors in adults and including adolescents in the study population in a longitudinal study.

In sub-study 1, participants were 474 undergraduate students (156 men, 318 women) aged 19-60 years ($M = 22.76$, $SD = 5.13$). They completed the follow measures: *Emotional Intelligence* (Mayer–Salovey–Caruso Emotional Intelligence Test Version 2.0, MSCEIT; Mayer et al., 2003); physical and verbal aggression (The Aggression Questionnaire, AQ; Buss & Perry, 1992); personality traits (The Big-Five Inventory, BFI-44; Benet-Martinez & John, 1998). Results of the regression analyses showed after controlling gender and personality, overall EI explained a statistically significant increment of variance in physical aggression. However, contrary to our expectations, AEI did not contribute significantly to explaining verbal aggression levels.

In sub-study 2, a total of 151 adolescents (75 males, 76 females) aged 13-17 years ($M = 14.74$, $SD = .84$) were recruited from secondary schools. Participants completed the measures in two sessions spaced 9 months apart: in one session at the start of the academic year (Time 1), they completed the measures of AEI and of physical and verbal aggression; at another session 9 months later (Time 2), they completed the measure of physical and verbal aggression. They completed the follow measures: physical and verbal aggression (AQ; Buss & Perry, 1992), emotional intelligence (Test de Inteligencia Emocional de la Fundación Botín para Adolescentes, TIEFBA; Fernández-Berrocal et al., 2015). High AEI levels at Time 1 predicted lower physically aggressive behavior at Time 2 in

adolescents over and above the significant contribution of baseline levels of physical aggression at Time 1. On the other hand, contrary to our expectations, the longitudinal model for predicting verbal aggression from AEI was not significant.

The results of both sub-study 1 in adults and sub-study 2 in adolescents indicate a negative association between AEI and physical aggression. The results in Study 1 further suggest incremental validity of AEI even after adjusting for personality factors already known to influence aggressive behavior. Our results with adolescents in sub-study 2 showed that AEI measured at one time predicted some variance in physical aggression 9 months later, even after controlling for the criterion variable at baseline and for gender. Results from both studies suggest the association between AEI and physical aggression appears to be much stronger than that between AEI and verbal aggression. In addition, AEI did not show incremental validity beyond personality in adults, nor did it predict verbal aggression levels at Time 2 in adolescents.

Study 3. Validity and reliability of the Spanish version of the Displaced Aggression Questionnaire

This study examined the validity and reliability of the Spanish version of the The Displaced Aggression Questionnaire (DAQ). The Displaced Aggression Questionnaire (DAQ) is a scale used to assess personality differences exist in the tendency to engage in displaced aggression. Displaced aggression occurs when a person is provoked, is unwilling or unable to retaliate against the original provocateur, and subsequently aggresses against a seemingly innocent target. DAQ is composed for three factors: an affective dimension (angry rumination), a cognitive dimension (revenge planning) and a behavioral dimension (a general tendency to behave aggressively toward those other than the source of the initial provocation). The scale consists of 31 items and participants

respond using a 7-point Likert scale (1 = *extremely unlike me*, 7 = *extremely uncharacteristic/characteristic of me*).

A total of 429 participants (24.2% males, 75.8% females), ranging in age from 18 to 69 (mean = 25.31, $SD = 08.74$), completed the Spanish version of the DAQ. Participants consisted of undergraduate students ($N = 249$), ranging in age from 19 to 54 (mean = 21.83, $SD = 4.49$), and non-students ($N = 165$), (27.2% males, 72.8% females), ranging in age from 18 to 69 (mean = 30.13, $SD = 10.72$). The subset of students completed additional tests to evaluate trait anger and anger expression and control, different forms of aggressive behaviour, affective style and personality traits. The subset of non-students participants completed additional tests to evaluate anger rumination and other cognitive and emotional regulation strategies. Finally, to evaluate test-retest reliability, 131 students participants of the initial sample (15.3% males, 84.7% females), ranging in age from 20 to 54 (mean = 24, $SD = 7.03$), completed the measure a second time, approximately 1 month after the first administration. The participants completed the follow measures: trait displaced aggression (The Displaced Aggression Questionnaire, DAQ; Denson et al., 2006); trait anger, anger expression (in/out) anger control (in/out) (The State-Trait Anger Expression Inventory-2, STAXI-2; Spielberger, 1999); the Big Five personality factors (The Big-Five Inventory, BFI-44; John, 1991); physical aggression and verbal aggression (The Aggression Questionnaire, AQ; Buss & Perry, 1992); positive and negative affective style. (The Positive and Negative Affect Schedule, PANAS; Watson et al., 1988); indirect aggression (The Indirect Aggression Scale, IAS; Forrest et al., 2005); emotion regulation strategies (self-blame, blaming others, acceptance, refocusing on planning, positive refocusing, rumination, positive

reappraisal, putting into perspective, and catastrophizing; The Cognitive Emotion Regulation Questionnaire, CERQ; Garnefski et al., 2001).

Our data confirmed the hypothesized three-factor structure for the Spanish version of the DAQ. The three factors correspond to the dimensions of Angry Rumination (affective dimension), Revenge Planning (cognitive dimension), and Behavioral Displaced Aggression (behavioral dimension) according to the original structure of the scale. Results also showed that the DAQ subscales have good reliability, with both adequate internal consistencies, displaying Cronbach's alpha coefficients similar to those reported for the original version, and evidences of test-retest stability over a 1month period. The correlations between scores on the Spanish version of the DAQ and associated variables such as trait anger and expression, affectivity, personality traits, angry rumination and physical and verbal aggression were in the expected direction. Regarding indirect aggression, DAQ subscales displayed similar associations to the correlations with verbal and physical aggression. Besides, indirect aggression showed the strongest relationship with the displaced aggression subscale. We examined correlations between the subscales of DAQ and cognitive and emotion regulation strategies. With respect to adaptive strategies, negative associations with several types of strategies were found. The highest magnitude correlation was with positive reappraisal. It is possible that individuals who obtain an alternative and positive interpretation of the situation consider it unnecessary to engage in rumination, planning about a potential revenge, or using displaced aggression against others. For the other hand, positive correlations with maladaptive strategies were found. Mainly, catastrophizing and blaming others were negatively related to angry rumination, displaced aggression and revenge planning. Given a provocation situation, some individuals may hold innocent others responsible because

it may be safer and more feasible to avoid the negative consequences of blaming the real source of a provocation.

Study 4. Angry rumination as a mediator of the relationship between ability emotional intelligence and various types of aggression.

The purposes of this study were to provide preliminary evidence on the relationships between AEI and angry rumination and between AEI and indirect aggression, and to examine the role of angry rumination as a mediator of the relationship between AEI and different types of aggression (physical, verbal and indirect aggression).

The participants were 243 undergraduate students (52 men and 191 women) aged between 19 and 54 years old ($M = 21.78$, $S.D. = 4.38$). They completed the follow measures: physical and verbal aggression (AQ; Buss & Perry, 1992); indirect aggression scale (IAS; Forrest et al., 2005); angry rumination (DAQ; Denson et al., 2006); emotional intelligence (MSCEIT; Mayer et al., 2003).

We tested the proposed model in which EI is related to different types of aggression via the mediation effect of angry rumination using structural equation modelling (SEM). Angry rumination was positively related with the all types of aggression and EI was negatively related with angry rumination. A significant direct effect of EI on physical and indirect aggression was found, whereas the direct effect of EI on verbal aggression was non-significant. The absent of direct effect of EI on verbal aggression indicates that angry rumination fully mediated this relationship.

Our results provide evidence for a negative relationship between AEI and indirect aggression; people with low AEI showed a tendency to use social relationships to harm others through gossiping, spreading rumors or social exclusion. Also, the results provided

evidence for negative associations between AEI and angry rumination, individuals with lower AEI were more likely to ruminate about anger-inducing events. Finally, analysis also indicated that angry rumination was a significant mediator of the relationship between AEI and all three types of aggression. People with low AEI engage in aggressive behavior more frequently partly due to their tendency to use angry rumination to regulate their emotions.

Discussion

Together, these four studies provide strong evidence that AEI and aggressive behavior are negatively related: people with higher AEI show less aggression. Their results were consistent with the remaining three studies based on ability measures of EI.

We found that people with higher AEI reported using all the types of aggressive behavior we studied (physical, verbal and indirect) less frequently. This result is consistent with previous research (García-Sancho et al., 2014) and suggests that people who manage their emotions effectively are less likely to harm or injure others. However, the strength of the association between AEI and aggression depended on the type aggression; AEI was less strongly associated with verbal aggression than with physical or indirect aggression; a similar pattern of results was found in a study of adults and adolescents using cross-sectional and longitudinal analyses. It is difficult to compare these findings with the literature or to propose explanations for the observed difference between physical and verbal aggression, since most previous studies used a general index of direct aggression that aggregates physical and verbal aggression. Nevertheless, one study analyzing the two types of aggression separately showed that TEI was significantly and negatively associated with physical aggression, but not with verbal aggression (Gardner and Qualter, 2010). Another study reported that TEI did not show incremental validity in the case of verbal aggression (Petrides, 2009). Some authors has showed that

use of AEI may facilitate both prosocial and interpersonally deviant behavior, depending on individual's personality traits, the type of goals and the motivation to achieve a specific aim (e.g. inhibit or not aggression behavior) (Côte et al., 2011). Thus, in case the person have the aim to inhibit aggressive behavior, high level of AEI may help to achieve it. Given that verbal aggression is considered more socially acceptable than physical aggression in most cultures (Fujihara et al., 1999; Ramirez, 2007), we speculate that individuals who believe that verbal aggression is justified may not feel the need to activate their AEI in order to inhibit such behavior, whereas they do rely on AEI to inhibit less socially acceptable physical aggression. This may help explain why we observed such a weak association between verbal aggression and AEI.

Our results in Study 2 suggest that AEI does indeed explain some variance in physical aggression beyond what personality factors explain. These findings extend the list of outcomes for which AEI has shown incremental validity beyond personality traits; this list already includes alcohol use, the existence of positive adult relationships, and various mental and social health indicators, such as disruptive behavior (Davis & Humphrey, 2012; Rossen & Kranzler, 2009). Taken together, these studies point to AEI as an important construct capable of significantly predicting variables related to social functioning independently of personality traits. Also, the present findings, which to our knowledge are the first longitudinal results linking AEI and aggression, suggest that emotional abilities can prevent individuals from engaging in physically aggressive conduct, such as striking or pushing another.

In the study 3 our data confirmed the hypothesized three-factor structure for the Spanish version of the DAQ which correspond to the dimensions of angry rumination (affective dimension), revenge Planning (cognitive dimension), and behavioral displaced

Aggression (behavioral dimension) according to the original structure of the scale. DAQ subscales correlated in the expected direction with several theoretically. A pattern of positive correlations between DAQ subscales and trait and expression of anger, negative affective style, physical and verbal aggression, and a pattern of negative correlations with control anger, and positive affective style were found. Preliminary evidence showed a significant and positive relationship of DAQ and indirect aggression. Regarding emotional regulation strategies, mainly, positive reappraisal was negatively related to DAQ subscales, and catastrophizing and blaming others were negatively related to angry rumination, displaced aggression and revenge planning. This study provides evidences of the validity and reliability of the Spanish version of the DAQ, support for the construct validity of the questionnaire, and shows that it is a useful instrument to measure individual differences in displaced aggression in Spanish population

Finally, as hypothesized, angry rumination mediated this relationship in the case of all the types of aggression studied. Our findings indicate that people with low AEI engage in aggressive behavior more frequently partly due to their tendency to use angry rumination to regulate their emotions. It is possible, as some authors have proposed in the case of depressive rumination (Salguero et al., 2013; Smith & Alloy, 2009), that when faced with an event with high emotional impact, people who have difficulty perceiving, using, understanding and regulations are overwhelmed by negative emotions and use rumination as a regulation strategy in an attempt to avoid this. Low AEI people could use angry rumination to avoid negative affect following an anger-inducing provocation above. However, angry rumination does not regulate or attenuate negative emotional states; in fact the opposite, it sustains or enhances anger, aggressive cognitions and

physiological arousal and thus increases the likelihood of aggressive behavior (Bushman, 2002; Pedersen et al., 2011).

According to GAM, several authors have proposed a possible mechanism to explain the how angry rumination increase likely to act aggressively (Denson et al., 2011). A situation factor interact with person factor and increases each of the three routes to aggression in the personal internal state: angry affect, aggressive cognitions and physiological arousal (Pedersen et al., 2011). The individual with low AEI tends to use angry ruminate as regulation strategy after an anger-inducing provocation therefore the person has repetitive thoughts about the provocation and his feelings. The general aggression model emphasizes the role of appraisal and decision-making processes to explain why people become aggressive or not (Anderson & Bushman, 2002). If a person counts with sufficient cognitive resources may reappraise the situation in a non-hostile manner and to inhibit the aggressive behavior. Angry rumination may temporary deplete executive functioning resources, in consequence impairing the appraisal and decision processes and increases risk of impulsive behavior such as retaliatory aggression (Denson et al., 2011).

AEI may operate in the GAM on multiple levels as well. First, it may influence the interaction between situational and person factors. In this sense, AEI may form part of the repertory of competencies, different from personality traits that interact with the situation to give rise to an internal state. This may help explain the observation by many authors that a deficit in the ability to perceive one's own and others' emotions can lead individuals to make a hostile attribution in a socially ambiguous situation. In this case, the individual interprets the situation erroneously, generating an internal state of hostile cognition, negative affect and elevated arousal, facilitating an aggressive response (Crick

& Dodge, 1994, de Castro et al., 2005). AEI may also operate on other processing levels within the GAM. AEI may participate in processes of appraisal and decision-making, bringing to bear abilities to understand one's own and others' emotions as well as regulation strategies that together can reduce negative affect, facilitating a choice to behave non-aggressively. Indeed, various studies have demonstrated how the use of effective emotion regulation strategies can reduce the probability of acting aggressively (Robertson et al., 2012). Also, the role of emotional intelligence may reside in the explanation of cognitive resources depleted as well. When people dominate a skill, the effort to implement it is lower than who start to acquire it. A high emotional intelligence level allow a successful emotional processing and that might let to reduce the cognitive resources consumption needed in an intense emotional situation. Thus executive functioning resources are available to engage in activities that rely on executive functioning abilities such as appraisal and decision-making processes and requires some form of inhibition or self-control to inhibit aggressive response.

This study provides preliminary evidence of associations among AEI, and aggression and suggests future lines of research. Previous studies have also found that ruminating about anger increases aggression in an experimental context (Pedersen et al., 2011). Future research should be replicate our results in a behavioral experiment which measures AEI as this would provide more reliable evidence to support our findings. It would also be useful to replicate these results in a longitudinal design in order to clarify the causal relationships between EI, angry rumination and aggression including adults. The Spanish DAQ will allow further research of the construct of trait displaced aggression, and the examination of its predictive role in important contexts, such as domestic abuse and road rage (Denson et al., 2006). Individuals who reported a tendency

to aggress against undeserving others, tend to take it out on individuals close to them or to display an aggressive attitude to small disturbances on the road. These processes and behaviors have important implications for the quality of interpersonal and intra-familial relationships. Further research is necessary on these fields, and the use of DAQ may help to deep in it.

In summary, this research has several theoretical and practical implications. From a theoretical perspective, it provides preliminary evidence about the relationship between AEI and different types of aggression. Our results also extend knowledge in this area as they have uncovered a potential psychological mechanism – angry rumination - through which low AEI might lead to aggression. Our findings about the associations between AEI, angry rumination and aggressive behavior have some practical implications for development of programs to reduce or prevent aggression.

Ultimately one of the most important goals of understanding the role of emotional abilities is to develop better interventions, and preliminary evidence suggests that training in such abilities can reduce the incidence of aggressive behavior (Castillo et al., 2013; Durlak et al., 2011). A better understanding of emotional abilities in aggression may help in designing more effective prevention and intervention programs that promote the ability to inhibit such behavior. Given the associations between aggression and AEI and angry rumination, intervention programs could include EI training or techniques for reducing angry rumination. It would interesting to investigate whether this was because they learned to restrain a tendency to ruminate.

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