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Factores motivacionales, cognitivos, emocionales y morales en acoso escolar y ciberacoso

Motivational, cognitive, emotional, and moral factors in bullying and cyberbullying

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TITULO: *Factores motivacionales, cognitivos, emocionales y morales en acoso escolar y ciberacoso*

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TÍTULO DE LA TESIS: FACTORES MOTIVACIONALES, COGNITIVOS, EMOCIONALES Y MORALES EN ACOSO ESCOLAR Y CIBERACOSO

DOCTORANDO/A: ANTONIO CAMACHO LÓPEZ

INFORME RAZONADO DEL/DE LOS DIRECTOR/ES DE LA TESIS

(se hará mención a la evolución y desarrollo de la tesis, así como a trabajos y publicaciones derivados de la misma).

El trabajo de investigación realizado por el doctorando Antonio Camacho López y dirigido por las profesoras Eva Romera Félix y Rosario Ortega Ruiz presenta, a nuestro juicio, suficientes indicios de calidad y rigor científico como para que sea presentado a defensa pública y evaluado por un comité académico para la posible obtención del grado de Doctor. La tesis se ha elaborado en el marco del proyecto de investigación "Competencia socio-moral y ecología del grupo de iguales en la violencia entre escolares: un estudio longitudinal y transaccional" (Ref. PSI2016-74871-R), financiado por la Agencia Estatal de Investigación, Ministerio de Ciencia e Innovación.

La tesis se presenta por compendio de artículos. Los resultados han sido publicados en tres revistas científicas de reconocido prestigio nacional e internacional indexadas en el Journal Citation Reports. El primero de los artículos, publicado en la revista *Journal of Youth and Adolescence* (JCR Q1), presenta un estudio longitudinal en el que a través de análisis complejos de cross-lagged se analiza la relación bidireccional entre necesidad de popularidad, desconexión moral y agresión entre iguales. El segundo, ha sido publicado en la revista *Aggressive Behavior* (JCR Q2). Este trabajo analiza el relevante papel de la rumiación de la ira en la implicación en ciberagresión y cibervictimización, así como el posible papel mediador de la relación cíclica entre ambos fenómenos de violencia interpersonal. Finalmente, el tercero, publicado en la revista Comunicar (JCR D1), analiza el papel mediador del uso problemático de Internet y el cibercotilleo en la relación entre la comunicación familiar y la implicación en ciberagresión en escolares de primaria. Los resultados de esta tesis, además de relevantes aportaciones científicas, aportan importantes implicaciones prácticas, para el diseño y desarrollo de un programa de formación del profesorado para la promoción de la competencia social y el bienestar de los escolares en el marco de un proyecto europeo actualmente en curso en el que el doctorando participa activamente.

Por todo ello, se autoriza la presentación de la tesis doctoral.

Córdoba, 22 de octubre de 2021

Firma de las directoras

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"Dado que nos preocupamos más por la humanidad,
propendemos a confundir los daños que nos rodean
con signos de lo bajo que ha caído el mundo,
en lugar de en lo alto que se han situado nuestros estándares".

— Steven Pinker (2018),
Enlightenment Now:
The Case for Reason, Science, Humanism, and Progress

En aplicación de la Ley 3/2007, de 22 de marzo, para la igualdad efectiva de mujeres y hombres, así como la Ley 12/2007, de 26 de noviembre, para la promoción de la igualdad de género en Andalucía, toda referencia a personas o colectivos incluida en la presente tesis doctoral estará haciendo referencia al género gramatical neutro, incluyendo la posibilidad de referirse tanto a mujeres como a hombres.

La presente tesis se ajusta a la séptima edición del Manual de Publicación de la Asociación Americana de Psicología (APA; American Psychological Association) (2020).

Agradecimientos

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A María. Por tu amistad incondicional. Por tu templanza. Por apoyarme y aconsejarme. Por tu confianza. Por comprender mi ausencia durante esta etapa. Por estar siempre ahí. A Ana. Por nuestra amistad arraigada desde el ámbito académico y desarrollada en el personal. Por tu energía y alegría. Por las experiencias vividas y las que están por descubrir.

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ÍNDICE

RESUMEN EXTENSO

Los chicos y chicas aprenden a interaccionar y comunicarse con sus iguales a partir de las relaciones interpersonales que mantienen en la escuela. Relaciones que pueden verse enturbiadas o alteradas por situaciones de desequilibrio y abuso entre los iguales que llegan a afectar a su propio desarrollo psicosocial. El acoso escolar es un fenómeno que quebranta la convivencia positiva entre los escolares que ha llamado la atención de las familias, profesores, políticos, investigadores y de la sociedad en general durante las últimas décadas.

El acoso escolar puede definirse como una agresión intencional y repetida en el tiempo que uno o más individuos hacen sobre otro igual (Olweus, 1993). Entre víctima y agresor se establece un desequilibrio de poder sostenido del que la víctima se encuentra indefensa y sin posibilidades de parar la situación de abuso (Ortega-Ruiz, 2010). La intencionalidad de la agresión refleja que esta conducta puede ser una estrategia instrumental para el logro o mantenimiento del estatus y del dominio social (Hawley, 1999; Pouwels et al., 2018). El acoso escolar también se caracteriza por su naturaleza inmoral, pues atenta contra los valores de respeto y afecto hacia los demás (Ortega & Mora-Merchán, 1996). Este tipo de violencia entre iguales viola los principios éticos y fomenta la injusticia, el desprecio, la coacción y la soledad.

A través del desarrollo de la tecnología y el acceso a Internet, el ciberacoso ha emergido como una nueva forma de acoso. El ciberacoso se define como un comportamiento agresivo intencionado y repetido en el tiempo mediante dispositivos digitales a cargo de uno o varios individuos contra alguien que no puede protegerse (Campbell & Bauman, 2018). Si bien el ciberacoso comparte características del acoso escolar, es necesario matizar algunas distinciones (Smith, 2016). En el ciberespacio la repetición en el tiempo está vinculada con la posibilidad de que una sola conducta de agresión puntual puede multiplicarse en la red, más que con la repetición de la conducta por parte del agresor (Olweus & Limber, 2018). El hecho de quedar almacenada y ser accesible hace que pueda ser reenviada por terceras personas. En el ciberacoso el desequilibrio de poder se vincula con el dominio de las habilidades tecnológicas (Kowalski et al., 2014), así como con el anonimato, que facilita la deshibibición de la agresión, además de dificultar su identificación (Nickerson et al., 2018). Si bien la intencionalidad en el cara a cara tiene por objetivo dañar a la víctima, en el ciberespacio la reducida comunicación hace que el daño causado no sea directamente percibido por el agresor. Además, la accesibilidad permanente hace que la víctima sea vulnerable 24/7 (24 horas los 7

días de la semana), lo cual puede agudizar sus consecuencias psicosociales (DePaolis & Williford, 2019).

Numerosos programas de prevención e intervención han emergido para tratar de reducir la implicación de los escolares en acoso escolar y ciberacoso. No obstante, la investigación psicoevolutiva respalda la necesidad de continuar profundizando en los mecanismos que explican por qué algunos escolares se implican en conductas de agresión.

A través de la presente tesis se desarrollan tres estudios independientes—aunque relacionados entre sí—con la finalidad de contribuir al avance científico que permita comprender cómo diferentes variables de naturaleza individual y grupal se vinculan con la implicación de los escolares en acoso escolar y ciberacoso.

En el primer estudio se analiza la relación entre la desconexión moral, la necesidad de popularidad y el acoso escolar en los escolares. Vinculado con la naturaleza inmoral de la agresión, uno de los factores asociados con la implicación de los escolares en el acoso escolar es la desconexión moral, entendida como el conjunto de estrategias cognitivas que permiten eludir las emociones asociadas al incumplimiento de las normas morales interiorizadas (Bandura, 2002). A través de la desconexión moral los escolares pueden desactivar selectivamente su proceso de autorregulación y llegar a considerar que la agresión puede ser legítima. La desconexión moral se ha analizado como un factor de riesgo en la agresión del acoso escolar principalmente de forma transversal (véase meta-análisis; Gini et al., 2014; Killer et al., 2019). Un menor número de estudios longitudinales han evidenciado cómo aquellos escolares con mayor desconexión moral se involucran posteriormente en la agresión entre iguales (Bjärehed et al., 2021; Falla et al., 2020, 2021; Georgiou et al., 2021; Teng et al., 2019, 2020; Wang et al., 2017). Sin embargo, no existen resultados concluyentes que permitan afirmar que el acoso escolar puede predecir la desconexión moral (Georgiou et al., 2021; Teng et al., 2019; Visconti et al., 2015; Wang et al., 2017).

La relación longitudinal entre desconexión moral y acoso escolar se ha analizado teniendo en cuenta que este mecanismo cognitivo es una característica estable del individuo (Thornberg et al., 2021). No obstante, aún se necesitan estudios que aborden la desconexión moral como un estado o un proceso que puede cambiar y derivar o ser el resultado de un aumento o disminución de la implicación en acoso escolar a corto plazo.

El acoso escolar, además de ser definido como un fenómeno inmoral también se caracteriza por su marcado carácter social pues surge y se mantiene en el seno del grupo de los iguales. En ese sentido, se ha demostrado que la popularidad tiene una gran influencia en las conductas de los escolares. La popularidad otorga a los chicos y chicas el acceso a los recursos del grupo (visibilidad, prestigio y atención), lo que les permite tener cierto dominio social. Estos beneficios posibilitan que muchos de ellos desempeñen conductas destinadas a ser reconocido como popular, movidos precisamente por lo que se denomina necesidad de popularidad (Santor et al., 2000). En algunos casos, la agresión se convierte en una estrategia efectiva para acceder a ese deseado estado de dominio e influencia sobre los demás (Malamut et al., 2020). La necesidad de popularidad se ha reconocido como un factor de riesgo del acoso escolar (Caravita & Cillessen, 2012; Duffy et al., 2017; Garandeau & Lansu, 2019; Romera et al., 2017; Sijtsema et al., 2009) e incluso, en menor medida, se ha considerado como un resultado del acoso escolar (Dumas et al., 2019; Malamut et al., 2020).

Aunque la necesidad de popularidad y la desconexión moral no se han vinculado previamente, determinadas perspectivas teóricas apuntan a una posible asociación entre motivación y moralidad. En la desconexión moral, las motivaciones personales constituyen un elemento clave en la desactivación selectiva de las estrategias de autorregulación de la conducta social. En base a ello, las motivaciones de naturaleza egoísta, como puede ser la necesidad de ser popular, pueden determinar el juicio moral de los escolares (Thomas, 2021).

La necesidad de popularidad se ha analizado en estudios previos como un rasgo estable a lo largo del tiempo (Dawes & Xie, 2017). No obstante, se necesitan estudios longitudinales que aborden la necesidad de popularidad como un estado, es decir, como una característica que puede variar a corto plazo y que puede influir o ser influenciada por un aumento o disminución del acoso escolar y la desconexión moral (McDonald & Asher, 2018).

El objetivo del primer estudio fue explorar las relaciones bidireccionales a nivel de rasgo y de estado entre necesidad de popularidad, desconexión moral y acoso escolar.

La victimización en el acoso y ciberacoso es un factor que se ha asociado con la implicación de los adolescentes en la agresión. En un reciente meta-análisis se ha evidenciado que esta relación es entre un 12% y 14% mayor en las situaciones de ciberacoso (Walters, 2020). Las características del anonimato y accesibilidad 24/7 pueden explicar por qué el

ciberespacio se configura como un contexto propicio para que las cibervíctimas tengan un mayor riesgo de verse implicadas en fenómenos de ciberagresión. Es más, la asociación longitudinal entre la agresión y victimización en el ciberacoso se ha evidenciado ser recíproca (véase meta-análisis; Marciano et al., 2020; Walters, 2020). Sin embargo, apenas existen estudios longitudinales que hayan explorado los posibles mecanismos que subyacen a la implicación de los escolares en ambos fenómenos. En la exploración de estos mecanismos es importante prestar atención a las estrategias utilizadas para gestionar las emociones asociadas a los episodios de ciberacoso, entre ellas la rumiación de la ira.

La rumiación de la ira hace referencia a aquellas estrategias cognitivas que guían el pensamiento sobre el estado interno a través de un proceso de reflexión persistente sobre las causas y consecuencias de un episodio de ira (Sukhodolsky et al., 2001). La rumiación de la ira se ha abordado en como una estrategia focalizada en la emoción para hacer frente a las situaciones diarias que causan estrés. El desarrollo de este tipo de estrategias de afrontamiento se ha vinculado con desajustes psicosociales (Veenstra et al., 2018). A través de estudios longitudinales, la rumiación de la ira se ha vinculado con la implicación de los individuos en agresión (Li et al., 2019; Quan et al., 2019, 2021) y, en menor medida, con la victimización (Malamut & Salmivalli, 2021). En el contexto del ciberespacio, las cibervíctimas y ciberagresores han mostrado mayor rumiación de la ira en comparación con los no implicados (Zsila et al., 2018, 2019). Incluso, un reciente estudio longitudinal ha evidenciado que aquellos adolescentes con mayor rumiación de la ira tienen mayor probabilidad de implicarse posteriormente en la ciberagresión (Yang et al., 2021). Estos estudios destacan la importancia de analizar el uso de esta estrategia cognitiva en el contexto cibernético. La accesibilidad 24/7 hace que los escolares puedan padecer en cualquier momento experiencias estresantes que les provoquen la activación de la rumiación de la ira. Así mismo, la anonimidad puede dotar a aquellos escolares con altos niveles de rumiación de la oportunidad para llevar a cabo su venganza o agresión ante la ausencia de represalias (Dennehy et al., 2020).

El segundo estudio se propuso analizar la relación bidireccional, así como los efectos de mediación entre la rumiación de la ira, la cibervictimización y la ciberagresión.

Los primeros contactos que tienen los escolares con el uso de Internet a través de dispositivos digitales se producen principalmente en el contexto familiar. Ello que hace que las estrategias parentales que se ponen en marcha sobre el aprendizaje del uso de Internet

puedan influir sobre la mayor o menor implicación de los escolares en las ciberconductas de riesgo (Bartau-Rojas et al., 2018). Tanto aquellas estrategias parentales basadas en la colaboración entre progenitores e hijos e hijas, como las de monitorización se han mostrado eficaces para la disminución de la implicación en ciberconductas de riesgo (Baldry et al., 2019; Chen & Shi, 2019; Elsaesser et al., 2017; Steinfeld, 2021; Symons et al., 2017). No obstante, si bien las estrategias de monitorización limitan el desarrollo de las habilidades de resolución de problemas y autonomía de los escolares (Steinfeld, 2021), las estrategias de colaboración fomentan un ambiente de afecto entre ambos que se traduce en una relación íntima. Los hijos e hijas pueden así sentir que tienen en sus progenitores a alguien en quien confiar. Bajo esta perspectiva, la literatura se ha ocupado del concepto de revelación filial, considerado como un tipo de comunicación espontánea de los hijos e hijas a sus progenitores sobre sus propias experiencias en Internet (Kerr et al., 2012), la cual puede ejercer como mecanismo de protección sobre la implicación de los escolares en ciberconductas de riesgo como el uso problemático de Internet y el cibercotilleo, ambas precursoras de la implicación en ciberagresión (Falla et al., 2021; Gámez-Guadix et al., 2016; Romera et al., 2018).

Desde la psicología evolutiva se ha destacado la infancia como una etapa de importancia en la revelación filial (Padilla-Walker et al., 2018). Por ello, el tercer estudio toma de referencia los últimos años de la infancia y los primeros de la adolescencia, lo que permite analizar los efectos de influencia de la edad precisamente en el período de transición de una etapa evolutiva a otra. En este sentido, en el tercer estudio se trató de examinar el efecto mediador del uso problemático de Internet y el cibercotilleo entre la revelación filial y la implicación en ciberagresión, así como el rol moderador de la edad y el sexo.

Para lograr los objetivos planteados en la presente tesis se emplearon dos muestras diferentes. En los estudios uno y dos la unidad de análisis fueron los adolescentes de Educación Secundaria Obligatoria de la provincia de Córdoba (España). Un total de 3.017 adolescentes de entre 11 y 16 años participaron en los estudios uno y dos ($M_{\text{Edad T1}}$ = 13,15; SD = 1,09; 49% chicas). Se empleó un diseño longitudinal de cuatro tiempos, con seis meses de intervalo entre cada uno. En el estudio tres la unidad de análisis fueron niños y niñas de Educación Primaria de las provincias de Córdoba y Jaén (España). El diseño del estudio fue transversal de modo que un total de 866 escolares entre 10 y 13 años participaron en una sola recogida de datos (M_{Edad} = 11,91; SD = 0,90; 53% chicas). En los tres estudios se utilizaron

cuestionarios de autoinforme para medir cada uno de los constructos a explorar.

Para analizar la influencia recíproca longitudinal entre desconexión moral, necesidad de popularidad y acoso escolar en el estudio 1, se llevaron a cabo análisis de "*Cross-Lagged Panel Model*" (CLPM) (para analizar las relaciones en base al rasgo) y "*Random Intercept Cross-Lagged Panel Model*" (RI-CLPM) (para analizar las relaciones en base al estado). Los resultados del estudio evidencian que la necesidad de popularidad predijo el acoso escolar a nivel de estado y de rasgo, mientras que el acoso escolar no predijo la necesidad de popularidad. La desconexión moral predijo el acoso escolar a nivel de rasgo, pero no a nivel de estado, mientras que no hubo una relación inversa. La necesidad de popularidad también predijo la desconexión moral tanto a nivel de estado como de rasgo, mientras que desconexión moral predijo la necesidad de popularidad solo a nivel de rasgo.

En el estudio dos, la relación recíproca longitudinal entre rumiación de la ira y ciberacoso se realizó a través del análisis CLPM. Los resultados evidencian que hubo una influencia bidireccional entre rumiación de la ira y cibervictimización. La ciberagresión fue predecida por la cibervictimización y la rumiación de la ira, mientras que no se evidenció la influencia inversa. La interacción entre las variables dio a lugar a que la cibervictimización fuese un mecanismo mediador sobre los efectos de la rumiación de la ira en la ciberagresión. Además, el sexo y la edad no influyeron entre la asociación de las variables.

Finalmente, para explorar el rol mediador del uso problemático de Internet y del cibercotilleo en los efectos de la revelación filial sobre la ciberagresión, así como el rol moderador del sexo y la edad, se llevó a cabo un modelo de mediación y otro de mediación moderada. Los resultados evidencian que la revelación filial se asocia con una mayor implicación en la ciberagresión. Dicha asociación estuvo mediada por el uso problemático de Internet y el cibercotilleo. Si bien dichas asociaciones fueron equivalentes en chicos y chicas, se encontraron diferencias significativas en base a la edad. Los efectos del uso problemático de Internet sobre el cibercotilleo, así como de la revelación filial sobre el uso problemático de Internet fueron mayores durante la adolescencia temprana.

Los resultados de la presente tesis subrayan la importancia de determinados mecanismos morales, motivacionales, cognitivos, conductuales y sociales que están vinculados con la agresión en el acoso escolar y ciberacoso. A nivel moral y motivacional, la

desconexión moral y la necesidad de popularidad son factores que ayudan a comprender cómo los escolares se implican en la agresión. Si bien previos estudios ya habían contribuido a ello, la presente tesis amplía dicho conocimiento al comparar los efectos de rasgo y estado a nivel longitudinal, así como al explorar la interacción entre ambos mecanismos. Los resultados sugieren que los efectos de la desconexión moral sobre el acoso escolar y la necesidad de popularidad se dan principalmente a nivel de rasgo. Esto implica que aquellos escolares con una mayor desconexión moral tienden a verse posteriormente más implicados en el acoso escolar, así como con mayor necesidad de popularidad. La ausencia de relación a nivel de estado implica que cambios a corto plazo (en comparación con el propio individuo) en la desconexión moral no se vinculan con cambios posteriores sobre otras variables. La diversidad de relaciones observadas sugiere que es preciso tener precaución a la hora de la interpretar los resultados cuando se emplean métodos tradicionales de análisis, los cuales no llegan a capturar las características de rasgo y estado necesarias para comprender los efectos causales entre variables. Los efectos de la desconexión moral sobre el acoso escolar se encuentran a nivel de rasgo, en el que se compara a los sujetos con sus iguales, pero no en el establecimiento de relaciones causales al compararse consigo mismos. Por otro lado, los efectos de la necesidad de popularidad indican que: a) aquellos escolares con niveles altos de necesidad de popularidad se asocian posteriormente con altos niveles en desconexión moral y acoso escolar; b) aquellos escolares que manifiesten un aumento a corto plazo (seis meses) en necesidad de popularidad se asocia con un aumento posterior en desconexión moral y acoso escolar.

A nivel cognitivo y social, la cibervictimización y la rumiación de la ira han evidenciado ser factores de riesgo sobre la implicación de los escolares en ciberagresión. La presente tesis permite ampliar el conocimiento científico sobre la relación de la rumiación de la ira con el ciberacoso. En ese sentido, se ha encontrado que aquellos escolares con mayores experiencias de cibervictimización tienden a mostrar posteriormente una mayor puesta en marcha de la rumiación de la ira y viceversa, lo cual pone en evidencia que la cibervictimización puede ser un factor estresante que desencadene la puesta en marcha de la rumiación de la ira como estrategia de afrontamiento desadaptativa. Dicha experiencia puede generar dificultades en el autocontrol de la ira a través de estrategias de afrontamiento centradas en el problema. Del mismo modo, estrategias pasivas y repetitivas sobre las experiencias de ira pueden derivan en los sujetos hacia respuestas psicosociales desadaptativas

que les deriven a una mayor vulnerabilidad sobre la experimentación de la victimización en la red, generando una influencia recíproca con implicaciones en su desajuste social. Aquellos escolares con altos niveles de rumiación de la ira también se han identificado con una mayor implicación en la ciberagresión. Al poner en marcha dicha estrategia, focalizada en la emoción, se puede generar un estado afectivo negativo y un menor autocontrol, que junto con las características del ciberespacio (accesibilidad 24/7 y anonimato), puede aumentar el riesgo de los escolares de implicarse en la ciberagresión. Además, los resultados de mediación indican que aquellos escolares con altos niveles de rumiación de la ira, que posteriormente se han visto implicados en la victimización en la red tienen aún mayores probabilidades de implicarse en ciberagresión.

A nivel conductual y social, la revelación filial, el uso problemático de Internet y el cibercotilleo son factores que ayudan a comprender por qué los escolares se implican en ciberagresión. Los estudios previos han evidenciado cómo aquellas estrategias de colaboración entre progenitores e hijos e hijas previenen de la implicación en las ciberconductas de riesgo. El uso problemático de Internet y el cibercotilleo también se han analizado como factores de riesgo de la implicación en la ciberagresión. La presente tesis subraya que la comunicación entre progenitores e hijos e hijas a través del contacto voluntario y espontáneo que los escolares hacen sobre el uso de Internet supone un factor de protección ante la implicación en ciberconductas de riesgo. Además, el uso problemático de Internet y el cibercotilleo se ha demostrado que puede mediar los efectos de la revelación filial en la ciberagresión. La comunicación voluntaria que los hijos e hijas hacen se lleva a cabo en un clima familiar cálido, donde los escolares llegan a percibir a sus padres y madres como una fuente apoyo y de confianza. Los resultados de moderación evidencian la especial importancia de la revelación filial en los últimos años de la infancia como factor de protección. En comparación con la adolescencia temprana, la infancia tardía es un periodo donde la revelación filial, así como el uso que se hace de Internet, protege a los chicos y chicas sobre la implicación de las ciberconductas de riesgo.

Los hallazgos de la presente tesis van asociados a importantes implicaciones en materia psicoeducativa para la promoción de la convivencia escolar, familiar y cibernética, a la vez que la prevención del acoso y el ciberacoso.

EXTENTED ABSTRACT

Boys and girls learn to interact and communicate with their peers from the interpersonal relationships they maintain at school. These relationships can be disturbed or altered by situations of imbalance and abuse among peers, which can affect their psychosocial development. Bullying is a phenomenon that interrupts the positive convivencia among schoolchildren and has attracted the attention of families, teachers, politicians, researchers, and society in general during the last decades.

Bullying can be defined as intentional and repeated aggression over time that one or more individuals carry out against another peer (Olweus, 1993). A sustained imbalance of power is established between victim and aggressor, in which the victim is defenseless and cannot put an end to the situation of abuse (Ortega-Ruiz, 2010). The intentionality of the aggression shows that this behavior can be an instrumental strategy to achieve or maintain social status and dominance (Hawley, 1999; Pouwels et al., 2018). Bullying is also characterized by its immoral nature, as it violates the values of respect and affection for others (Ortega & Mora-Merchán, 1996). This type of peer violence violates ethical principles and fosters injustice, contempt, coercion, and loneliness.

Through the development of technology and Internet access, cyberbullying has emerged as a new form of bullying. Cyberbullying is defined as aggressive behavior, intentional and repeated over time through digital devices by one or more individuals against someone who cannot protect themselves (Campbell & Bauman, 2018). Although cyberbullying shares bullying characteristics, some distinctions need to be qualified (Smith, 2016). In cyberspace, repetition over time is linked to the possibility that a single behavior of punctual aggression can multiply in the network, rather than the repetition of the behavior by the aggressor (Olweus & Limber, 2018). The fact that it is stored and accessible means that it can be forwarded by third parties. In cyberbullying, the imbalance of power is linked to the mastery of technological skills (Kowalski et al., 2014), as well as anonymity, which facilitates the disinhibition of aggression, also making it difficult to identify the bully (Nickerson et al., 2018). Whereas face-to-face intentionality aims to harm the victim, in cyberspace, reduced communication means that the damage caused is not directly perceived by the bully. Further, permanent accessibility makes the victim vulnerable 24/7 (24 hours a day, 7 days a week), which can exacerbate the psychosocial consequences (DePaolis & Williford, 2019).

Numerous prevention and intervention programs have emerged to try to reduce the involvement of schoolchildren in bullying and cyberbullying. However, psycho-developmental research supports the need to continue delving into the mechanisms that explain why some schoolchildren engage in aggressive behaviors.

Through this thesis, three independent—albeit related—studies are performed, to contribute to the scientific advance that allows to understand how different variables of a motivational, moral, emotional, and cognitive nature are linked to schoolchildren's engagement in bullying and cyberbullying.

The first study analyzes the relationship between moral disengagement, the need for popularity, and bullying perpetration in schoolchildren. Linked to the immoral nature of aggression, one of the factors associated with schoolchildren's involvement in bullying is moral disengagement, understood as the set of cognitive strategies that allow avoiding the emotions associated with the breach of internalized moral norms (Bandura, 2002). Through moral disengagement, schoolchildren can selectively deactivate their self-regulation process and come to consider aggression as legitimate. Moral disengagement has been analyzed mainly transversally as a risk factor in aggression in school bullying (see meta-analyses; Gini et al., 2014; Killer et al., 2019). A smaller number of longitudinal studies have shown how schoolchildren with greater moral disengagement subsequently engage in peer aggression (Bjärehed et al., 2021; Falla et al., 2020, 2021; Georgiou et al., 2021; Teng et al., 2019, 2020; Wang et al., 2017). However, there are no conclusive results that allow to affirm that bullying can predict moral disengagement (Georgiou et al., 2021; Teng et al., 2019; Thornberg, Wänström, Pozzoli, et al., 2019; Visconti et al., 2015; Wang et al., 2017).

The longitudinal relationship between moral disengagement and bullying has been analyzed considering that this cognitive mechanism is a stable characteristic of the individual (Thornberg et al., 2021). However, studies are still needed that address moral disengagement as a state or process that can change and derive from or be the result of an increase or decrease in involvement in bullying in the short term.

Bullying, in addition to being defined as an immoral phenomenon, is also characterized by its marked social nature because it arises and is maintained within the peer group. In that sense, it has been shown that popularity greatly influences schoolchildren's behaviors.

Popularity gives boys and girls access to the group's resources (visibility, prestige, and attention), which allows them to have some social dominance. These benefits allow many of them to perform behaviors that are considered popular, driven precisely by the so-called need for popularity (Santor et al., 2000). In some cases, bullying becomes an effective strategy to access that coveted state of dominance and influence over others (Malamut et al., 2020). The need for popularity has been recognized as a risk factor for bullying (Caravita & Cillessen, 2012; Duffy et al., 2017; Garandeau & Lansu, 2019; Romera et al., 2017; Sijtsema et al., 2009) and, to a lesser extent, it has even been considered an outcome of bullying (Dumas et al., 2019; Malamut et al., 2020).

Although the need for popularity and moral disengagement have not been previously linked, certain theoretical perspectives point to a possible association between motivation and morality. In moral disengagement, personal motivations constitute a key element in the selective deactivation of the self-regulatory strategies of social behavior. In this sense, selfish motivations, like the need to be popular, can determine schoolchildren's moral judgment (Thomas, 2021).

The need for popularity has been analyzed in previous studies as a stable trait over time (Dawes & Xie, 2017). Nonetheless, longitudinal studies are needed that address the need for popularity as a state, that is, a characteristic that may vary in the short term and that may influence or be influenced by an increase or decrease in bullying and moral disengagement (McDonald & Asher, 2018).

The objective of the first study was to explore the bidirectional relationships at the trait and status levels between the need for popularity, moral disengagement, and bullying.

In bullying and cyberbullying, victimization is a factor that has been associated with adolescent involvement in aggression. In a recent meta-analysis, it was shown that such relationship is between 12% and 14% higher in cyberbullying situations (Walters, 2020). The 24/7 characteristics of anonymity and accessibility may explain why cyberspace is configured as a context conducive to cybervictims' greater risk of being involved in cyberaggression phenomena. Moreover, the longitudinal association between aggression and victimization in cyberbullying has been shown to be reciprocal (see meta-analyses; Marciano et al., 2020; Walters, 2020). However, there are hardly any longitudinal studies that have explored the

possible mechanisms underlying schoolchildren's involvement in both phenomena. In exploring these mechanisms, it is important to pay attention to the strategies used to manage the emotions associated with episodes of cyberbullying, including anger rumination.

Anger rumination refers to those cognitive strategies that guide thinking about the internal state through a process of persistent reflection on the causes and consequences of an episode of anger (Sukhodolsky et al., 2001). Anger rumination has been addressed as an emotion-focused strategy for coping with daily situations that cause stress. The development of such coping strategies has been linked to psychosocial maladjustment (Veenstra et al., 2018). Through longitudinal studies, anger rumination has been linked to individuals' involvement in aggression (Li et al., 2019; Quan et al., 2019, 2021) and, to a lesser extent, to victimization (Malamut & Salmivalli, 2021). In the context of cyberspace, cybervictims and cyberaggressors have shown greater anger rumination compared to uninvolved individuals (Zsila et al., 2018, 2019). In fact, a recent longitudinal study has shown that adolescents with greater anger rumination are more likely to become involved in cyberaggression later on (Yang et al., 2021). These studies highlight the importance of analyzing the use of this cognitive strategy within the cyber context. 24/7 accessibility means that schoolchildren can suffer stressful experiences at any time, which cause them to activate anger rumination. Likewise, anonymity can provide schoolchildren who have high levels of rumination with the opportunity to carry out their revenge or aggression in the absence of reprisals (Dennehy et al., 2020).

The second study aimed to analyze the bidirectional relationship, as well as the possible mediating effects, between anger rumination, cybervictimization, and cyberaggression.

Schoolchildren's first contacts with the use of the Internet through digital devices occur mainly in the family context. This means that the parental strategies that are implemented in learning how to use the Internet can influence the greater or lesser involvement of schoolchildren in risky cyberbehavior (Bartau-Rojas et al., 2018). Parental strategies based on parent-child collaboration, as well as monitoring strategies, have both been shown to be effective in reducing children's involvement in risky cyberbehavior (Baldry et al., 2019; Chen & Shi, 2019; Elsaesser et al., 2017; Steinfeld, 2021; Symons et al., 2017). However, whereas monitoring strategies limit the development of schoolchildren's problem-solving skills and

autonomy (Steinfeld, 2021), collaborative strategies foster an environment of affection between parents and children that translates into an intimate relationship. The children can thus feel that they can trust their parents. From this perspective, the literature has addressed the concept of child disclosure, considered as a type of children's spontaneous communication to their parents about their own experiences on the Internet (Kerr et al., 2012), which can act as a protective mechanism against their involvement in risky cyberbehavior, such as the problematic use of the Internet and cybergossip, both precursors of engagement in cyberbullying (Falla et al., 2021; Gámez-Guadix et al., 2016; Romera et al., 2018).

Developmental psychology has emphasized childhood as an important stage in child disclosure (Padilla-Walker et al., 2018). Therefore, the third study takes as a reference the last years of childhood and the first years of adolescence, which allows to analyze the effects of the influence of age precisely in the transition from one evolutionary stage to another. In this sense, the third study aimed to examine the mediating effect of the problematic use of the Internet and cybergossip between child disclosure and involvement in cyberaggression, as well as the moderating role of age and gender.

To achieve the objectives set out in this thesis, two different samples were used. In Studies 1 and 2, the unit of analysis was secondary school adolescents in the province of Córdoba (Spain). A total of 3,017 adolescents aged 11 to 16 years participated in Studies 1 and 2 ($M_{\text{Age T1}} = 13.15$, $SD = 1.09$; 49% girls). A longitudinal four-wave design was used, with a six-month interval between each wave. In Study 3, the unit of analysis was boys and girls of primary school in the provinces of Córdoba and Jaén (Spain). The study design was cross-sectional, and a total of 866 schoolchildren aged between 10 and 13 years participated in a single data collection ($M_{\text{Age}} = 11.91$, $SD = 0.90$; 53% girls). In all three studies, self-report questionnaires were used to measure each of the constructs to be explored.

To analyze the longitudinal reciprocal influence between moral disengagement, need for popularity, and bullying perpetration in Study 1, a "*Cross-Lagged Panel Model*" (CLPM) (to analyze relationships based on trait) and a "*Random Intercept Cross-Lagged Panel Model*" (RI-CLPM) (to analyze relationships based on status) was performed. The results of the study showed that the need for popularity predicted bullying perpetration at the state and trait level, whereas bullying did not predict the need for popularity. Moral disengagement predicted bullying perpetration at the trait level, but not at the state level, and there was no inverse

relationship. The need for popularity also predicted moral disengagement both at the state and trait level, whereas moral disengagement predicted the need for popularity only at the trait level.

In Study 2, the longitudinal reciprocal relationship between anger rumination and cyberbullying was examined through CLPM analysis. The results revealed a bidirectional influence between anger rumination and cybervictimization. Cyberaggression was predicted by cybervictimization and anger rumination, whereas no inverse influence was observed. The interaction between the variables showed that cybervictimization was a mediating mechanism in the effects of anger rumination on cyberaggression. Moreover, gender and age did not influence the association of the variables.

Finally, to explore the mediating role of problematic Internet use and cybergossip in the effects of child disclosure on cyberaggression, as well as the moderating role of gender and age, both a mediation model and a moderate mediation model were carried out. The results showed that child disclosure is associated with greater involvement in cyberaggression. This association was mediated by the problematic use of the Internet and cybergossip. Although these associations were equivalent in boys and girls, significant differences were found as a function of age. The effects of problematic Internet use on cybergossip as well as child disclosure on problematic Internet use were higher during early adolescence.

The results of this thesis underline the importance of certain moral, motivational, cognitive, behavioral, and social mechanisms that are linked to bullying and cyberbullying.

On a moral and motivational level, the factors of moral disengagement and the need for popularity help to understand why schoolchildren engage in aggression. Although previous studies had already contributed to this finding, this thesis expands our knowledge by comparing the effects of trait and state at the longitudinal level, as well as by exploring the interaction between the two mechanisms. The results suggest that the effects on bullying of moral disengagement and the need for popularity occur primarily at the trait level. This implies that schoolchildren with higher moral disengagement subsequently tend to be more involved in bullying, as well as presenting a greater need for popularity. The absence of a state-level relationship implies that short-term changes (comparing individuals with themselves) in moral disengagement are not linked to subsequent changes in other variables. The diversity of

relationships observed suggests that results should be interpreted with caution when using traditional methods of analysis, which fail to capture the trait and state characteristics necessary to understand causal effects between variables. The effects of moral disengagement on bullying perpetration are found at the trait level, in which subjects are compared with their peers, but not in the establishment of causal relationships, when they are compared with themselves. On the other hand, the effects of the need for popularity indicate that: a) schoolchildren with high levels of need for popularity are subsequently associated with high levels of moral disengagement and bullying; b) schoolchildren who manifest a short-term increase (six months) in the need for popularity are associated with a subsequent increase in moral disengagement and bullying.

At the cognitive and social levels, cybervictimization and anger rumination have proven to be risk factors for schoolchildren's involvement in cyberaggression. This thesis allows to expand the scientific knowledge about the relationship between anger rumination and cyberbullying. In this sense, it has been found that schoolchildren with more experiences of cybervictimization subsequently tend to show more anger rumination and vice versa, showing that cybervictimization can be a stressor that triggers anger rumination as a maladaptive coping strategy. This experience can lead to difficulties in anger self-control due to problem-focused coping strategies. Likewise, passive and repetitive strategies of anger experiences can lead to maladaptive psychosocial responses that provoke greater vulnerability to network victimization, generating a reciprocal influence, with implications in individuals' social maladjustment. Schoolchildren with high levels of anger rumination have also been linked to increased involvement in cyberaggression. This emotion-focused strategy may generate a negative mood and lower self-control, which, together with the characteristics of cyberspace (24/7 accessibility and anonymity), can increase schoolchildren's risk of becoming involved in cyberaggression. In addition, the mediation results indicate that schoolchildren with high levels of anger rumination, who have subsequently been implicated in online victimization, are even more likely to engage in cyberaggression.

At the behavioral and social levels, the factors of child disclosure, problematic Internet use, and cybergossip help to understand why schoolchildren engage in cyberaggression. Previous studies have shown how strategies of parent-child collaboration prevent children's involvement in risky cyberbehavior. Problematic Internet use and cybergossip have also been

analyzed as risk factors for involvement in cyberaggression. This thesis emphasizes that parent-child communication, through the children's voluntary and spontaneous disclosure about their use of the Internet, is a protective factor against their involvement in risky cyberbehavior. In addition, problematic Internet use and cybergossip have been shown to mediate the effects of child disclosure on cyberaggression. Children's voluntary communication takes place in a warm family atmosphere, where the children come to perceive their parents as a source of support and trust. The results of the moderation show the particular importance of child disclosure as a protective factor in the last years of childhood. Compared to early adolescence, late childhood is a period where child disclosure, as well as the use of the Internet, protects boys and girls from involvement in risky cyberbehavior.

The findings of this thesis have important implications in psycho-educational issues for the promotion of school, family and cyber-convivencia, as well as for the prevention of bullying and cyberbullying.

PRIMERA PARTE

EL MARCO TEÓRICO

CAPÍTULO

1

Acoso escolar y ciberacoso:
definición, características y estado del arte

Durante los años 70, en los paises nórdicos, comenzó a hacerse público, primero mediante artículos periodísticos, y posteriormente los primeros trabajos científicos de Dan Olweus (1978), un fenómeno que ya era conocido a nivel popular en muchos países, pero que, como otros muchos hechos de desatención a los derechos de la infancia, pasaba desapercibido. Se trata de las agresiones a las que con frecuencia un grupo de chicos, siempre liderados por el mas cruel, sometía a otro, siempre más debil o más torpe. En el idioma sueco, ese fenómeno recibió el nombre de *mobbing*. Luego, cuando los primeros trabajos del profesor Olweus fueron traducidos al inglés, a la agresión sistemática, intencional y cruel de unos escolares a otros, se denominaron bullying. A partir de ese momento, en los años ochenta, el acoso escolar recibe dicho nombre. A raíz del suicidio de tres chicos noruegos víctimas de acoso, este fenómeno atrajo la atención científica de investigadores de otros países y comenzó a adquirir un carácter internacional (Buck, 2017), hasta llegar a considerarse como una de los tipos de agresión con mayor presencia en los centros educativos.

1.1. Naturaleza psicosocial del acoso escolar y el ciberacoso

Existe acoso escolar cuando una persona es agredida o está expuesta a abusos de poder de forma prolongada en el tiempo por una o más personas (Olweus, 1993). Si bien, al compienzo la agresión se consideraba como un acto impulsivo e incontrolable hacia las víctimas (Olweus, 1978), el concepto de bullying ha ido evolucionando hasta considerarse como un fenómeno complejo grupal caracterizado principalmente por: a) la repetición en el tiempo; b) el desequilibrio de poder entre el agresor y la víctima; c) la intencionalidad; d) conducta inmoral (Ortega & Mora-Merchán, 1996).

El desequilibrio de poder refleja que los agresores se perciben como superiores física, psicológica y socialmente hasta el punto de elegir a sus propias víctimas carentes de apoyo social, o incluso debilidad física o psicológica (Nelson et al., 2019). De este modo, el agresor elige como víctima a quienes no puedan defenderse por sí mismas, ni cuentan con la ayuda de otros iguales. El *esquema de dominio-sumisión* ayuda a comprender el vínculo existente entre el agresor y la víctima, donde el primero aprender a dominar al segundo, quien reconoce su superioridad y desencadena la posterior sumisión. El esquema que se ha descrito como "la ley del silencio" ayuda a comprender hasta qué punto la tolerancia de los miembros del grupo,

conocedores de la agresión, contribuye a que el fenómeno se mantenga en el tiempo (Ortega-Ruiz, 2010).

A diferencia de la conductal accidental, reflejada en otro tipo de agresiones, la intencionalidad del acoso refleja el carácter estratégico orientado al logro o mantenimiento del estatus y dominio social (Hawley, 1999; Pouwels et al., 2018). Este rasgo ha llevado a la investigación sobre el acoso escolar a prestar atención a la distinción entre la agresión proactiva –como conducta instrumental– y la agresión reactiva –como conducta defensiva–. La agresión en el acoso escolar se ha asociado en gran medida con la agresión proactiva, considerándose como una característica definitoria del acoso (Hellström et al., 2021). Sin embargo, para comprender por qué los adolescentes se ven envueltos en el acoso escolar, es necesario ir más allá de la distinción agresión reactiva-proactiva (Runions et al., 2018).

El hecho de que el acoso escolar se sostenga en el tiempo puede ser explicado, como se ha dicho, por la conjunción del patrón dominio-sumisión en el ámbito interpersonal y la cínica ley del silencio que se genera alrededor del fenómeno (Ortega-Ruiz, 2020). A través de la agresión se pone de manifiesto las consecuencias desagradables del acoso. De este modo, el agresor logra que aquellos escolares conocedores de lo que sucede entre la víctima y el agresor se mantengan en silencio (norma social implícita) sobre lo que sucede dentro del grupo. Ello permite que tanto la impunidad del agresor como la indefensión de la víctima se prolonge en el tiempo. Esta cínica conducta moral evidencia el importante papel que el microcontexto de las relaciones entre el grupo de iguales tiene en el mantenimiento del fenómeno. Así como el valor de la conducta prosocial de algunos miembros del grupo que comienzan a actuar contra la injusta agresión, contribuyendo a la erradicación de la conducta agresiva o a su progresiva disolución. De tal forma que a veces la víctima no solo tiene que enfrentarse a una agresión que supera sus capacidades de defensa, sino que en gran parte, si no es ayudada por el exterior puede desarrollar sentimientos de humillación y vergüenza (Ortega et al., 2012). Una vez normalizado el comportamiento en el grupo, el agresor, más que sufrir el rechazo de sus compañeros, puede tener buena posición en la jerarquía social del grupo (Romera, Bravo, et al., 2019).

El acoso escolar se caracteriza por su naturaleza inmoral (Ortega & Mora-Merchán, 1996). Se trata de un tipo de conducta que vulnera los principios sociales de respeto y solidaridad hacia los iguales. La moralidad en el bullying aludeal sistema de valores sobre la

conducta individual que se asientan en principios éticos (Ortega-Ruiz, 2020). Los juicios morales en este sentido ayudan a los individuos a tomar decisiones sobre lo que es correcto e incorrecto. Bajo este prisma, la canalización de la conducta inmoral en los escolares viene motivada por contravalores propios de la bondad afectiva como la injusticia, el desafecto, el rechazo, el hostigamiento o la soledad.

El acoso es un fenómeno que puede manifestarse de diferentes formas ya sea física, verbal, relacional o psicológica (Ortega-Ruiz, 2010). El acoso físico como agresión directa es el más reconocible. Puede expresarse a través de golpes, empujones, patadas o cualquier otro tipo de contacto físico directo con la víctima. El acoso verbal se caracteriza por insultar o hacer comentarios rudos directamente a la víctima para herirla o humillarla. El acoso relacional puede entenderse como aquellas conductas directas que desembocan en la omisión de la amistad o exclusión social de la víctima o bien indirectas a través de la difusión de rumores o cotilleos para debilitar la reputación de la víctima. La agresión psicológica implica el uso de amenazas que cohartan la libertad de decisión de quien las sufre y acaba somentiéndose.

Durante el siglo XXI, junto con el acceso a las plataformas sociales digitales ha emergido una nueva forma de acoso (Ortega-Ruiz & Zych, 2016). Internet se ha arraigado cada vez más en la vida cotidiana de escolares ya que ofrece una gran cantidad de experiencias positivas, como mantenerse conectado con familiares y amigos remotos. Más allá de la accesibilidad a Internet las 24 horas del día, los 7 días de la semana (24/7), entre los escolares españoles ya desde la infancia tardía (9-11 años) se muestra un elevado uso diario continuado (2:11 horas/día), que aumenta durante la adolescencia temprana (12-14 años; 3:22 hora/día) y media (15-16 años; 4:12 horas/día) (Smahel et al., 2020).

Las características específicas del contexto online, así como su accesibilidad 24/7 han generado un espacio de conexión y comunicación abierto a la manifestación de nuevas formas de violencia interpersonal (Ortega-Ruiz, 2020). El *ciberacoso* (cyberbullying en inglés) es una conducta agresiva intencionada repetida en el tiempo mediante los dispositivos digitales ejercida por una persona o un grupo de personas sobre alguien que no puede defenderse (Campbell & Bauman, 2018). Debido a los continuos cambios de las plataformas digitales, las aproximaciones conceptuales del ciberacoso fluyen constantemente (Barlett, 2019).

Las similitudes y divergencias entre el acoso online y offline han derivado en un debate conceptual sobre la definición de ciberacoso (Smith, 2016; Smith et al., 2008). ¿Se trata el acoso en la red de un fenómeno independiente (Slonje et al., 2013), o más bien es un tipo de bullying con características diferenciales (Cross et al., 2015)? Algunos autores sugieren que tanto el acoso cara a cara como en la red pueden coexistir por la propia naturaleza común de ambos fenómenos (Zych et al., 2015). Si bien el acoso en línea comparte las características conceptuales del offline (repetición, desequilibrio de poder, intencionalidad e inmoralidad), es preciso tener en cuenta una serie de características específicas.

Mientras que en el acoso escolar la conducta agresiva debe aparecer en más de una ocasión, en el ciberacoso la repetición se asocia con la posibilidad de que una conducta sea multiplicada en la red. Debido a que en Internet los contenidos quedan almacenados de forma permanente con una audiencia potencial infinita, un solo acto por parte del agresor (por ejemplo, subir una foto a la red humillando a la víctima) puede considerarse ciberacoso. Una vez en la red, el acto puede reenviarse y, de este modo, multiplicarse sin necesidad de que el agresor realice más conductas. Como consecuencia, en el ciberbullying la repetición en el tiempo podría asociarse con la cantidad de personas con las que se comparte el contenido violento (Olweus & Limber, 2018).

El desequilibrio de poder en el ciberacoso, más que a la superioridad física, psicológica o social del agresor, se asocia a una mayor destreza de habilidades digitales (Kowalski et al., 2014), así como un posible anonimato del ciberagresor (Nickerson et al., 2018). Aquellos adolescentes hábiles digitalmente tienen a su disposición un mayor número de recursos ya sea por una mayor facilidad de acceso a la información o por contar con más visibilidad en la red (en términos de popularidad). Por otro lado, el anonimato facilita la desinhibición del agresor (Ansary, 2020) como consecuencia de la ausencia de responsabilidad, desindividualización de la conducta e inhibición de la empatía. Además, la dificultad para identificar al agresor contribuye a mantener la ciberagresión, dejando a las víctimas indefensas y con mayores efectos adversos, tales como la ansiedad, el miedo o la humillación (Dennehy et al., 2020).

En el contexto online, la intencionalidad también es una característica definitoria del ciberacoso, debido a que las agresiones tienen la finalidad de causar vergüenza, humillación o daño sobre la víctima. No obstante, el ciberespacio reduce la comunicación no verbal entre víctima y agresor. En el ciberespacio, la percepción y comprensión emocional sobre el

contacto visual, la expresión facial o el lenguaje corporal quedan limitadas. Ello provoca una mayor dificultad en la identificación del daño que las conductas provocan en la víctima por parte del agresor.

En el acoso escolar las víctimas pueden sentirse protegidas de las agresiones cuando existe una figura de autoridad (por ejemplo, con los docentes en los centros educativos) o cuando están en casa con la familia. Sin embargo, el ciberacoso, debido a la accesibilidad total a la víctima (24/7), puede desembocar en una vulnerabilidad crónica. Con el desarrollo de la amenaza ineludible, los agresores provocan un gran estrés en la víctima y, por ende, una mayor probabilidad de tener efectos psicosociales severos (DePaolis & Williford, 2019).

El acoso y el ciberacoso pueden acarrear numerosos desajustes para los implicados que pueden prolongarse hasta la edad adulta. Diferentes meta-análisis han evidenciado que la participación en la agresión en el acoso y ciberacoso se vincula con mayores alteraciones externalizantes posteriores, como la violencia en el curso de la vida o el consumo de sustancias (Sigurdson et al., 2015; Ttofi et al., 2012; Vrijen et al., 2021). Asímismo, la agresión se ha asociado con un posterior deterioro de los síntomas internalizantes, como ansiedad, depresión, problemas de atención o suicidio (Katsaras et al., 2018; Sigurdson et al., 2015; Sourander et al., 2016). El comportamiento inmoral no queda impune sobre las competencias socioemocionales y el ajuste psicosocial del infractor, por cuanto se asocia con un deterioro de la autoestima, educación, actividades de ocio, empleabilidad, y disfrute de la vida (Kowalski et al., 2014; Sigurdson et al., 2014, 2015; Tsaousis, 2016).

La exposición de los escolares a la vicitmización en el acoso escolar y el ciberacoso se ha vinculado principalmente con el desarrollo posterior a corto, medio e inclusive a largo plazo de problemas internalizantes, como la ansiedad, depresión, dolor crónico, problemas de sueño, trastornos de alimentación, obesidad, síntomas psicóticos, y suicidio (Cunningham et al., 2016; Katsaras et al., 2018; Lie et al., 2019; Marin et al., 2021; Moore et al., 2017; Pastore et al., 2020; Sigurdson et al., 2015, 2018; van Geel et al., 2016, 2021; Winding et al., 2020). La victimización también se ha asociado con el desarrollo posterior de síntomas externalizantes, como la delincuencia, problemas de conducta sexual o consumo de sustancias (Moore et al., 2017; Sigurdson et al., 2014; Ttofi et al., 2012; Vrijen et al., 2021). Otros factores que pueden derivarse de la experimentación de victimización son el deterioro del ajuste psicosocial, como el estatus social, de las amistades en el aula, de la autoestima, de las

actividades de ocio, educación y empleabilidad (Brimblecombe et al., 2018; Kowalski et al., 2014; Romera, Jiménez, et al., 2021; Sigurdson et al., 2014, 2015; Tsaousis, 2016).

1.2. De la prevalencia a la investigación sobre factores psicosociales

El estudio del acoso escolar, reconocido como un problema de salud púbica que atenta contra los derechos humanos (UNESCO, 2018). Los responsables políticos y los académicos se esfuerzan por evaluar la prevalencia del acoso escolar con el fin de atender y paliar este fenómeno que atenta contra la salud pública y los derechos humanos. El acoso es un fenómeno presente en todo el mundo que surge durante infancia temprana –en la etapa preescolar ya se aprecian conductas próximas a la delimitación de acoso escolar (Ostrov et al., 2019) a través de la agresividad injustificada (Ortega & Monks, 2005)–. El acoso escolar alcanza su máxima expresión durante la adolescencia temprana y disminuye durante la adolescencia tardía (Smith, 2016; Zych et al., 2020). En cambio, el ciberacoso asciende notablemente hasta la adolescencia media, momento en el que la prevalencia tiende a disminuir ligeramente (Zych & Farrington, 2021).

La investigación sobre acoso escolar y ciberacoso ha estado siempre muy vinculada a las iniciativas educativas tratando de erradicarlo de las escuelas. Desde el punto de vista científico los primeros años de trabajo de la comunidad científica psicoeducativa se han dedicado a describir el fenómeno y su extensión en toda clase de escuela cualquiera que sea su tamaño, las características sociológicas de las poblaciones a las que éstas atienden, así como la naturaleza de sus sistemas educativos. Pero en la última década, las investigaciones sobre acoso y ciberacoso han abierto sus intereses a un análisis más detallado del sustrato motivacional, los aspectos cognitivos, emocionales y morales. Así mismo, comienza a hacerse evidente que una mejor comprensión de estos fenómenos exige la confluencia del análisis psicológico de los factores individuales y los grupales.

La prevalencia entre los escolares varía en cada contexto cultural y entre países. Las diferencias en las cifras de prevalencia entre los estudios y países podrían atribuirse tanto a factores culturales y sociales, así como a las diferentes definiciones y medidas utilizadas, lo cual requiere de cierta cautela a la hora de interpretarlas (Biswas et al., 2020; Bjereld et al., 2020). De hecho, se puede observar una amplia variabilidad incluso dentro de un mismo país (Lozano-Blasco et al., 2020).

Diferentes estudios transculturales a gran escala (sobre Europa y América del Norte principalmente) han tratado de ofrecer una visión global de la participación de los escolares en el acoso y el ciberacoso, tales como: Trends in International Mathematics and Science Study (TIMSS), Health Behaviour in School-age Children (HBSC), Global School Health Survey (GSHS), Program for International Student Assessment (PISA), y EU Kids Online (EUKO). Además, numerosos meta-análisis y revisiones sistemáticas han recabado estudios de prevalencia para trazar una panorámica de la vinculación de los escolares con el acoso escolar.

En cuanto al bullying, un estudio enmarcado dentro del proyecto HBSC realizado con 317.036 escolares (entre 12-17 años) de 83 países destacó que un 31% afirmaba haber sufrido el fenómeno una o más veces durante el último mes (Biswas et al., 2020). En cambio, en un estudio sobre ciberacoso en 180.919 escolares (entre 11-15 años) de 42 países, se encontró una prevalencia del 9% en la agresión y del 13% en victimización.

Uno de los meta-análisis pioneros recopiló datos de 40 países y encontró una prevalencia media del 26% del acoso escolar (con una variabilidad entre países de entre el 7% y el 41%) con una muestra total de 202.056 escolares (Craig et al., 2009). En base a la implicación en ciberacoso, un meta-análisis sobre 137 estudios mostró que la prevalencia oscilaba entre el 15% y el 40% (Kowalski et al., 2014). En un meta-análisis sobre ambos fenómenos que incluyó a 80 estudios se encontró que el 35% y 16% de los escolares se habían visto involucrados en episodios de agresión offline y online respectivamente, mientras que el 36% y 15% habían sufrido victimización cara a cara y en la red (Modecki et al., 2014).

A través de los estudios transculturales a gran escala mencionados, las diferencias de sexo en la prevalencia ponen de manifiesto que los chicos están más involucrados en la agresión tanto escolar como online (Smith et al., 2019). No obstante, no hay consistencia en cuanto a las diferencias entre chicos y chicas sobre la implicación en victimización (Smith et al., 2019).

Atendiendo al contexto español, numerosos estudios han considerado la prevalencia a partir del uso de diferentes criterios e instrumentos, así como de muestras de escolares de diversas procedencias geográficas. Un estudio enmarcado en el proyecto HBSC encontró una prevalencia de victimización en acoso escolar entre el 4,1% y el 14,6% en los diferentes tipos

de acoso en un total de 64.099 escolares (entre 11 y 18 años) (Sánchez-Queija et al., 2017). Un reciente estudio elaborado en 2.068 escolares de distintas regiones de España encontró una prevalencia del acoso cara a cara del 15% en comportamientos de agresión y del 29% en victimización (González-Cabrera et al., 2020). Respecto al ciberacoso, se ha encontrado una prevalencia del 5% en victimización y el 3% en agresión (proyecto HBSC) (Craig et al., 2020).

Así mismo existen revisiones sistemáticas que han agrupado la implicación de los escolares españoles. En una revisión sobre 31 estudios se encontró una prevalencia media del 13% en la victimización cara a cara (entre 4% y el 29%) y del 7% en la victimización en la red (entre el 5% y el 9%) (García-García et al., 2017). Por otro lado, en una revisión sistemática sobre el ciberacoso con 21 estudios, se encontró una prevalencia media del 27% y 25% en victimización y agresión respectivamente (Zych et al., 2016).

La investigación sobre acoso escolar y ciberacoso ha estado siempre muy vinculada a las iniciativas educativas tratando de erradicarlo de las escuelas. Desde el punto de vista científico los primeros años de trabajo de la comunidad científica psicoeducativa se han dedicado a describir el fenómeno y su extensión en toda clase de escuelas, cualquiera que sea su tamaño, las características sociológicas de la población a la que ésta atiende, así como la naturaleza de sus sistemas educativos. Ello ha contribuido a la sensibilización de la comunidad educativa y social sobre la importancia de ambos fenómenos. No obstante, en la última década, las investigaciones sobre acoso y ciberacoso han abierto sus intereses a un análisis más detallado del sustrato motivacional, los aspectos cognitivos, emocionales y morales con la finalidad de dar soporte a los programas psicoeducativos de prevención e intervención del bullying y el ciberbullying. Así mismo, comienza a hacerse evidente que una mejor comprensión de estos fenómenos exige la confluencia del análisis psicológico de los factores individuales y los grupales.

CAPÍTULO
2

Procesos cognitivos, emocionales y morales en el fenómeno del acoso y el ciberacoso

Durante las últimas décadas, son numerosos los trabajos que han explorado los factores que explican por qué los escolares se ven implicados en fenómenos de agresión. Diferentes meta-análisis han esbozado los factores de riesgo y de protección implicados en la agresión en el acoso y ciberacoso (Álvarez-García et al., 2015; Chen et al., 2017; Gini et al., 2014; Kowalski et al., 2014; Lozano-Blasco et al., 2020; Walters, 2020; Zych et al., 2019).

En el presente capítulo se pretende recoger el estado actual del arte en base a determinadas características de naturaleza cognitiva, emocional y moral, que se han identificado como claves en la promoción de los comportamientos de acoso escolar y ciberacoso. Entre ellas destacan los procesos emocionales, tantos los que se relacionan con las emociones sociales (culpa y vergüenza) derivadas de la naturaleza inmoral de un comportamiento que, confrontado tanto con los valores éticos, como con la experiencia normativa de la socialización, emergen cuando se realizan actuaciones de agresión injustificada como son las que acontecen en el acoso y el ciberacoso. Entre las emociones más primitivas, la ira es una de las más experimentadas. Las relaciones interpersonales entre iguales son una fuente de aprendizaje y desarrollo de la gestión de las emociones. Dependiendo de cómo se afronte la ira, se puede dar lugar a una respuesta adaptativa o desadaptativa. Mediante estrategias centradas en la emoción, como la rumiación, la ira puede tener implicaciones conductuales desadaptativas. En consecuencia, la rumiación de la ira puede ser un factor de riesgo para la involucración de los escolares en la agresión.

2.1. Desconexión moral y control de la culpa y la vergüenza

La investigación vinculada al desarrollo moral se ha interesado por comprender el vínculo entre cognición moral y la conducta. Las teorías clásicas del desarrollo cognitivo, en concreto las teorías cognitivo-constructivistas, sostienen que la conducta es la combinación del razonamiento moral y el conocimiento sobre el comportamiento correcto en una situación determinada (Kohlberg, 1984; Piaget, 1964). Desde esta perspectiva, se asume que el desarrollo moral está asociado a las habilidades cognitivas, como el razonamiento moral.

La agresión es una conducta inmoral (Ortega & Mora-Merchán, 1996). Ello se refleja en el rol central que ha tenido la moral en la investigación para comprender por qué los escolares se implican en acoso (Romera, Casas, et al., 2019). Los escolares reconocen el acoso escolar como una de las transgresiones más graves en cuanto el daño que causa a la víctima

(Thornberg et al., 2017). Entonces, ¿por qué las personas 'buenas' pueden comportarse 'mal'? Para comprender la implicación en el comportamiento agresivo en el acoso escolar, es preciso tener en cuenta los mecanismos morales de autorregulación que se activan para explicar el comportamiento inmoral (Bandura, 1999).

Conforme a la *teoría de la agencia moral* las personas ponen en marcha procesos de autorregulación encaminados a actuar conforme a criterios morales, lo cual les proporciona satisfacción y sensación de valía personal (Bandura, 1986). Ello les lleva a eludir aquellas conductas que infringen los estándares morales para evitar o minimizar las sanciones externas pero fundamentalmente las autosanciones (sentimiento de culpa, remordimiento o autocondena). Ahora bien, la conducta no siempre está regulada en base a los estándares morales (Bandura, 2016). De acuerdo con la teoría socio-cognitiva, la interacción de factores individuales y sociales podrían desactivar los mecanismos de autorregulación y, por consiguiente, la autocondena moral. De este modo, podría producirse una inhibición de las conductas morales y prosociales, al tiempo que se genera una tendencia a realizar conductas antisociales.

Para explicar este proceso, Bandura (2002) introdujo el concepto de *desconexión moral*, definido como un conjunto de mecanismos cognitivos que tratan de legitimar la propia conducta inmoral tras la transgresión del criterio moral. Dicha distorsión está causada por la desactivación selectiva de los mecanismos de control interno y las autosanciones morales que, a pesar de entrar en conflicto con las creencias y valores sociales, evitan los sentimientos de culpa, remordimiento o vergüenza (Doramajian & Bukowski, 2015). Se trata de un proceso que se adquiere gradualmente mediante la aceptación sucesiva de comportamientos que anteriormente se habían internalizado como crueles, antisociales e inaceptables. Los individuos pueden desactivar selectivamente el proceso de autorregulación bajo determinadas circunstancias, donde consideran que la transgresión es razonable. Estos mecanismos de desconexión moral pueden utilizarse en situaciones diarias en las que las personas muestran un comportamiento que les beneficia en detrimento de cualquier otra persona (Bandura, 1999). Así, estos mecanismos no solo repercuten en las conductas delictivas, sino que también operan en situaciones cotidianas, llegando a considerar que todo comportamiento agresivo puede ser justificable. En consecuencia, personas reconocidas por sus principios éticos pueden desviarse

temporalmente de sus creencias morales intrínsecas, sin ser conscientes de su conducta poco ética, proceso conocido como *ceguera moral* (Bauman & Donskis, 2013).

Bandura et al. (1996) propusieron ocho mecanismos diferenciados que justifican la transgresión del criterio moral, agrupados en cuatro estrategias: la *reestructuración cognitiva*, la *minimización de la culpa*, la *distorsión de las consecuencias* y la *culpa o deshumanización de la víctima* (Bandura, 2002).

La reestructuración cognitiva hace mención a la reconstrucción de la conducta para no ser percibida como inmoral: a) la *justificación moral* hace referencia a la visión de los actos inmorales como algo personalmente más positivo y aceptable por razones morales o de dignidad social ('Está bien pelearse con quien amenaza el honor de tu grupo'); b) el *lenguaje eufemístico* trata de disminuir o tergiversar la intensidad y magnitud de la conducta inmoral a través del lenguaje de tal forma que pierda su carácter dañino ('Coger la bici de alguien sin su permiso es solo *tomarla prestada*'); y c) la *comparación ventajosa* que supone reinterpretar los actos comparando la propia conducta con otra considerada más grave, con lo que la propia conducta no parece tan dañina ('Robar algo de dinero no es tan grave si lo comparas con aquellos que roban mucho dinero').

La minimización de la culpa trata de reducir la implicación del agresor mediante: d) el *desplazamiento de la responsabilidad*, al transferir la responsabilidad de las acciones a otras personas o situaciones ('No se puede culpar a los chicos/as por portarse mal si sus amigos les presionaron para que lo hiciera'); y e) la *difusión de la responsabilidad*, al diseminar la culpa entre todos los miembros de un grupo, atenuando o desvaneciendo la responsabilidad individual ('No es justo culpar a un chico/a que solo ha participado un poco en algún daño causado por el grupo').

La distorsión de las consecuencias es una estrategia que aplica el uso de la f) *distorsión de las consecuencias* al considerar erróneos o sobredimensionados los efectos de un comportamiento inmoral, permitiendo un distanciamiento del daño causado al enfatizar los efectos positivos en lugar de los negativos ('Está bien decir pequeñas mentiras porque en realidad no hacen daño').

La culpa o deshumanización de la víctima implica mecanismos de: g) *deshumanización* para disminuir la naturaleza humana de las víctimas, sometiendo la

trascendencia de sus vidas al percibirlas como personas sin sentimientos, esperanzas y preocupaciones ('Los chicos/as que reciben maltrato normalmente han hecho algo para merecérselo'); y h) la *atribución de la culpa* es un mecanismo que percibe el comportamiento inmoral como una reacción normal al considerar a la víctima como principal responsable de la conducta ('Alguien que es odioso no se merece ser tratado como un ser humano').

El desarrollo de los mecanismos de desconexión moral está vinculado con el desarrollo cognitivo-moral (Bussey, 2020). Desde la propuesta teórica original de Bandura (2018), la desconexión moral se ha considerado como un rasgo de los individuos. Como consecuencia la desconexión moral tiende a ser estable, por lo que los cambios en su desarrollo se manifiestan a largo tiempo. A nivel evolutivo, en un análisis prospectivo sobre la tendencia global de la desconexión moral durante la adolescencia se evidencia que el pico de mayor prevalencia se ocasiona a los 14 años (Paciello et al., 2008). A los 16 años se produce un considerable descenso, edad a partir de la cual se evidencia cierta estabilidad a pesar de la tendencia decreciente.

En cuanto a las diferencias de sexo, existe una clara evidencia de que los chicos utilizan en mayor medida que las chicas este tipo de estrategias (Falla et al., 2020; Romera, Ortega-Ruiz, et al., 2021). Las diferencias pueden ser un reflejo de la socialización de la agresión en función del sexo, ya que el comportamiento agresivo de los chicos tiene una connotación y un valor social funcional (Bandura, 2016). Ello puede implicar una mayor percepción de legitimad de su comportamiento inmoral.

Desconexión moral y acoso escolar

Diferentes revisiones sistemáticas y meta-análisis han puesto de manifiesto cómo la desconexión moral ha sido ampliamente utilizada para comprender por qué los chicos y chicas se ven implicados en comportamientos de agresión (Bussey, 2020; Chen et al., 2017; Gini et al., 2014; Killer et al., 2019; Romera, Casas, et al., 2019), y delictivos (Lowry et al., 2017; Ntoumanis et al., 2014). Específicamente sobre el acoso escolar, en un meta-análisis sobre 27 estudios que implicaban a 17.776 escolares de entre 8 y 18 años se evidenció la asociación positiva entre desconexión moral y bullying ($r = 0,25$) y ciberbullying ($r = 0,31$) (Gini et al., 2014). En dicha asociación no hubo diferencias de sexo, aunque sí en base a la edad, pues en los adolescentes la asociación fue mayor en comparación con los niños y niñas. Recientemente

se ha publicado un meta-análisis sobre la asociación entre desconexión moral y acoso que abarca a 77 estudios y a 43.809 escolares de entre 7 y 19 años (Killer et al., 2019). En este caso, la desconexión moral estuvo asociada de forma positiva con la agresión cara a cara ($r =$ 0,31), agresión en la red ($r = 0,30$), victimización cara a cara ($r = 0,06$), victimización en la red ($r = 0,17$) y conducta defensiva en la red ($r = 0,19$), mientras que de forma inversa con la conducta defensiva cara a cara ($r = -0,17$). No obstante, estos meta-análisis consideraron estudios de naturaleza transversal, así como la correlación entre desconexión moral y acoso escolar. De este modo, su foco de estudio estaba en la exploración del solapamiento de la desconexión moral y acoso, más allá de explorar la direccionalidad de la asociación.

Los escasos estudios de carácter longitudinal han evidenciado que aquellos escolares con altos niveles de desconexión moral tienen mayor probabilidad de verse envueltos tanto en la agresión online y offline (Bjärehed et al., 2021; Falla et al., 2020, 2021; Georgiou et al., 2021; Marín-López et al., 2020; Teng et al., 2019, 2020; Thornberg, Wänström, Pozzoli, et al., 2019; Wang et al., 2017). Tan solo los meta-análisis focalizados en ciberacoso han evidenciado que la desconexión moral predice una mayor implicación tanto en agresión ($r =$ 0,28) como en victimización ($r = 0,14 - r = 0,15$) (Chen et al., 2017; Kowalski et al., 2014). Por el contrario, un menor número de investigaciones han explorado la asociación inversa, si la agresión predice una mayor desconexión moral. Los resultados en este caso son inconsistentes, habiéndose encontrado tanto una predicción positiva como la inexistencia de relación (Georgiou et al., 2021; Teng et al., 2019; Thornberg, Wänström, Pozzoli, et al., 2019; Visconti et al., 2015; Wang et al., 2017).

Hasta ahora, la investigación ha analizado el papel de la desconexión moral como una serie de estrategias cognitivas fijas y estables de la personalidad (Thornberg et al., 2021). En cambio, la desconexión moral también se ha de considerar como un estado o proceso que puede cambiar a corto plazo (Schaefer & Bouwmeester, 2020). En esta línea, la evidencia empírica ha señalado que la desconexión moral es sensible a los cambios a corto plazo (Sticca & Perren, 2015). Así mismo, una reciente línea de investigación sostiene que la desconexión moral también debe ser abordada como estado en el contexto del acoso, ya que cambios a corto plazo en la desconexión moral se han asociado con cambios posteriores en agresión (Teng et al., 2019, 2020; Thornberg, Wänström, & Hymel, 2019).

Aunque las investigaciones anteriores han proporcionado información sobre cómo los mecanismos de desconexión moral contribuyen a dilucidar la forma en que los escolares se involucran en el acoso escolar, aún es necesario profundizar en este aspecto mediante la consideración de la desconexión moral como un estado. De este modo, se podrá explorar si los cambios a corto plazo en este mecanismo de autorregulación afectan a la implicación en agresión entre iguales o viceversa, si la participación en comportamientos violentos puede provocar la activación de la desconexión moral.

2.2. Rumiación de la ira, agresión y victimización

La etapa escolar está caracterizada por la importancia de las relaciones sociales entre iguales (Rubin et al., 2015). En ocasiones, en el grupo de iguales emergen emociones estresantes y negativas como resultado de situaciones desafiantes (por ejemplo, el ser tratado injustamente). Estas emociones negativas pueden conducir a una percepción ampliada de la amenaza y a una exigencia de respuesta para mitigar el estrés (Agnew, 2007). Entre otras emociones experimentadas a menudo por los escolares, la ira es una de las emociones más experimentadas, llegando a desarrollarse varias veces a la semana, incluso hasta varias veces al día (Li et al., 2019). La ira puede tener una función adaptativa, ya que alerta de posibles amenazas en el entorno social (Kreuze et al., 2021). A nivel cognitivo, en general, los escolares tienden a gestionar emocionalmente las situaciones de forma adecuada. Sin embargo, las estrategias de gestión de la ira no siempre son exitosas. Cuando la ira es frecuente, intensa o prolongada puede ser desadaptativa, lo cual queda reflejado en desajustes psicológicos (Veenstra et al., 2018). Por ejemplo, la ira puede conducir a una interpretación negativa de las situaciones ambiguas sociales que se experimentan para afrontar la experiencia desagradable (Cougle et al., 2017).

¿Por qué algunos escolares superan con mayor eficacia las experiencias socialmente desagradables? La *teoría de los estilos de afrontamiento* ayuda a analizar cómo los individuos afrontan las experiencias desagradables (Nolen-Hoeksema, 1991). De acuerdo con esta teoría, las estrategias de afrontamiento pueden clasificarse en aquellas que se *centran en la emoción* y las que se *centran en el problema*. Las estrategias de afrontamiento *centradas en el problema* tienden a desarrollar una respuesta adaptativa por cuanto procuran eliminar o minimizar el impacto de la vivencia centrándose en el causante del estrés (por ejemplo, resolución de

problemas o búsqueda de apoyo) (Moreno-Manso et al., 2021; Spiekerman et al., 2021). Por el contrario, aquellas estrategias centradas en la emoción persiguen reducir la angustia experimentada mediante la focalización en el estado afectivo relacionado con el estresor (por ejemplo, preocuparse excesivamente o ignorar el problema). En consecuencia, el afrontamiento centrado en la emoción se ha relacionado con un posterior desajuste psicosocial vinculado a los problemas internalizantes, principalmente a la depresión, y a los externalizantes (Moreno-Manso et al., 2021; Spiekerman et al., 2021).

Un ejemplo de afrontamiento centrado en la emoción puede ser el no poder dejar de pensar en el episodio que causó el malestar. Este ejemplo se refiere a la rumiación como un proceso cognitivo de afrontamiento de vivencias y sentimientos negativos mediante el pensamiento repetitivo y pasivo sobre los síntomas, las causas y las consecuencias (Nolen-Hoeksema, 1991). La rumiación es bastante amplia por cuanto engloba la propensión a incidir en una diversidad de sentimientos más allá de una emoción específica. Ahora bien, la investigación se ha extendido en el estudio de este procesamiento cognitivo sobre emociones específicas que a su vez provocan un mayor desajuste, como la rumiación de la ira.

La *rumiación de la ira* supone focalizar los pensamientos relativos al estado interno mediante un proceso de reflexión persistente sobre las causas y las consecuencias de un episodio de ira (Sukhodolsky et al., 2001). Se trata de una reflexión involuntaria y recurrente que da lugar a especulaciones sobre la ira (Denson, DeWall, et al., 2012). Este procesamiento se nutre se estrategias cognitivas como el recuerdo de la ira, los pensamientos de venganza, la ira posterior y la comprensión de las causas (Sukhodolsky et al., 2001). El *recuerdo de la ira* permite tener presente los pensamientos asociados con eventos no inmediatos que ha provocado el malestar ("Pienso sobre determinados sucesos que me ocurrieron hace mucho tiempo y todavía me siguen enfadando"). Los *pensamientos de venganza* se focalizan en los deseos de devolver al provocador lo que se está padeciendo ("Cuando alguien me enfada no puedo parar de pensar en cómo devolvérsela"). La *ira posterior* se refiere a los pensamientos posteriores sobre detalles concretos de la situación que provocó el malestar ("Cuando la discusión se ha terminado, sigo peleándome con esa persona en mi imaginación"). La *comprensión de las causas* implica el esfuerzo por detectar las razones que han provocado la experiencia de ira ("Pienso acerca de las razones por las que la gente me trata mal").

La investigación ha puesto en evidencia la relevancia de la manifestación de emociones negativas, como la ira, en la aparición del acoso. Así pues, se ha encontrado que aquellos escolares con implicación en la agresión y la victimización experimentan con mayor frecuencia ira en comparación con aquellos escolares no implicados (De Pasquale et al., 2021; Ortega et al., 2012). Así mismo, en cuanto a la gestión que hacen los escolares, se ha encontrado que aquellos implicados en la victimización y agresión en el acoso escolar y ciberacoso tienen una mayor rumiación de la ira en comparación con los escolares no implicados (Zsila et al., 2018, 2019). Si bien estos estudios tienen un carácter descriptivo, es necesario contextualizar la rumiación de la ira en su interacción con longitudinal con la victimización y agresión.

CAPÍTULO

3

Factores grupales:
la perturbadora necesidad de popularidad

Durante las últimas décadas la popularidad ha recibido una especial atención en el contexto del acoso escolar, dada la potencial influencia en el comportamiento de los escolares (Adler & Adler, 1998; Cillessen & Mayeux, 2004). La popularidad se refiere al alto nivel de visibilidad, influencia y prestigio dentro del grupo de iguales (Cillessen & Marks, 2011). De acuerdo con la *teoría de la identidad social*, aquellos escolares populares son percibidos como más importantes dentro del grupo de iguales y más influyentes en la toma de decisiones (Hogg, 2005). Durante la etapa escolar, los chicos y chicas son conscientes de su propia posición en el grupo de iguales (Prinstein, 2018; Rose & Rudolph, 2006), y tienden a estar motivados en la búsqueda de estatus para alcanzar éxito social (por ejemplo, admiración, consideración y apoyo de los demás, o capacidad de atracción e influencia sobre otros) (Rubin et al., 2015).

La popularidad es una característica ampliamente asociada con el acoso escolar (Pouwels & Garandeau, 2021), evidenciándose que los agresores tienden a tener una buena posición social dentro del grupo de iguales (Romera, Bravo, et al., 2019).

De acuerdo con la *teoría del control de recursos,* la agresión se considera una estrategia deliberada en el grupo de iguales que permite alcanzar una posición de dominio social y acceder a los beneficios asociados como puede ser la popularidad (Hawley, 1999; Huitsing et al., 2014). En base a la *teoría del control de recursos*, el acoso escolar se ha asociado con motivos de recompensa social intencional (Dumas et al., 2019; Runions et al., 2018). En un reciente estudio se demostró que aquellos escolares con un mayor empleo de estrategias coercitivas del control de recursos se mostraron más implicados en agresión (Clark et al., 2020). El acceso a estos recursos conlleva un empoderamiento del agresor sobre la víctima. Conforme a este planteamiento, el agresor no suele caracterizarse por un deterioro en las habilidades sociales, sino que más bien puede disponer de cierto desenvolvimiento social para manipular a sus compañeros y compañeras y conseguir sus propias metas (Sutton et al., 1999).

3.1. La necesidad de popularidad, acoso escolar y desconexión moral

La *necesidad de popularidad* es un constructo que alude a la voluntad de actuar con el objetivo de ser reconocido como popular dentro del grupo (Santor et al., 2000). Desde el punto de vista evolutivo, este tipo de motivaciones vinculadas a la obtención de estatus son un factor clave, incluso consideradas normativas, independientemente de si los escolares alcanzan o no

la popularidad deseada, pues influyen notablemente en la conducta (Moffitt, 1993). Tanto el desarrollo puberal y la transición de la Educación Primaria a la Educación Secundaria constituyen una etapa clave donde el procesamiento socio-afectivo se vincula con un creciente interés por alcanzar visibilidad y prestigio en detrimento de otras motivaciones sociales (Dawes & Xie, 2017; Meisel et al., 2021).

La investigación se ha interesado sobre como la necesidad de popularidad repercute en la conducta. La necesidad de estatus puede desencadenar una serie de conductas de riesgo, reconocidas por los escolares, tales como el uso inadecuado de las redes sociales, el consumo de sustancias o la agresión (Casas et al., 2019; Dumas et al., 2019; Malamut et al., 2020; van den Broek et al., 2016). Según la *teoría del procesamiento de la información social* (Crick & Dodge, 1994; Dodge, 2014), las personas pueden tomar decisiones según las expectativas del resultado de su comportamiento. En esta línea, la motivación conduce a que las personas se centren en la información sobre la meta a conseguir, valoren la conveniencia de las alternativas y activen estrategias conductuales para intentar alcanzarla.

Atendiendo a estos principios, la necesidad de popularidad puede condicionar las conductas de los escolares. En el contexto del bullying, las expectativas están vinculadas con los costes y beneficios de la agresión (Pouwels et al., 2019). En otras palabras, si la agresión puede propiciar cierta popularidad con un coste mínimo, la probabilidad de que los escolares tomen la decisión de agredir será alta (Pan et al., 2020). Dado que la agresión puede ser un instrumento que dota a los escolares de una posición de privilegio, chicos y chicas pueden encontrar razones suficientes para generar comportamientos de acoso con la finalidad de alcanzar el ansiado reconocimiento dentro del grupo.

Los propios escolares reconocen el valor de la popularidad entre sus iguales. A través de un estudio cualitativo se preguntó sobre los motivos por los cuales se implicaban los escolares en acoso. El 35% de los escolares manifestó que la búsqueda de estatus en el grupo de iguales era un factor de riesgo de acoso escolar (Thornberg et al., 2012); "*Algunas personas quieren mostrarse como 'populares'. Se creen muy guays y quieren demostrarlo intimidando a otra persona*" (Thornberg & Knutsen, 2011, p. 183). A través de estudios transversales, la literatura ha reconocido la necesidad de popularidad como un factor de riesgo del acoso escolar (Caravita & Cillessen, 2012; Duffy et al., 2017; Garandeau & Lansu, 2019; Romera et al., 2017; Sijtsema et al., 2009).

No obstante, los estudios se han centrado en la necesidad de popularidad como predictor, más que un resultado de la agresión. Al igual que ocurre con la percepción de popularidad (Stevens et al., 2020), existen algunos estudios que apuntan a que la necesidad de popularidad y el acoso escolar pueden influenciarse mutuamente.

En base a la *teoría socio-cognitiva* (Bandura, 2001), la agresión podría está asociada con la recompensa social. La intimidación ejercida sobre otros puede ser una vía de acceso a los recursos sociales del grupo ligados al poder (Huitsing et al., 2014). Este vínculo podría estimular la necesidad de popularidad, no solo para acceder a los recursos del grupo, sino también para conservar ese carácter preponderante de influencia y visibilidad (Malamut et al., 2020). Hasta la fecha los estudios que han tomado las metas de popularidad como un resultado de la agresión son escasos, encontrándose resultados ambivalentes al respecto (Dumas et al., 2019; Malamut et al., 2020).

Necesidad de popularidad y desconexión moral

Si bien la necesidad de popularidad y el acoso escolar se han asociado previamente, apenas existen estudios empíricos que ayuden a comprender cómo los escolares que buscan popularidad se implican en la agresión. Desde una perspectiva teórica que vincula motivación y moralidad, una plausible explicación puede sustentarse en la *teoría socio-cognitiva* (Bandura, 2001). La inhabilitación de estrategias de autorregulación de la conducta social, sometida a las motivaciones personales, es un elemento clave en la desconexión moral (véase apartado 1.2.1.). En este sentido, determinadas actitudes para lograr la popularidad de naturaleza egoísta (por ejemplo, "He dado de lado a algunos amigos por lo que otras personas puedan pensar de mí") pueden llegar a percibirse por los escolares como legítimas.

La moralidad individual está sustentada en las propias autoevaluaciones (Bandura, 2002). Aquellas motivaciones de naturaleza instrumental podrían condicionar el propio juicio moral de los escolares a la hora de valorar si una conducta es correcta o incorrecta moralmente (Thomas, 2021). Ello implica que una mayor motivación por la consecución de beneficios individuales podría aumentar la probabilidad de desconectar de las normas morales (Ettekal et al., 2015). El hecho de considerar sus motivaciones y beneficios individuales como legítimas y adecuadas facilita la transgresión del criterio moral a través de la desconexión moral.

Si bien no existen estudios empíricos sobre la relación entre necesidad de popularidad y desconexión moral, algunas investigaciones sí han explorado el vínculo entre popularidad y moralidad. Por ejemplo, en una muestra de adultos se observó que quienes tenían un mayor estatus eran propensos a tomar decisiones inmorales (Piff et al., 2012). En una muestra con jóvenes, la desconexión moral se asoció con la motivación para liderar a los demás (Hinrichs et al., 2012). Así pues, existe una tendencia a asociar el poder con una disminución en la comprensión sobre cómo otros piensan y sienten (Galinsky et al., 2006). Ello deriva en una insensibilidad hacia las implicaciones sociales que la conducta propia ocasiona en los demás.

Las investigaciones con escolares en torno a la moralidad y la popularidad han mostrado que las metas de popularidad están asociadas a conductas que se desvinculan de la ética, como pueden ser la abstención escolar y el daño a la propiedad (Dumas et al., 2019). En un estudio de naturaleza longitudinal, se mostró que aquellos escolares con altos niveles de desconexión moral tenían mayor probabilidad de tener posteriormente objetivos sociales vinculados con la venganza (Visconti et al., 2015). No obstante, aún no existen estudios que hayan explorado la relación cíclica entre necesidad de popularidad y desconexión moral en la adolescencia.

El análisis de las relaciones de influencia entre necesidad de popularidad, desconexión moral y agresión entre iguales requiere identificar que la necesidad de popularidad puede ser un rasgo estable o bien un estado que puede variar a corto plazo. Si bien la literatura se ha centrado principalmente en su estudio como un rasgo estable en los escolares, algunas investigaciones ya apuntan a su variabilidad a lo largo del tiempo. Un estudio sobre la tendencia longitudinal durante la adolescencia temprana evidenció cierta estabilidad de las metas de popularidad (Dawes & Xie, 2017). En este estudio, un total de 406 escolares norteamericanos del último curso de Educación Primaria (5º curso en Estados Unidos) fueron entrevistados. La tendencia de las metas de popularidad se analizó durante 24 meses a través de cinco recogidas de datos con seis meses de intervalo entre cada una. Precisamente se observó un incremento significativo de las metas de popularidad incluso después de la etapa de transición a la adolescencia.

No obstante, apenas existen estudios de carácter longitudinal que se hayan focalizado en la necesidad de popularidad como una característica asociada al estado de la persona (McDonald & Asher, 2018). En un reciente estudio con 384 adolescentes de Educación

Secundaria (entre 12 y 14 años) se ha evidenciado que aquellas metas asociadas con el necesidad de lograr estatus pueden cambiar a corto plazo (seis meses de intervalo) (Ojanen & Findley-Van Nostrand, 2020). Siguiendo con esta línea, aún se necesitan estudios que exploren si los cambios en la necesidad de popularidad a corto plazo pueden influenciar o ser influenciados por un aumento o disminución de la implicación en acoso escolar.

Si bien estudios previos han abordado la relación entre necesidad de popularidad y acoso escolar, aún se necesita profundizar en esta relación a través de la consideración de la necesidad de popularidad como un estado. En este sentido, se podrá analizar si posibles cambios en la necesidad de popularidad influyen o son el resultado de la implicación de los escolares en el acoso escolar. Además, la interacción entre desconexión moral y necesidad de popularidad podría contribuir en la comprensión del fenómeno de acoso escolar.

3.2. Complejidad psicológica de la dinámica de agresión-victimización

Previamente se ha constatado que la victimización y la agresión son factores estrechamente asociados. Un reciente meta-análisis sobre 23 estudios que implica a 43.156 escolares encontró una moderada asociación entre victimización y agresión en acoso ($r = 0,39$) (Walters, 2020). En el mismo meta-análisis, a través de seis estudios con 7.584 escolares se observó que los efectos aumentaron entre un 12% y 14% en el contexto del ciberacoso ($r = 0,44$) (Walters, 2020). Dichos resultados en el contexto online han sido refutados en otros dos meta-análisis. Uno de los meta-análisis pioneros identificó una moderada asociación concurrente entre la ciberagresión y la cibervictimización mediante una amplia muestra de 91 estudios sobre 147.434 escolares ($r = 0,51$) (Kowalski et al., 2014). El otro es un reciente meta-análisis a través de una muestra de 22 estudios con un total de 47.836 escolares ($r = 0,43$) (Lozano-Blasco et al., 2020).

Ciberagresión y cibervictimización

El contexto virtual tiene unas características específicas que difieren del bullying, que pueden explicar por qué dicha asociación es aún mayor en la agresión online. El desequilibrio de poder presente en el acoso escolar se asocia con mayores recursos físicos, sociales y psicológicos del agresor que pueden promover la indefensión de la víctima (Nelson et al., 2019). En el ciberbullying, este desequilibrio de poder también está vinculado al anonimato (Barlett, 2015), que permite dotar a la víctima del coraje necesario para vengarse e implicarse

en la ciberagresión, sin que ello le reporte represalias. Además, la red tiende a facilitar la desinhibición de los escolares, de modo que aquellos escolares más retraídos en el cara a cara pueden encontrar mayor libertad para agredir en el contexto virtual (Ansary, 2020).

Dadas estas peculiaridades, numerosos estudios han tratado de esclarecer por qué la ciberagresión y la cibervictimización están estrechamente relacionadas. Así pues, ha sido de interés abordar el carácter bidireccional entre la cibervictimización y la ciberagresión a través de estudios longitudinales. En recientes meta-análisis se ha evidenciado que la cibervictimización se asocia posteriormente con mayor ciberagresión ($r = 0,20$ - $r = 0,22$) y viceversa ($r = 0,23$ - $r = 0,24$) (Marciano et al., 2020; Walters, 2020).

El *modelo general de agresión* analiza el proceso mediante el cual los individuos se implican en la agresión y así como las consecuencias derivadas, ayudando a comprender los procesos de reciprocidad subyacentes (Allen et al., 2018; Anderson & Bushman, 2002). En este sentido, el modelo establece que los *factores personales* (por ejemplo, el sexo o la personalidad) y *contextuales* (por ejemplo, la provocación o el apoyo de los iguales o familiares) influyen en el *estado interno* de los individuos (por ejemplo, la activación fisiológica, el afecto o la cognición). El procesamiento cognitivo mediante la *evaluación* y la *toma de decisiones* (por ejemplo, la acción impulsiva o reflexiva) está determinado por el estado interno. El procesamiento cognitivo, a su vez, guía a la *conducta* en la medida en que puede o no aparecer la agresión. Así mimo, la conducta puede influir en los factores personales y contextuales, lo que deriva en el *ciclo de la violencia* (Allen et al., 2018; Widom, 1989).

Aplicado al contexto online, Kowalski y colaboradores (2014) profundizaron en el *modelo general de agresión* para comprender por qué tras la cibervictimización los adolecentes tenían mayor probabilidad de implicarse en ciberagresión. La cibervictimización, como factor contextual, al ser percibida como intencional e injustificada puede desencadenar en malestar en el estado interno (por ejemplo, hostilidad). Durante el procesamiento cognitivo, la forma en que los escolares afrontan la experiencia de victimización (véase la *teoría de los estilos de afrontamiento* en el apartado 1.2.4.) puede desembocar en una reacción de venganza y dar lugar a una respuesta de ciberagresión (Martins et al., 2019). La venganza es uno de los motivos que pueden llevar a los individuos a comportarse agresivamente, incluida en la denominada *taxonomía de las razones*, que trata de analizar las razones por las cuales los individuos se implican en violencia (Baumeister, 2001; Pinker, 2011), La conducta de

ciberagresión en las víctimas podría estar dirigida al ciberagresor original o incluso a otra persona y verse igualmente potenciada por el carácter anónimo y la desinhibición de la red.

La *teoría cognitivo-social* (Bandura, 1986) también ha tratado de explicar la importancia del aprendizaje por observación a la hora de implicarse en la agresión. Según esta teoría, las víctimas en la red pueden aprender a acosar a partir de las propias experiencias de acoso sufridas. La cibervictimización puede ser una experiencia de aprendizaje a modo de ensayo que permite almacenar en la memoria las pautas de agresión. De este modo, pueden desarrollar expectativas de poder y dominio asociadas al propio acto de agresión (Falla et al., 2020).

La mayoría de los estudios realizados hasta ahora han explorado esta relación de forma transversal, lo cual limita el establecimiento de asociaciones de naturaleza causal o correlacional, así como la comprensión de la relación bidireccional entre las variables. Además, a pesar de que la literatura ha avanzado considerablemente en los mecanismos que subyacen entre la ciberagresión y cibervictimización aún es preciso profundizar en el estudio de las variables que pueden tener una especial relevancia en su conexión (Romera, Ortega-Ruiz, et al., 2021). Con la presente tesis se pretende explorar la influencia recíproca entre cibervictimización y ciberagresión, así como su interacción con la rumiación de la ira.

La gestión de la ira y la rumiación

Las experiencias de victimización por parte de los compañeros y compañeras pueden ser un evento de rumiación de ira. Los escolares que han sido victimizados emprenden estrategias de afrontamiento. Si estas estrategias de afrontamiento incluyen técnicas centradas en la emoción, la rumiación de la ira puede derivarse (Nolen-Hoeksema, 1991). En consecuencia, la victimización puede ser un factor de riesgo en la aparición de dichas estrategias desadaptativas. Específicamente, el entorno virtual puede ser un estresor a tener en cuenta, pues el anonimato del agresor puede derivar en un gran malestar en la víctima (Dennehy et al., 2020). Además, la disponibilidad 24/7 del contenido hace que víctima pueda volver a ver el contenido ofensivo de forma ilimitada, lo que puede derivar en una exacerbación de su ira (Runions & Bak, 2015). Como consecuencia, la investigación ha constatado que la experiencia de cibervictimización se asocia posteriormente con un aumento de la rumiación en los escolares (Feinstein et al., 2014; Liu et al., 2020).

De igualmente, existen conexiones que pueden dar lugar a comprender la relación entre la cibervictimización y rumiación de la ira como una asociación recíproca. En otras palabras, la rumiación de la ira también puede actuar como un factor de riesgo para la cibervictimización. La tendencia de rumiación de la ira, al focalizarse en el afecto negativo, puede derivar en un aumento de los síntomas internalizantes, los cuales a su vez están ampliamente asociados con la cibervictimización (Izadpanah et al., 2017; Wright & Wachs, 2019). Además, el déficit de autocontrol, asociado con la rumiación de la ira (White & Turner, 2014), ha sido explorado como un factor de riesgo de la cibervictimización (Álvarez-García et al., 2019; Pratt et al., 2014). Hasta el momento la rumiación de la ira no se ha explorado como un factor asociado con la previa victimización en el ciberacoso, aunque sí se ha evidenciado su asociación con previas experiencias de victimización en el acoso escolar (Malamut & Salmivalli, 2021).

Durante la adolescencia, la rumiación de la ira también se ha asociado ampliamente con síntomas externalizantes (du Pont et al., 2018). En mayor medida, la rumiación de la ira se ha vinculado con la implicación en agresión. Desde la psicología y neurociencia, el modelo de *sistemas múltiples de la rumiación de ira* ha ayudado a comprender por qué la rumiación de la ira puede ser un antecedente de la conducta agresiva (Denson, 2013). De acuerdo con este modelo, esta conexión puede explicarse en base a cinco niveles de análisis: cognitivo, neurobiológico, afectivo, de control ejecutivo y conductual.

Tras una vivencia de una situación que provoca ira, las estrategias cognitivas que los individuos ponen en marcha (como la focalización en el contenido, el modo de procesamiento y la toma de perspectiva) pueden determinar la experiencia subjetiva de ira y la activación neurobiológica (como el control cognitivo-emocional, el afecto negativo o la activación fisiológica). Además, las estrategias cognitivas pueden determinar la duración, intensidad y el tipo de afecto negativo que se produce por la rumiación. En cuanto al control ejecutivo, la alta activación psicofisiológica provocada por la rumiación de la ira puede derivar en un déficit de autocontrol debido a que se necesitan mayores recursos cognitivos para hacer frente con el estado afectivo. La carencia de control ejecutivo deriva en una mayor propensión a exacerbar la experiencia de ira y, por ende, pueda desencadenarse la conducta agresiva, ya sea intencional o impulsiva.

Recientes estudios han evidenciado que la rumiación de la ira predice la agresión a través de estudios exploratorios de carácter transversal (Guerra & White, 2017; Salguero et al., 2020; Wang et al., 2018; White & Turner, 2014) y longitudinal (Li et al., 2019; Quan et al., 2019, 2021; Wang et al., 2020). No obstante, estos estudios están focalizados en muestras de jóvenes y adultos. Uno de los estudios pioneros durante la adolescencia en el estudio de la rumiación de la ira tomó escolares de entre 11 y 16 años (Yang et al., 2021). A través de un diseño transversal se evidenció que la rumiación de la ira es un factor de riesgo de la agresión en la red. Este resultado parece indicar que el contexto virtual es un escenario a tener en cuenta para analizar la rumiación de la ira, pues la anonimidad del agresor puede facilitar la venganza o la agresión desplazada hacia otros con una menor probabilidad de represalias (Dennehy et al., 2020). No obstante, se requiere explorar la relación entre victimización, rumiación de la ira y agresión a través de estudios longitudinales que permitan determinar la dirección y efecto de las variables de estudio.

La vinculación de la rumiación de la ira como resultado de la cibervictimización, así como antecedente de la ciberagresión. Ello puede dar lugar a esta estrategia cognitiva como un factor de riesgo que puede explicar cómo aquellos escolares que han sido previamente victimizados en la red se pueden implicar posteriormente en la ciberagresión. La experimentación de cibervictimización puede derivarse posteriormente de la puesta en marcha de estrategias desadaptativas de rumiación de la ira que pueden aumentar la probabilidad de implicarse posteriormente en la ciberagresión. Si bien este mecanismo no ha sido previamente explorado en el contexto cibernético, en un reciente estudio longitudinal con escolares si que se ha explorado la rumiación de la ira como proceso mediador en los efectos de la victimización sobre la agresión en el acoso cara a cara (Malamut & Salmivalli, 2021).

CAPÍTULO
4

Cibercomunicación:
El cibercotilleo y el uso problemático de Internet

El acceso a Internet a través de los dispositivos electrónicos ha dotado a la sociedad de un sinfín de recursos. Se trata de una alternativa que está redefiniendo las relaciones sociales, con mayor énfasis entre los más jóvenes, llegando a convertirse en un escenario de incalculable potencial de socialización (Ortega-Ruiz, 2020). Incluso algunos autores apuntan que la exponencial digitalización ha provocado la "cuarta revolución industrial" (Zunino et al., 2020).

Los escolares españoles entre 9 y 16 años acceden a Internet principalmente a través del teléfono móvil (75%), ordenador (29%) o tablet (28%) (Smahel et al., 2020). El tiempo medio que pasan los escolares conectados es de 3 horas/diarias (Smahel et al., 2020). Conforme avanza la adolescencia aumenta el uso de Internet (9-11 años, 2,2 horas/diarias; 12-14 años, 3,4 horas/diarias; 14-15 años 4,2 horas/diarias).

La red ofrece a los escolares innumerables ventajas a la hora de relacionarse con los demás, debido a que es una herramienta con acceso permanente para estar en contacto con los amigos o buscar otras relaciones a través de las redes sociales. Dadas las características propias de Internet, el ciberespacio puede desembocar en el encuentro de nuevas oportunidades o vulnerabilidades (Cabello-Hutt et al., 2018).

Si bien se ha evidenciado que el uso de la tecnología promociona el bienestar de los escolares (Giovanelli et al., 2020; Schemer et al., 2021), el 34% afirma haber padecido alguna experiencia negativa a través de Internet en el último año (Smahel et al., 2020). El ciberacoso, grooming, sexting, sextorsion, cibercotilleo, suplantación de la identidad, phishing o uso problemático de Internet son algunos de los ejemplos que ponen de manifiesto la vulnerabilidad que pueden padecer los adolecentes en Internet.

Entre las experiencias negativas, el ciberacoso ha sido uno de los factores más explorados en la investigación (véase meta-análisis; Chen et al., 2017; Kowalski et al., 2014; Lozano-Blasco et al., 2020; Zych et al., 2019). Dada la alta prevalencia e implicaciones psicosociales que trae consigo el ciberbullying (véase apartados 1.1. y 1.2.), se requiere profundizar en aquellos factores vinculados con el uso de Internet que pueden ayudar a comprender por qué los escolares se implican en fenómenos de agresión entre iguales. En diferentes meta-análisis se ha evidenciado que aquellas conductas de riesgo en Internet (por ejemplo, compartir información personal en Internet o añadir a extraños como amigos en las

redes sociales) suponen un factor de riesgo para la implicación en ciberagresión (r = 0,23 - r = 0,29) (Chen et al., 2017; Kowalski et al., 2014).

Más concretamente, la presente tesis se focalizará en el *uso problemático de Internet* y el *cibercotilleo* como conductas de riesgo en la red que han sido previamente asociadas con una mayor implicación en la ciberagresión (Falla et al., 2021; Gámez-Guadix et al., 2016).

4.1. Uso problemático de Internet y ciberagresión

El uso de Internet es positivo y enriquecedor, siempre y cuando el uso que se hace no deje que las actividades de la vida cotidiana queden relegadas a un segundo plano. Si la conducta de los escolares en la red provoca la aparición de síntomas internalizantes, así como un deterioro interpersonal se puede considerar que se hace un *uso problemático de Internet* (Caplan, 2010).

Al igual que puede ocurrir en el consumo de sustancias, el uso de Internet es una conducta repetitiva asociada con el placer. Cuando se establece una relación de dependencia entre los escolares e Internet las conductas no quedan reguladas por el control cognitivo, sino que son automáticas y se activan por la recompensa inmediata, sin considerar las posibles consecuencias negativas a largo plazo. El uso abusivo de Internet se ha asociado con un deterioro del desarrollo cognitivo llegando a afectar a la regulación emocional y metacognitición, así como vinculándose con déficits cognitivos (Casale et al., 2021; Gioia et al., 2021; Ioannidis et al., 2019).

En el informe de EU Kids Online, un total de 27% escolares españoles afirma haber usado excesivamente Internet, aumentando la prevalencia conforme avanza la adolescencia (Smahel et al., 2020). No obstante, la media edad de la primera conexión a Internet de forma autónoma se sitúa a una edad cada vez más temprana (actualmente en 10 años) (Inchley et al., 2020). En un reciente meta-análisis de 115 estudios con una muestra de 204.352 escolares queda reflejado que los chicos tienen mayor probabilidad de ser adictos a Internet (Hedges'g = 0,15, 95% CI [0,10 - 0,19]) (Su et al., 2019).

A través de diferentes revisiones sistemáticas y meta-análisis, el uso problemático de Internet se ha asociado con consecuencias a corto, medio y largo plazo. Específicamente el uso problemático de Internet se ha vinculado con un posterior aumento de los síntomas

internalizantes, como malestar psicológico, depresión, ansiedad, estrés, soledad, alexitimia, trastornos de alimentación, trastornos del sueño y trastorno obsesivo compulsivo (Alimoradi et al., 2019; Gao et al., 2020; Hinojo-Lucena et al., 2019; Hussain & Griffiths, 2018; Ioannidis et al., 2021; Kokka et al., 2021; Lozano-Blasco & Cortés-Pascual, 2020; Mac Cárthaigh et al., 2020; Mahapatra & Sharma, 2018; Männikkö et al., 2020; Marino et al., 2018a, 2018b; Moretta & Buodo, 2020). Respecto a los síntomas externalizantes, el uso excesivo de la red se ha vinculado con el consumo de sustancias, hostilidad, impulsividad, agresión y ciberacoso (Anderson et al., 2017; Dahl & Bergmark, 2020; Falla et al., 2021; Lanthier-Labonté et al., 2020).

Debido a las características vinculadas con la adicción (abstinencia, tolerancia e incluso mortalidad), la literatura ha debatido sobre la necesidad de que el uso problemático de Internet sea considerado como una adicción entre los trastornos mentales (DSM) (Block, 2008; Dahl & Bergmark, 2020).

El hecho de permanecer mayor tiempo en la red se ha considerado como un factor de riesgo para implicarse en ciberbullying (Baldry et al., 2019). En un reciente meta-análisis se ha mostrado que aquellos escolares con un menor uso de los dispositivos electrónicos tienen una menor probabilidad de verse implicados en la ciberagresión (OR = 2,10 - OR = 2,36) (Zych et al., 2019). Por el contrario, en otro meta-análisis sobre 12 estudios que implicaba a 6.764 escolares se ha evidenciado que aquellos que pasan más tiempo en Internet tienen mayor probabilidad de implicarse en ciberagresión ($r = 0,20$) (Kowalski et al., 2014). Más recientemente, en otro meta-análisis que implica a 18 estudios y 21.035 escolares se volvió a corroborar la vinculación entre frecuencia del uso de Internet y ciberagresión ($r = 0,20$) (Chen et al., 2017).

Si bien estos estudios han analizado la implicación de los escolares en agresión en la red en base únicamente al tiempo de uso de Internet, otros estudios han abordado de forma específica el uso problemático de Internet. En un estudio descriptivo reciente se asociaron las conductas de ciberadicción sobre las experiencias de ciberacoso en 3.188 escolares españoles de 12 a 17 años de edad (Feijóo et al., 2021). Los resultados evidencian que aquellos escolares implicados en ciberagresión muestran un mayor uso problemático de Internet, en comparación con aquellos que no están implicados.

En otro estudio, se analizó el efecto longitudinal del uso problemático de Internet sobre la agresión del ciberacoso sobre un total de 888 escolares españoles entre 13 y 18 años (Gámez-Guadix et al., 2016). Los resultados evidencian que aquellos escolares que hacen un mayor uso problemático de Internet mostraron mayores niveles de implicación en ciberagresión seis meses más tarde. Dichos resultados han sido posteriormente corroborados en otros estudios con muestras de diferentes países y culturas (Camerini et al., 2020).

Si bien los efectos del uso problemático de Internet y el ciberacoso han sido ampliamente evidenciados, se necesita explorar los posibles mecanismos (factores mediadores o moderadores) que pueden sustentar dicha asociación. En esta línea, se ha evidenciado que el sexo no es un factor moderador, pues no existen diferencias entre chicos y chicas en la asociación entre el uso problemático de Internet y la ciberagresión (Martínez-Ferrer et al., 2021; Yudes et al., 2021). Entre los mecanismos implicados entre ambos constructos, un estudio reciente muestra que en aquellos adolecentes con una menor inteligencia emocional, los efectos del uso problemático de Internet sobre la ciberagresión fueron mayores (Yudes et al., 2021). En otro estudio, el uso problemático de Internet se ha mostrado ser un factor mediador entre los efectos de la victimización (online y offline) en ciberagresión (Martínez-Ferrer et al., 2021).

Debido al escaso conocimiento sobre otros factores implicados es necesario explorar los posibles moderadores de la relación entre el uso problemático de Internet y la agresión online, así como el posible efecto mediador que puede ejercer este uso problemático.

4.2. Cibercotilleo y ciberagresión

Las redes sociales cada vez ofrecen más recursos a los escolares para relacionarse entre sí. Ello desemboca en la redefinición constante de las ciberconductas de los escolares como fuente de socialización. Entre las ciberconductas que tratan de explicar las interacciones en las redes sociales de los escolares se encuentra el *cibercotilleo,* que se refiere al tipo de comentarios que surgen en un grupo sobre otras personas conocidas que no están presentes (Laghi et al., 2013).

El cotilleo se ha definido como una conversación evaluativa entre personas familiares sobre otras personas que no están presentes (Eder & Enke, 1991; Foster, 2004). Los comentarios no tienen por qué tener una connotación negativa, sino que frecuentemente puede

aportar información de gran utilidad.

El cotilleo tiene la funcionalidad de informar, entretener, construir y mantener amistades e influir en otros (Foster, 2004). Para que cumpla dichas funciones, la información que se transmite ha de ser veraz (Milinski, 2019), de lo contrario la reputación del propio emisor puede verse afectada (Smith, 2014). Tiene un marcado carácter situacional porque el contexto influye notablemente en la emisión e interpretación del mensaje (Wert & Salovey, 2004). Ello implica que la intencionalidad del mensaje no solo recae en el emisor, sino que el propio grupo puede influir a través de la aceptación o rechazo de dichas conductas (Herrera López et al., 2021).

Desde la neuropsicología, estudios focalizados en el desarrollo cognitivo han evidenciado que durante la infancia y la adolescencia temprana esta estrategia de comunicación entre los iguales comienza a hacerse cada vez más común (Ingram, 2019).

Si bien se trata de un tipo de conversaciones muy prevalentes entre personas de confianza (Levin & Arluke, 2013), con frecuencia el cotilleo se ha asociado con características de naturaleza egoísta, debido a que manipula la percepción de los receptores sobre la persona ausente en la que se focaliza el mensaje (Goodman & Ben-Ze'ev, 1994). A partir de la adolescencia media, coincidiendo con el desarrollo de un pensamiento más complejo y sofisticado, es cuando se produce un aumento considerable del cotilleo con cierta connotación negativa (Ingram, 2019).

No obstante, el cotilleo también se ha asociado ampliamente con efectos positivos (Baumeister et al., 2004). El cotilleo se ha vinculado con el placer, pues a través de este tipo de evaluaciones se activa el control ejecutivo prefrontal derecho vinculado con el sistema de recompensa (Peng et al., 2015). Así pues, se considera una forma de entretenimiento grupal con un carácter gratificante que mejora las relaciones interpersonales (Ellwardt, 2019; Foster, 2004). Desde esta perspectiva, el cotilleo, como habilidad social (McAndrew, 2019), fomenta el bien común pues se ha vinculado con la cohesión grupal (Giardini & Wittek, 2019). El conocimiento de las normas y sanciones sociales hace que los miembros del grupo tiendan a cumplir las reglas (Feinberg et al., 2014; Kisfalusi et al., 2019).

Con la expansión de las relaciones interpersonales al contexto de las redes sociales en Internet, el cibercotilleo es el equivalente al cotilleo cara a cara. No obstante, es preciso

destacar que el cibercotilleo tiene unas características específicas. Si bien en el cotilleo el lenguaje verbal cobra especial importancia (Mangardich & Fitneva, 2019), en el cibercotilleo el mensaje puede presentarse por escrito, a través de un video o una imagen. El mensaje en la red se puede volver a reproducir tal y como el emisor lo envió (Bertolotti & Magnani, 2013), además de tener una amplia audiencia y estar accesible 24/7. El carácter situacional también difiere, debido a que la comunicación virtual limita la intencionalidad social que se desea transmitir, encontrando el receptor una clara dificultar para poder contextualizar el mensaje a través del uso de elementos no verbales (Mangardich & Fitneva, 2019).

El cibercotilleo ha sido identificado en la mayoría de estudios como una forma indirecta de agresión, considerándose como la manipulación de la imagen de una persona para excluirla del grupo (Archer & Coyne, 2005). No obstante, a diferencia del ciberacoso, en el cibercotilleo no tiene por qué haber una intención de hacer daño a otra persona (Tokunaga, 2010). El cibercotilleo tiene unas características específicas que hace que ambos constructos necesiten estudiarse por separado (Romera et al., 2018).

Hasta la fecha, pocos han sido los estudios que hayan explorado cómo el cibercotilleo se vincula con otras conductas de riesgo en Internet. En un estudio con 3.747 escolares españoles y colombianos de entre 10 y 19 años se encontró una moderada asociación entre la ciberagresión y el cibercotilleo ($r = 0,44$) (Romera et al., 2018). Esta relación podría explicarse por la dificultad tanto del emisor para expresar su intencionalidad en la comunicación como la del receptor para interpretarla, lo cual puede derivar en malentendidos (Del Rey et al., 2015).

En un reciente estudio se ha analizado la relación longitudinal entre el cibercotilleo y la ciberagresión en un total de 1.912 escolares españoles de 1º y 2º de Educación Secundaria (Falla et al., 2021). Los resultados destacan que aquellos escolares con mayores niveles de cibercotilleo se vincularon posteriormente con mayores niveles de implicación en la ciberagresión 12 meses más tarde. Además, dicha asociación resultó ser parcialmente explicada en un 26% por la reestructuración cognitiva, una estrategia de desconexión moral.

Si bien, la ciberagresión y el cibercotilleo se han vinculado en estudios previos, aún se requiere la realización de estudios exploratorios que continúen profundizando en su relación, así como en los posibles mecanismos implicados que pueden sustentarla.

4.3. La comunicación con la familia y la implicación en ciberacoso

Los escolares españoles reconocen que los progenitores son la segunda fuente de confianza a quien acudir cuando experimentan algún problema en Internet (49%)–la primera son los amigos (69%)–(Smahel et al., 2020). La iniciación y aprendizaje sobre el uso de los dispositivos digitales en los menores se produce dentro del contexto familiar, siendo la relación y comunicación que se establece entre ambos un factor determinante a la hora de que los escolares puedan desarrollar en mayor o menor medida ciberconductas de riesgo en Internet (Bartau-Rojas et al., 2018).

La literatura ha diferenciado diferentes tipos de mediación parental en función de las estrategias que ponen en marcha los padres y madres para ayudar a sus hijos e hijas en el uso de Internet (Bartau-Rojas et al., 2018; Livingstone & Helsper, 2008; Nielsen et al., 2019): a) ausencia de mediación, los progenitores no asisten a sus hijos e hijas sobre el uso de Internet; b) uso compartido, los progenitores e hijos e hijas acceden juntos a Internet; c) mediación activa, los progenitores asisten a los hijos e hijas sin incurrir en la crítica sobre su uso; d) supervisión, los progenitores controlan el contenido y tiempo de uso de los hijos e hijas, sin hablar con ellos; y e) mediación restrictiva, los progenitores establecen límites de acceso, así como normas de uso de Internet.

Aquellas estrategias de colaboración, como el uso compartido y la mediación activa, se han asociado con un ambiente de afecto positivo entre progenitores e hijos e hijas que deriva en una relación de intimidad y repercute positivamente en el bienestar de los chicos y chicas. De este modo, los menores pueden sentir que tienen en sus progenitores a alguien de confianza. Dentro de este contexto, en la literatura se ha prestado atención al concepto de *revelación filial,* entendida como la expresión espontánea de los hijos e hijas a sus progenitores sobre sus propias vivencias en Internet (Kerr et al., 2012), lo que les permite no ejercer otros tipos de control parental como la supervisión o la mediación restrictiva. Estudios sobre el desarrollo de la revelación filial han evidenciado que disminuye paulatinamente conforme avanza la adolescencia, principalmente en los chicos (Keijsers & Poulin, 2013; Padilla-Walker et al., 2018).

Revelación filial y conductas de riesgo en Internet

Al igual que se ha evidenciado en el contexto cara a cara (Fernández et al., 2021; Fu et al., 2021), la revelación filial puede actuar como factor protector de la aparición de ciberconductas de riesgo en la red, como el uso problemático de Internet, el cibercotilleo y el ciberacoso.

Estudios recientes han contrastado cómo cada una de las técnicas de mediación parental y revelación filial pueden influenciar las ciberconductas de los chicos y chicas en Internet. Aquellos padres y madres que ofrecen una mayor permisividad y deciden no asistir sobre el uso y contenido de Internet exponen a sus hijos e hijas a una mayor vulnerabilidad a los riesgos asociados al uso de Internet (Agbaria & Bdier, 2021; Chou & Lee, 2017; Lee & Kim, 2017). Respecto a las estrategias de mediación restrictiva, se ha encontrando que disminuyen ligeramente los riesgos en la red (Agbaria & Bdier, 2021; Ding et al., 2017; Martins et al., 2020). La mediación restrictiva ha demostrado tener una mayor eficacia en la toma de conciencia de los escolares sobre los diferentes riesgos del uso de Internet (Steinfeld, 2021), al igual que la supervisión parental (Agbaria & Bdier, 2021; Chou & Lee, 2017; Martins et al., 2020). Por el contrario, aquellas estrategias centradas en el uso compartido, en la mediación activa y en la revelación filial se han mostrado más efectivas en la reducción de las ciberconductas de riesgo (Iqbal et al., 2021; Law et al., 2010; Nielsen et al., 2019; Shin & Kang, 2015; Steinfeld, 2021).

A través de diferentes estudios comparativos, revisiones sistemáticas y meta-análisis se ha diferenciado la eficacia que tienen las estrategias parentales específicamente sobre el ciberacoso y el uso problemático de Internet. Para ambas ciberconductas se ha encontrado que la mediación parental basada en la colaboración (uso compartido y mediación activa) y la revelación filial tienen mayor eficacia en comparación con aquellas estrategias de monitorización (supervisión y mediación restrictiva) (Baldry et al., 2019; Chen & Shi, 2019; Elsaesser et al., 2017; Steinfeld, 2021; Symons et al., 2017).

La supervisión e imposición de límites y normas sobre el tiempo de uso de Internet, así como del contenido limitan el desarrollo las habilidades de resolución de problemas y autonomía de los escolares (Steinfeld, 2021). Por el contrario, un ambiente de confianza promueve que sean los propios hijos e hijas quienes hablen con sus progenitores sobre las

actividades que realizan en Internet. Este clima promociona la autorregulación e independencia sobre el uso de Internet de los chicos y chicas, lo que a su vez favorece un uso adecuado de la red.

Si bien la mayoría de los estudios sobre las ciberconductas en los escolares se han desarrollado en la etapa adolescente, es preciso tener en cuenta edades anteriores, que coinciden con el inicio del acceso de forma autónoma y por tanto existe una mayor vulnerabilidad a los riesgos asociados al uso de Internet. Durante la infancia es común la ausencia de habilidades para afrontar las experiencias negativas en la red, pues tan solo el 32% de los niños y niñas (9-11 años) afirma conocer cómo actuar ante conductas desagradables en la red (Smahel et al., 2020). Por el contrario, durante la adolescencia temprana (12-14 años) y media (15-16 años) el 71% y 77% respectivamente afirma conocer cómo proceder. Sobre la comunicación, un 48% de los escolares afirma que sus progenitores les hablan del uso de Internet a menudo (Smahel et al., 2020). En el caso de las chicas (53%) la prevalencia es mayor en con comparación con los chicos (43%). Tal y como se ha evidenciado en el desarrollo de la revelación filial (Keijsers & Poulin, 2013; Padilla-Walker et al., 2018), existe una mayor prevalencia de la comunicación sobre el uso de Internet entre progenitores e hijos e hijas durante la adolescencia temprana (53%; 12-14 años) en comparación con la adolescencia media (44%; 15-16 años) y la infancia tardía (45%; 9-11 años) (Smahel et al., 2020).

Los escolares también fueron preguntados acerca de su actitud ante los consejos que sus progenitores les dan sobre el uso de las redes sociales en Internet. Un 32% de los chicos y chicas afirma ignorar este tipo de comentarios. No obstante, esta actitud varía tiende a aumentar en función de la edad (23% en la infancia tardía, 9-11 años; 34% en la adolescencia temprana, 12-14 años; 50% en la adolescencia media, 15-16 años).

La revelación filial se presenta por tanto como un factor protector sobre la implicación en ciberconductas de riesgo como es el caso del uso problemático de Internet, el cibercotilleo y la ciberagresión. No obstante, aún se necesita explorar la relación entre estas variables de forma conjunta considerando los posibles efectos moderadores y mediadores. Este estudio resalta la importancia de los últimos años de la infancia, en los que, si bien existe una mayor vulnerabilidad ante los riesgos cibernéticos, también se caracteriza por una mayor influencia de los padres y madres sobre las conductas que sus hijos e hijas hacen por Internet.

SEGUNDA PARTE

ESTUDIO EMPÍRICO

CAPÍTULO

5

Objetivos e hipótesis y metodología

El compendio de artículos desarrollados en el marco de la presente tesis tiene como finalidad contribuir al conocimiento científico sobre la implicación de los escolares en la agresión en el acoso escolar y ciberacoso. La tesis consta de tres estudios independientes e interrelacionados entre sí. Para ello, pretende interaccionar diferentes procesos individuales de naturaleza cognitiva, emocional y moral, junto con factores contextuales en el seno del grupo de iguales y de la familia.

5.1. Objetivos e hipótesis

A través del primer estudio se analiza la relación longitudinal entre necesidad de popularidad, desconexión moral y agresión en el fenómeno del acoso escolar. Si bien, la mayoría de los estudios que han explorado la relación entre desconexión moral y necesidad de popularidad con el acoso escolar lo han realizado desde un diseño transversal, que limita el establecimiento de relaciones causales, o al menos correlacionales. Además, este tipo de estudios no permite analizar la posible reciprocidad entre estos factores morales y motivacionales respecto al acoso escolar. En otras palabras, si el acoso solo es explicado por la desconexión moral y necesidad de popularidad, o incluso el acoso puede explicar la puesta en marcha de estos mecanismos.

Los estudios longitudinales realizados hasta la fecha han empleado técnicas metodológicas como el "Cross-Lagged Panel Model" (CLPM). A través de este diseño, la relación longitudinal entre dos o más constructos puede explorarse de forma bidireccional, pues se influencian mutuamente. El CLPM es una técnica útil para analizar las relaciones longitudinales entre las variables. Sin embargo, una vez que existen evidencias al respecto, es necesario profundizar sobre otras técnicas que superen algunas de las limitaciones del CLPM. En ese sentido, el CLPM analiza las variables como un rasgo. A través de esta técnica la relación entre las variables se establece desde una perspectiva interpersonal entre los sujetos, al comparar a los individuos con el resto de los individuos. Por ejemplo, una relación positiva entre la variable A en tiempo 1 (T1) sobre la variable B en T2 indicaría que aquellos adolescentes con altos niveles A en el T1 tienen mayores probabilidades de tener también altos niveles en la variable B en el T2. De modo que no tiene en cuenta los cambios a corto plazo que se pueden observar en los individuos (estado).

A pesar de que tanto la desconexión moral como la necesidad de popularidad se consideran principalmente estables, cuyos cambios son perceptibles a largo plazo, se ha evidenciado que ambos pueden cambiar a corto plazo. Como consecuencia y una vez que se ha demostrado su asociación con el acoso en CLPM, se requiere la realización de estudios que consideren la necesidad de popularidad y desconexión moral como un estado.

Hamaker y colaboradores (2015; 2020) han discutido las limitaciones de CLPM tradicional y han propuesto un modelo alternativo. A través de la técnica "Random Intercept Cross-Lagged Panel Model" (RI-CLPM) se controlan las características rasgo de los constructos ("Between-person level"), así las relaciones longitudinales entre dos o más variables se produce a nivel de estado ("Within-person level"), es decir, tiene en cuenta que los constructos pueden evidenciar cambios a corto-plazo. A través del RI-CLPM la relación entre las variables se establece desde una perspectiva interpersonal entre los sujetos, al comparar a los individuos con ellos mismos. Por ejemplo, una relación positiva entre la variable A en T1 sobre la variable B en T2 indicaría que aquellos adolescentes que muestran cambios niveles A en el T1 respecto a su puntuación media también muestran cambios en la misma dirección en la variable B en el T2 respecto a su puntuación media.

En el presente estudio se analiza la relación entre las tres variables de forma longitudinal a través de un análisis a nivel intra e inter-sujeto (between- and within-person level). Para ello, se emplea un diseño longitudinal de cuatro recogidas con seis meses de intervalo entre cada una. El objetivo del primer estudio fue comparar las relaciones bidireccionales a nivel de rasgo y de estado entre la necesidad de popularidad, desconexión moral y acoso escolar. En las Figuras 1 y 2 se pueden observar los modelos teóricos propuestos. Las hipótesis que se establecieron fueron:

Hipótesis 1: La agresión del acoso escolar y la desconexión moral se influenciarían mutuamente de forma bidireccional.

Hipótesis 2: La necesidad de popularidad se asociaría posteriormente con el acoso escolar.

Hipótesis 3: La necesidad de popularidad se asociaría posteriormente con la desconexión moral.

Figura 1

Modelo Propuesto de "Cross-Lagged Panel Model"
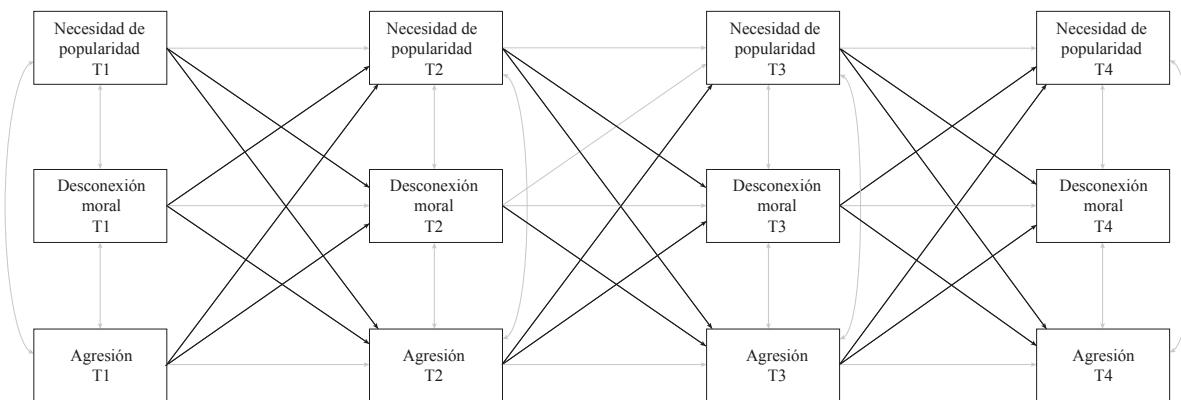
Figura 2

Modelo Propuesto de "Random Intercept Cross-Lagged Panel Model"
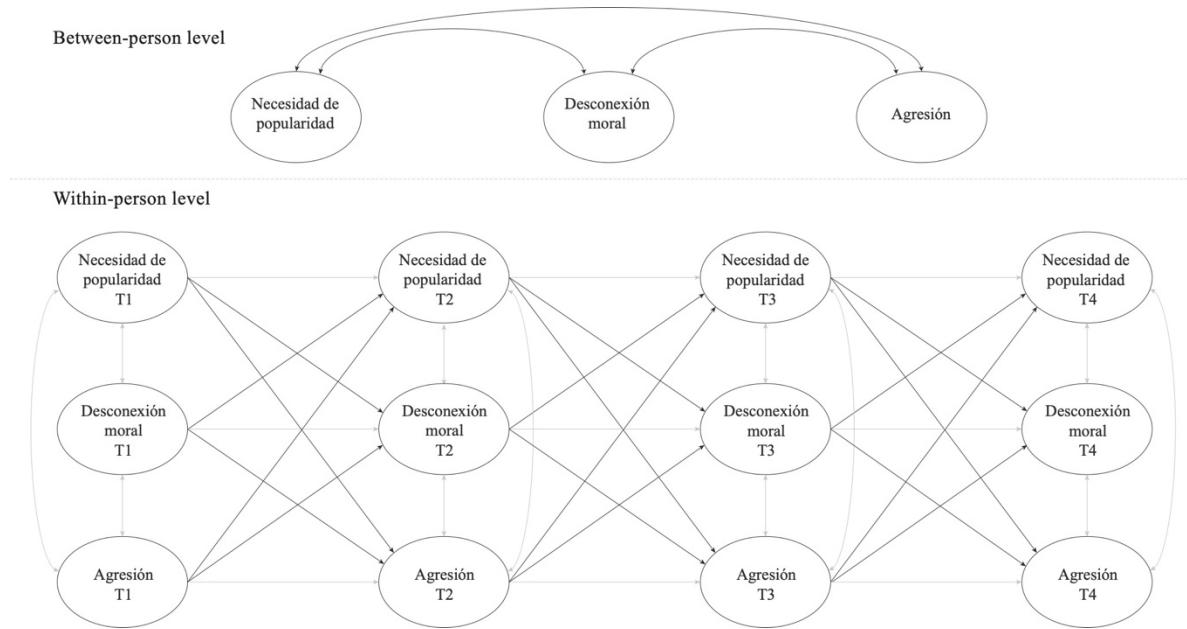
Mediante el estudio dos se analiza la relación longitudinal entre la rumiación de la ira, la cibervictimización y ciberagresión. En el contexto del ciberacoso, estudios transversales y longitudinales se han focalizado en comprender por qué la victimización y agresión están tan estrechamente asociados. Sin embargo, se necesitan estudios que profundicen en los mecanismos implicados en el ciberacoso. Recientemente han emergido estudios transversales que tratan de explorar dichos mecanismos. En consecuencia, para poder establecer relaciones

causales, así como la reciprocidad entre las variables, estudios longitudinales deben entrever dichas asociaciones. Dada la relación previa con agresión y victimización, el presente estudio se focaliza en la rumiación de la ira como un factor cuya relación con la implicación en ciberacoso puede ser recíproca.

En el presente estudio se analiza la relación entre cibervictimización, ciberagresión y rumiación de la ira a través de un diseño longitudinal de cuatro recogidas de datos con seis meses de intervalo entre cada una. El objetivo del presente estudio fue analizar las relaciones bidireccionales, así como los posibles efectos de mediación entre la rumiación de la ira, la cibervictimización y la ciberagresión. En la Figura 3 se pueden observar el modelo teórico propuesto. Las hipótesis que se establecieron fueron:

Hipótesis 1: La cibervictimización predeciría la ciberagresión (Hipótesis 1a), pero no al contrario (Hipótesis 1b).

Hipótesis 2: La cibervictimización predeciría la rumiación de ira (Hipótesis 2a), y la rumiación de la ira la cibervictimización (Hipótesis 2b).

Hipótesis 3: La rumiación de ira predeciría la ciberagresión (Hipótesis 3a), pero no al contrario (Hipótesis 3b).

Hipótesis 4: No habría diferencias de sexo (Hipótesis 4a) y edad (Hipótesis 4b) en base a la asociación entre las variables.

Hipótesis 5: La rumiación de la ira mediaría la relación entre la cibervictimización y la ciberagresión (Hipótesis 5a). Además, la cibervictimización mediaría la asociación entre la rumiación de la ira y la ciberagresión (Hipótesis 5b).

Figura 3

Modelo Propuesto de Cross-Lagged Panel Model
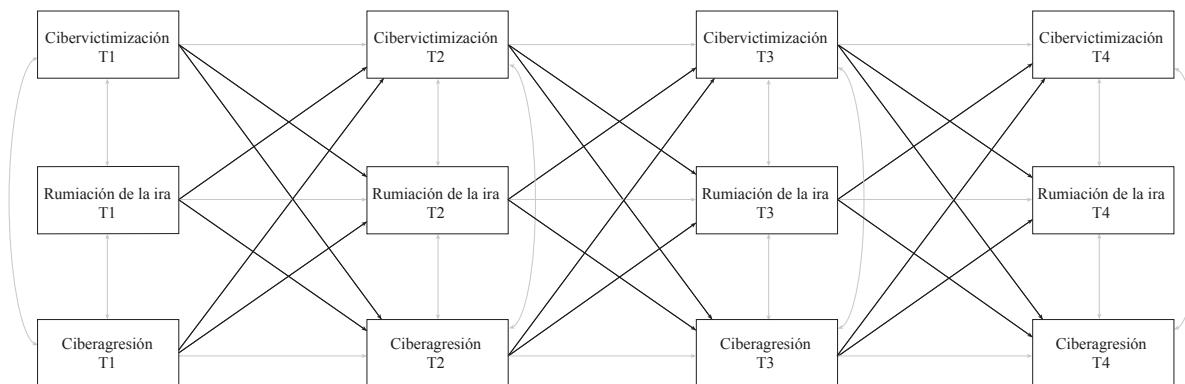
En el tercer artículo se trata de analizar rol protector de la revelación filial en cuanto a la implicación de los escolares en las ciberconductas de riesgo. Las estrategias colaborativas de mediación parental han sido ampliamente asociadas con efectos positivos en la reducción de la implicación de ciberconductas de riesgos. Entre ellas, se ha identificado el efecto de la revelación filial sobre el uso de Internet en la ciberagresión. Sin embargo, hasta la fecha no se ha profundizado en los diferentes mecanismos que pueden sustentar dicha relación. Además, los estudios se han desarrollado mayoritariamente en la etapa de la adolescencia. Dado que el uso de Internet comienza cada vez a una edad más temprana (Inchley et al., 2020), son necesarios estudios que analicen el uso problemático de Internet durante la infancia tardía.

A través de la mediación y mediación moderada con un diseño transversal, el objetivo del tercer estudio fue examinar el efecto mediador del uso problemático de Internet y el cibercotilleo entre la revelación filial y la implicación en ciberagresión, así como el rol moderador de la edad y el sexo. En las Figuras 4 y 5 se pueden observar los modelos teóricos propuestos. Las hipótesis que se establecieron fueron:

Hipótesis 1: La revelación filial se prediciría negativamente la ciberagresión.

Hipótesis 2: El uso problemático de Internet y el cibercotilleo mediarían la relación entre la revelación filial y ciberagresión.

Hipótesis 3: Se espera que los efectos de la revelación filial en las conductas de riesgo sean menores en la infancia tardía (Hipótesis 3a) y en las chicas (Hipótesis 3b) en comparación con los preadolescentes y los chicos.

Figura 4

Modelo Propuesto de Mediación
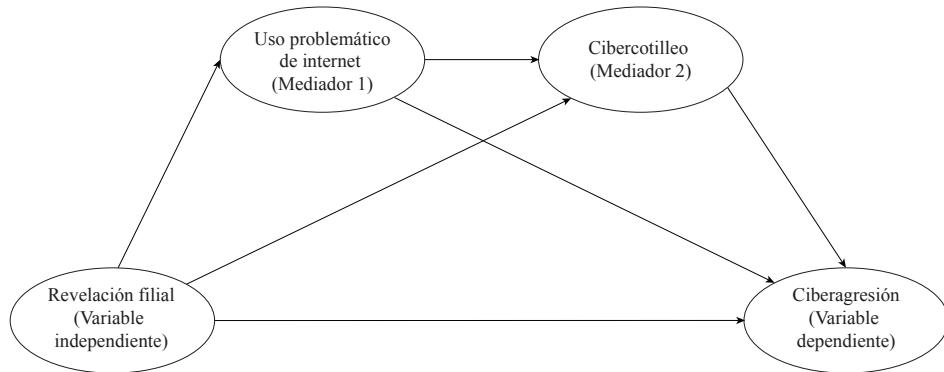
Figura 5

Modelo Propuesto de Mediación Moderada
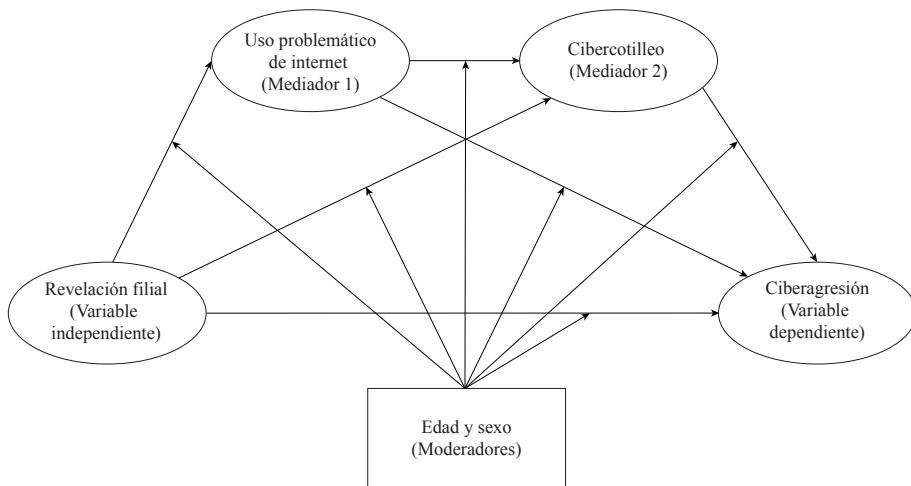
5.2. Metodología

5.2.1. Diseño, participantes y procedimiento

La población de referencia de los estudios que componen la presente tesis fue el alumnado de Educación Primaria y Secundaria. Diferentes centros educativos pertenecientes a las provincias de Jaén y Córdoba (España) conformaron las unidades de muestreo. Los escolares fueron las unidades de análisis. Los centros educativos se seleccionaron a través de un muestreo no probabilístico por accesibilidad (Singleton & Straits, 2004).

Una vez obtenida la aprobación del Comité de Bioseguridad y Bioética de la Universidad de Córdoba, se contactó con los centros educativos para exponerles los objetivos de la investigación y solicitar su colaboración. Tras la aprobación del equipo directivo de cada centro educativo, se obtuvo el consentimiento informado de los progenitores o tutores de los participantes. Varios investigadores con formación y experiencia en recogida de datos administraron los cuestionarios a los participantes en los centros educativos dentro del horario escolar. Los participantes rellenaron los cuestionarios de lápiz y papel de forma anónima y voluntaria, a sabiendas de que podían abandonar su colaboración en cualquier momento. Para los estudios 1 y 2, los participantes usaron un código anónimo con la finalidad de asociar sus respuestas en cada una de las recogidas de datos.

En los diferentes estudios se emplearon dos grupos de participantes. A continuación, en la Tabla 1 se pueden observar las características de la muestra para cada estudio. Además,

se presenta el análisis estadístico principal realizado en cada estudio para abordar los objetivos propuestos. En cada uno se desarrollan análisis preliminares y complementarios que incluyen correlaciones entre los constructos, *t-test* para muestras independientes (sexo y edad) y análisis de invarianza (sexo, edad y longitudinal).

Tabla 1

	n	Sexo	Edad	Curso	Análisis estadístico
Estudios 1 y 2	3.017 adolescentes de Educación Secundaria Obligatoria (Córdoba) Tiempo 1 = 2.790 (92%) Tiempo 2 = 2.553 (85%) Tiempo 3 = 2.362 (78%) Tiempo 4 = 2.361 (78%)	49% Chicas 51% Chicos	$M_{Tiempo\ 1} = 13,15$ $SD_{Tiempo\ 1} = 1,09$ Entre 11 y 16 años	35% en 1º 34% en 2º 31% en 3º	- Estudios 1 y 2 "Cross-lagged panel model" - Estudio 2 "Random Intercept cross-lagged panel model"
Estudio 3	866 escolares de Educación Primaria (Córdoba y Jaén)	53% Chicas 47% Chicos	$M = 11,91$ $SD = 0,90$ Entre 10 y 13 años	29% en 4º 29% en 5º 42% en 6º	- Mediación serial - Mediación serial moderada

5.2.2. Instrumentos

En cada uno de los estudios la información se recogió a través de cuestionarios de autoinforme. En la Tabla 2, se presentan los instrumentos empleados en cada estudio para evaluar cada uno de los constructos de interés.

Tabla 2

Instrumentos	Validación original y española	Estudio
1. European Bullying Intervention Project Questionnaire	(Ortega-Ruiz et al., 2016)	Estudio 1
2. Moral Disengagement Scale	(Caprara et al., 1995; Romera, Ortega-Ruiz, et al., 2021	Estudio 1
3. Need for Popularity Scale	(Del Rey et al., 2019; Santor et al., 2000)	Estudio 1
4. European Cyberbullying Intervention Project Questionnaire	(Del Rey et al., 2015; Ortega-Ruiz et al., 2016)	Estudios 2 y 3
5. Anger Rumination Scale	(Sukhodolsky et al., 2001; Uceda et al., 2016)	Estudio 2
6. Revelación filial	Ad hoc	Estudio 3
7. Internet-Related Experiences Questionnaire	(Beranuy et al., 2008; Casas et al., 2013)	Estudio 3
8. Cybergossip Questionnaire	(Romera et al., 2018)	Estudio 3

A continuación, se describe brevemente cada uno de los instrumentos que componen los estudios de la tesis.

- La agresión en acoso escolar fue evaluada a través de la subescala del *European Bullying Intervention Project Questionnaire* (EBIPQ) (Ortega-Ruiz et al., 2016). El instrumento se ha empleado ampliamente con anterioridad y se ha validado en adolescentes españoles (Ortega-Ruiz et al., 2016). La subescala de agresión consta de 7 ítems con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia en la implicación en acoso escolar durante los dos últimos meses desde 0 (*nunca*) a 4 (*más de una vez a la semana*). Con la finalidad de diferenciar el acoso escolar de otros comportamientos (por ejemplo, agresión en general, bromas, etc.) a los participantes se les proporcionó la definición de acoso, destacando sus tres características principales: intencionalidad, desequilibrio de poder y repetición en el tiempo.

- La necesidad de popularidad se evaluó a través de la escala *Need for Popularity Scale* (NfP) (Santor et al., 2000). Se trata de un cuestionario sobre las conductas que manifiestan los chicos y chicas con la motivación de ser percibido por los demás como popular. El instrumento se ha empleado ampliamente con anterioridad y se ha validado en adolescentes españoles (Del Rey et al., 2019). Consta de 12 ítems con una escala de respuesta tipo Likert de cinco puntos sobre el grado de acuerdo de las afirmaciones desde 1 (*totalmente en desacuerdo*) a 7 (*totalmente de acuerdo*).

- La agresión y victimización en ciberacoso fue evaluada a través del *European Cyberbullying Intervention Project Questionnaire* (ECIPQ) (Del Rey et al., 2015). Se trata de un cuestionario. El instrumento se ha empleado ampliamente con anterioridad y se ha validado en escolares españoles (Ortega-Ruiz et al., 2016). Consta de 22 ítems (11 para agresión y 11 para victimización) con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia en la implicación en acoso durante los dos últimos meses desde 0 (*nunca*) a 4 (*más de una vez a la semana*). En base a los objetivos de cada estudio, en el tercero se usó la subescala agresión, mientras que en el segundo se emplearon las subescalas de agresión y victimización. En el caso del estudio tres focalizado a la etapa de Educación Primaria, se empleó una versión reducida de 8 ítems para la subescala de agresión.

- La revelación filial se evaluó a través de una escala ad hoc a partir de una adaptación de la escala *Parenting Questionnaire* (Law et al., 2010; Stattin & Kerr, 2000). Se trata de una escala sobre la frecuencia con la que chicos y chicas hablan con sus progenitores sobre el uso que hacen Internet. Consta de 4 ítems con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia de las afirmaciones desde 0 (*nunca*) a 4 (*siempre*) (véase Anexo 1).

- El uso abusivo de Internet se evaluó a través de la escala *Internet-Related Experiences Questionnaire* (Beranuy et al., 2008). Se trata de un cuestionario sobre la frecuencia con la que los chicos y chicas usan Internet de forma abusiva. El instrumento se ha empleado ampliamente con anterioridad y se ha validado en escolares españoles (Casas et al., 2013). Consta de 10 ítems con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia de las afirmaciones desde 0 (*nunca*) a 4 (*bastante*).

- El cibercotilleo se evaluó a través de la escala *Cybergossip Questionnaire* (Romera et al., 2018). Se trata de un cuestionario sobre la frecuencia con la que los chicos y chicas hablan con sus amigos por Internet sobre las cosas que les suceden a otros. El instrumento se ha empleado con anterioridad y se ha validado en escolares españoles (Romera et al., 2018). Consta de 9 ítems con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia de las afirmaciones desde 0 (*nunca*) a 4 (*bastante*).

- La rumiación de la ira se evaluó a través de la escala *Anger Rumination Scale* (Sukhodolsky et al., 2001). Se trata de un cuestionario sobre las estrategias cognitivas pasivas y repetitivas que los escolares pueden desarrollar al pensar sobre eventos que le han inducido ira. El instrumento se ha empleado ampliamente con anterioridad y se ha validado en escolares españoles (Uceda et al., 2016). Consta de 19 ítems con una escala de respuesta tipo Likert de cinco puntos sobre la frecuencia de las afirmaciones desde 1 (*casi nunca*) a 4 (*casi siempre*).

- La desconexión moral se evaluó a través de la escala *Moral Disengagement Scale* (MDS) (Caprara et al., 1995). Se trata de un cuestionario que mide los mecanismos de desconexión que pueden desarrollar los chicos y chicas sobre las relaciones interpersonales en general. La escala MDS es el instrumento más empleado para medir desconexión moral (Férriz Romeral et al., 2019). Tiene una escala de respuesta tipo Likert de cinco puntos sobre el grado de acuerdo de las afirmaciones de desconexión moral desde 1 (*totalmente en desacuerdo*) a 5 (*totalmente de acuerdo*). Los autores del MDS diseñaron tres versiones para

diferentes poblaciones objetivo: una versión con 32 ítems para adultos (MDS-32), una con 24 ítems para adolescentes (MDS-24) y una tercera con 14 ítems para niños (MDS-14) (Caprara et al., 1995). Las versiones abreviadas comprenden menos ítems al seleccionar aquellos que se consideraron más adecuados a los respectivos grupos objetivo. A pesar de la disponibilidad de una versión adolescente, la mayoría de los estudios de validación con adolescentes han utilizado la versión MDS-32 para adultos (e.g., Mazzone et al., 2019; Zych et al., 2020), y en menor medida otros estudios han empleado la versión MDS-14 para niños (e.g., Campaert et al., 2017; Paciello et al., 2020). No obstante, la versión MDS-24 destinada a adolescentes ha sido menos empleada en sobre esta población (Bartolo et al., 2019; Romera, Ortega-Ruiz, et al., 2021). La presente tesis utilizó la versión MDS-24 ya que fue recomendada para adolescentes por los diseñadores originales del MDS (véase Anexo 2) (Caprara et al., 1995). Debido a la ausencia de investigaciones que hayan constatado las propiedades psicométricas de la escala MDS-24 en adolescentes españoles, complementariamente a los estudios que comprenden la presente tesis se ha desarrollado un trabajo actualmente bajo revisión por pares. Dicho estudio tiene por objetivo analizar las propiedades psicométricas de la estructura unidimensional de la escala MDS-24, consistencia interna y validez externa, así como la invarianza por sexo y edad. A continuación, se expone brevemente parte de los resultados del mencionado estudio.

Propiedades psicométricas de Moral Disengagement Scale-24

El estudio utilizó una muestra de 1.396 adolescentes (49% chicas; tasa de respuesta del 89%) escolarizados en Educación Secundaria Obligatoria (ESO) de la provincia de Córdoba (España) (el 47% de los participantes asistían a institutos en un entorno urbano; el 53% a institutos rurales) con edades comprendidas entre los 11 y los 17 años ($M = 13,65$; $DT = 1,32$); el 27% estaban en 1º de la ESO, el 25% en 2º de la ESO, el 25% en 3º de la ESO y el 23% en 4º de la ESO. Las escuelas se seleccionaron mediante un muestreo no probabilístico basado en la accesibilidad.

Las propiedades psicométricas se analizaron con un análisis factorial confirmatorio (AFC). Se utilizó el método de mínimos cuadrados ponderados robustos de la varianza media, como se recomienda en ausencia de distribución normal y con variables categoriales (Brown, 2006). El ajuste del modelo se evaluó con índice de ajuste comparativo (CFI), el índice Tucker-Lewis (TLI), error cuadrático medio de aproximación (RMSEA) y la raíz

media cuadrática residual estandarizada (SRMR). Valores superiores a .90 y .95 para el CFI y TLI, e inferiores a .08 y .06 para el RMSEA y SRMR en el ajuste del modelo se consideraron aceptables y buenos respectivamente (Hu & Bentler, 1999). Los análisis se llevaron con el paquete estadístico de R *lavaan* (Rosseel, 2012). La estructura unidimensional del MDS-24 tuvo un aceptable ajuste del modelo, $\chi^2_{\text{S-B}}$ *(gl)* = 2.138,187 (252), CFI = ,958, TLI = ,954, RMSEA = ,062, 90% [,060 - ,064], and SRMR = ,073, *p* < ,001. Las cargas factoriales de los ítems estuvieron entre ,36 y ,83. La consistencia interna fue evaluada a través de la fiabilidad compuesta (ρc). Para una buena fiabilidad, los valores de ρc se consideraron cuando fueses superiores a ,60 (Fornell & Larcker, 1981). El ρc de la estructura unidimensional fue excelente (,97).

La validez externa se exploró asociando el MDS-24 y con la escala de acoso escolar (EBIPQ; victimización y agresión). La asociación positiva entre la correlación de desconexión moral con la agresión (*r* = 0,48, *p* < ,001) y la victimización (*r* = 0,20, *p* < ,001) evidenció la validez convergente. La validez predictiva incremental del MDS-24 sobre la agresión se exploró utilizando un modelo de regresión lineal jerárquica por pasos. En el primer modelo se controlaron los efectos del sexo, la edad y la victimización sobre la agresión. Posteriormente se introdujo el MDS-24 en el modelo para estimar la de varianza en la agresión por parte de la desconexión moral. En el primer paso, se evidenció que la victimización (β = 0,45, *p* < ,001) explicaba en gran medida la implicación en la agresión, así como que los chicos (β = -0,12, *p* < ,001) y los adolescentes de más edad (14-17 años) (β = 0,08, *p* < ,01) eran más propensos que las chicas y los adolescentes de menor edad (11-13 años) a participar en este comportamiento agresivo (R^2 = 0,22). En el segundo paso, al introducir la desconexión moral en el modelo (β = 0,37, *p* < ,001), se produjo un aumento en la explicación de la agresión del 13% (R^2 = .35).

Por último, se analizó la invarianza de la escala entre grupos de forma jerárquica mediante una comparación de diferentes modelos, en los que los parámetros de medición del MDS-24 se restringieron de forma gradual para ser iguales en chicos y chicas, en la adolescencia temprana y adolescencia media. En primer lugar, se probó la invarianza configural en un modelo de referencia sin ninguna restricción. Para analizar la invarianza métrica, se restringieron las cargas factoriales para que fueran iguales entre los grupos. Para la invarianza escalar, se restringieron los interceptos. Todos los modelos se compararon con

el modelo anterior en los valores delta de referencia (Δ) del CFI y el RMSEA (Chen, 2007). Estos valores deben ser menores que ,01 para el CFI y ,015 en el RMSEA para confirmar la invarianza de medida del MDS-24 a través del sexo y de la edad. Una vez confirmada la invarianza escalar, se pueden analizar las diferencias de la prueba *t* para muestras independientes. El tamaño del efecto de las diferencias se analizó utilizando la *d* de Cohen: efectos pequeños (*d* = ,20), medianos (*d* = ,50) y grandes (*d* = ,80) (Cohen, 1977).

Los resultados de los análisis de invarianza entre el sexo y la edad se muestran en la Tabla 2. En la invarianza configural, todos los parámetros se estimaron libremente mostrando un buen ajuste del modelo tanto en el sexo como en la edad. En la invarianza métrica, las cargas factoriales estaban restringidas entre los grupos con un modelo de buen ajuste. La comparación entre la invariancia configural y la métrica mostró que los parámetros eran equivalentes en entre los grupos. Por último, los interceptos se limitaron con un modelo de buen ajuste en la invarianza escalar. La comparación entre la invariancia métrica y la escalar mostró cómo los interceptos de los ítems permanecen invariantes a través de los grupos.

Tabla 2

Invarianza de la Escala MDS-24 a través del Sexo y Edad

	$\chi^2_{\text{S-B}}$ (*gl*)	CFI	TLI	RMSEA [90% CI]	SRMR	ΔCFI	ΔRMSEA
Sexo							
Configural	2.312,617 (504)***	,956	,951	,062 [,059, ,064]	,079	—	—
Métrica	2.114,370 (527)***	,953	,951	,062 [,059, ,065]	,084	,003	,000
Escalar	2.511,522 (598)***	,948	,952	,062 [,059, ,064]	,081	,005	,000
Edad							
Configural	2.477,241 (504)***	,956	,952	,065 [,062, ,067]	,080	—	—
Métrica	2.217,460 (527)***	,952	,952	,064 [,061, ,067]	,084	,004	,001
Escalar	2.480,383 (598)***	,953	,956	,059 [,061, ,064]	,082	,001	,005

Note. CFI = Índice de Ajuste Comparativo; TLI = Índice Tucker-Lewis; RMSEA = Error Cuadrático Medio de Aproximación; SRMR = Raíz Media Cuadrática Residual Estandarizada,

***p < ,001.

Una vez alcanzada la invarianza de la escala en ambas categorías de grupos, es fiable analizar la prueba *t* para muestras independientes a través del sexo y la edad en la estructura

unidimensional del MDS-24. Los resultados indicaron que los chicos ($M = 1,74$, $DT = 0,58$) mostraron mayor desconexión moral que las chicas ($M = 1,49$, $DT = 0,42$; $t = 8,36$, $p < .001$, $d = 0,47$). Estas diferencias reportaron un tamaño del efecto bajo y moderado. No se encontraron diferencias en cuanto a la edad entre la adolescencia temprana ($M = 1,60$, $DT = 0,52$) y la tardía ($M = 1,63$, $DT = 0,51$; $p > .05$).

CHAPTER

6

STUDY 1

EMPIRICAL RESEARCH

Bullying Perpetration, Moral Disengagement and Need for Popularity: Examining Reciprocal Associations in Adolescence

Eva M. Romera [1] · Rosario Ortega-Ruiz[1] · Kevin Runions[2] · Antonio Camacho[1]

Abstract

Precursors and consequences of bullying have been widely explored, but much remains unclear about the association of moral and motivational factors. This study examined longitudinal associations between need for popularity, moral disengagement, and bullying perpetration. A total of 3017 participants, aged 11 to 16 years in wave 1 (49% girls; $M_{age} = 13.15$, $SD = 1.09$), were surveyed across four waves with six-month intervals. At the between-person level, cross-lagged modeling revealed a positive bidirectional association between moral disengagement and need for popularity; bullying perpetration was predicted by both need for popularity and moral disengagement. From the within-person level, random intercept cross-lagged analyses revealed that need for popularity predicted both moral disengagement and bullying perpetration. The results highlight the interplay between motivational and moral mechanisms that underlies bullying behavior.

Keywords: Motivation, moral, bullying, between-person, within-person, longitudinal.

6.1. Introducción

Bullying is defined as intentional and repeated aggression characterized by an imbalance of power between perpetrator (s) and victim (Smith, 2019). Given bullying behavior significantly decreases during late school years (Cho & Lee, 2020), early and middle adolescence are hence target periods for effective intervention to prevent and reduce bullying. In recent years, important insights have arisen from studies on the psychological enablers of face-to-face bullying perpetration. Two important perspectives, in particular, have received empirical support. First, moral disengagement is posited as a set of psychological processes that may result in bullying by reducing self-censure when one is violating one's moral standards (Bandura et al., 1996). Meta-analysis has confirmed a robust relationship of moral disengagment and bullying behavior (Gini et al., 2014). Second, an individual's need for popularity is a foundational motivator in resource control theories of bullying. As postulated by such accounts, bullying is a strategic enactment of coercive manipulation, which may be used alongside self-interested pseudo-prosocial strategies to attain desired social resources, for example social dominance within one's group (Clark et al., 2020). To date, the majority of studies have been cross-sectional, and the developmental sequence of the two constructs for adolescent bullying perpetration has been little studied. The current study used a longitudinal design over four waves to examine the developmental dynamics of moral disengagement, the need for popularity and face-to-face bullying perpetration over adolescence. In addition, gender and age were controlled (Smith et al., 2019).

6.1.1. Bullying Perpetration and Moral Disengagement

Bandura's social cognitive theory postulates that people establish moral standards as a self-regulatory process, to avoid self-censuring emotions like shame, remorse, and guilt (Bandura, 2002). In some cases, however, people may selectively and preemptively deactivate these emotional responses via moral disengagement, thereby enabling immoral behaviors (Bandura, 2002). Deactivation allows perpetrators to consider aggressive acts as appropriate and legitimate in view of their self-interest and it enables a positive self-image despite the immoral acts (Sticca & Perren, 2015). There is a large body of cross-sectional research that has focused on moral disengagement as a self-regulatory mechanism to explain peer aggression and bullying (see meta-analysis; Gini et al., 2014). Only a few studies have established longitudinal associations, and these showed that moral disengagement predicted

future bullying perpetration after controlling for the autoregressive effects of perpetration (Falla et al., 2020; Visconti et al., 2015; Wang et al., 2017).

Social cognitive theory states that moral disengagement and immoral behavior reciprocate over time (Bandura et al., 1996), creating in effect a slippery slope to immorality. According to such a 'breaking bad' hypothesis, an instance of a morals-violating behavior is retroactively rationalized by moral disengagement, creating a bidirectional feedback loop toward increased likelihood of future bad behavior. Research findings are mixed. In a study of adolescents that examined whether bullying perpetration was prospectively associated with moral disengagement (Wang et al., 2017), the best fitting model included only a significant path from moral disengagement to subsequent bullying. Another article, however, used a standard cross-lagged panel model examining between-person associations over time, conducted with children (in 4th–6th grade), found that aggression predicted later moral disengagement (Visconti et al., 2015). A study during adolescence (in 7th–10th grade) has also found that involvement in aggression may lead to higher levels of moral disengagement later (Teng et al., 2019). This suggests that the deactivation of standard morals not only occurs before the aggression but may also arise from the use of aggression, as the progressive disengagement Bandura hypothesized (1996). More consequently, most studies about the bidirectionality of moral disengagement and aggression relied on traditional cross-lagged panel analyses; such models have been critiqued as considering only the between-person effects but failing to account adequately for within-person variance (see below).

6.1.2. Bullying Perpetration and Need for Popularity

Adolescents are, generally, highly aware of their social position in the peer group and tend to desire increased visibility, influence, and power among their peers (Prinstein, 2018). Popular adolescents are perceived as prestigious, visible, and influential in the group's decision making (Hogg, 2005). Popularity motivations may increase in importance relative to other social motivations during adolescence (Dawes & Xie, 2017). Socio-affective processing research has suggested that pubertal development may lead to increases in goals associated with achieving status and dominance (Meisel et al., 2021). Reflecting evolutionary-based group dynamics and adolescents' need for popularity, status goals may be considered normative in adolescence (Moffitt, 1993). Researchers have assessed the need for popularity as a motivation to behave in ways that will be perceived as popular within a peer group (Santor

et al., 2000). These developmental changes may make the need for popularity an increasingly important behavioral driver in adolescence.

Popularity motivations have been found to be precursors to a range of antisocial or problematic adolescent outcomes, including maladaptive social media use (i.e., sexting, mobile porn use or sexual grooming; Vanden Abeele et al., 2014; Utz et al., 2012). Longitudinal research indicated increased risk of unhealthy behaviors including alcohol use amongst those with high need for popularity (Malamut et al., 2020). The drive for popularity may motivate a range of risky behaviors among adolescents.

According to resource-control theory, individuals may use both pseudo-prosocial and aggressively coercive strategies to access and secure social resources, with the goal of attaining a position of social dominance (Hawley., 1999). In this approach, bullying is viewed as a deliberate strategy within the peer group to obtain the scarce resource of popularity and its perceived benefits (Huitsing et al., 2014). A range of studies have shown that popularity motivations are related to physical and social aggression towards peers (Dawes & Xie, 2014). Adolescents who report high use of resource-control strategies have a very high need for recognition from others and are the most involved in bullying perpetration (Clark et al., 2020). Some adolescents use coercive methods to elevate themselves in the social hierarchy (Ojanen & Nostrand, 2014), and adolescent bullying is associated with intentional reward motives for aggression (Dumas et al., 2019; Runions et al., 2018). Adolescents who are motivated to be popular will pay special attention to the potential benefits and cost of bullying behavior (Pouwels et al., 2019). If bullying appears to lead to popularity with minimal costs, young people are more likely to involve in bullying (Pan et al., 2020).

The developmental unfolding of bullying and the need for popularity has been little examined. The inverse influence is possible: social-cognitive theory (Bandura, 2002) would suggest that the reward value of successful instances of aggression (from the aggressor's perspective) might increase the aggressor's sense of agency, and could thereby feed the need for popularity. But bidirectionality between need for popularity and aggressive behavior has been tested in only a handful of studies. Previous research with early adolescents found that aggression predicts peer-nominated popularity in early adolescence (Stevens et al., 2020), suggesting it may be a successful strategy in some contexts. More tellingly, a two-wave study with Canadian students in grades 9–11 found that social aggression predicted significant

increases in need for popularity assessed five months later (Dumas et al., 2019). However, a three-year prospective study found no such relationship between popularity goals and overall aggression, nor did popularity goals predict increased relational aggression (Malamut et al., 2020). To date, these studies have not examined bullying per se. Moreover, most studies analyzing the prospective associations between need for popularity and aggression used traditional cross-lagged panel analyses. Finally, these studies have not examined moral disengagement, which could entirely account for the relationship of need for popularity and bullying perpetration, as discussed next.

6.1.3. Moral Disengagement and Need for Popularity

Although the need for popularity may motivate aggression, the literature is relatively silent on how young people manage to actually bring themselves to enact aggressive behavior in pursuit of popularity. Social-cognitive theory does, however, provide a theoretical account for the role of personal motivations in the progressive reduction of self-censure central to moral disengagement. For some adolescents, the moral justification of securing one's position in the social group may provide a strong incentive for adolescents, especially in social settings where salient examples of aggression being rewarded by social status abound. Seeking social status for adolescents may be seen as a worthy pursuit, enabling ample self-serving moral justification (a key mechanism of moral disengagement). Bandura's (2002) social cognitive theory posits that individual morality is rooted in one's self-evaluations. Individuals with stronger need for popularity may be more strongly driven to disengage from the moral rules prohibiting them from reaching their goal. The attainment of the desired reward — social status — may allow individuals to disengage their moral controls by easily providing justifications to engage in immoral behavior. Moral disengagement, then, may provide a way to maintain a positive self-view while pursuing one's goals through antisocial means.

Despite the theoretical link between motivation and moral functioning, few studies have explored this association. Adult empirical studies have found that high-status individuals are more likely to make immoral decisions because they more highly value their own welfare over that of other people (Piff et al., 2012). Also, the desire to obtain power is associated with impoverished understanding of others, and with insensitivity to social implications of behavior, with power being "associated with a reduced tendency to comprehend how other individuals see the world, think about the world, and feel about the world" (Galinsky et al.,

2006, p. 1072). This suggests that attained power may faciliate moral disengagement via reduced perspective taking, but it does not speak directly to the need for popularity or related motivations to hold power.

During adolescence, popularity motivations drive an emphasis on anti-authoritarian behaviors associated with deviance from ethical standards, such as skipping school and damaging property (Dumas et al., 2019). But it remains unclear whether holding motives such as the need for popularity predispose youth to increased moral disengaagement. Amongst adolescents, higher levels of revenge goals have been found to predict greater moral disengagement (Visconti et al., 2015). The motivation to lead, referred to an individual's desire or willingness to lead others is also associated with moral disengagement (Hinrichs et al., 2012). To date, however, no studies have examined whether the need for popularity predicts increases in moral disengagement over time, or whether the converse is the case.

6.1.4. Between- and Within-Person Level Approach

Although moral disengagement and need for popularity have been mainly addressed as trait-like characteristics at between-person level, established over adolescence (Paciello et al., 2008; Dawes & Xie, 2017), both may also have state-like qualities at a within-person level. Moral disengagement implies a process of applying moral disengagement mechanisms (Bandura, 2018), and it has been argued that moral disengagement should not be considered only as a relatively stable characteristic of a person, but also as a process that assumes that an individual may exhibit differences in the expression of moral disengagement depending on the behavior, situation or context (Runions & Bak, 2015; Schaefer & Bouwmeester, 2020). This state-like characteristic of moral disengagement permits an understanding of how morally healthy individuals may engage in unethical behavior. Consequently, some have argued that study designs should adapt to the conceptualization of moral disengagement as a disposition and as a process (Moore, 2015). In this line, research has captured short-term intrapersonal changes in moral disengagement at six-month intervals (Sticca & Parren, 2015) and has even developed changes on its relationship with aggression at different points during adolescence at the within-person level (Teng et al., 2019). Need for popularity is also considered both a trait- and state-like variable (McDonald & Asher, 2018), and has also been considered to be malleable during socialization in adolescence (Makara & Madjar, 2015). Thus far, however, studies have measured social motivations as broad traits. However, in

short-term studies, personal and contextual factors were found to be relevant in explaining changes in status goals (Makara & Madjar, 2015; Ojanen & Findley-Van Nostrand, 2020). In the case of bullying behavior, most research assumes methods that imply an absence of time-invariant individual differences. This appears to be a rather challenging statement, as involvement in perpetration among adolescents is highly variant: while some individuals are chronic bullies, others may be involved occasionally or even participate in different bullying behaviors (Zych et al., 2020). To address these gaps, recent short-term prospective research has already accounted for the inclusion of random intercepts in modeling adolescents bullying participation (Doty et al., 2020). Application of statistical methods that can adequately account for both state- (time-dependent characteristics) or trait-like variables (time-independent characteristics), such as random intercept cross-lagged model (RI-CLPM), is crucial to the study of potential drivers of bullying.

Recent methodological advances in cross-lagged panel models have provided improved ways to study of the association between variables from an individual-developmental perspective. The approach used in traditional cross-lagged panel model (CLPM) of simple autocorrelation–which accounts for rank-stability over time–fails to capture stability of trait-like variables within participants (Hamaker et al., 2015). However, both models have different properties and advantages and give useful information to understand the relationship between psychological variables (Hudson et al., 2019). At the between-person level, it may be useful to know how adolescents are situated within the group and which individuals are more likely to have higher or lower levels of psychological variables than their peers. Within-person modeling should be considered to explore the development at the individual level (Hudson et al., 2019). The present study adopts both approaches to understand the nature of the longitudinal associations between the study variables at the between- and within-person levels.

6.1.5. Current Study

The present study provides a test of the prospective unfolding of bullying perpetration, moral disengagement and the need for popularity within adolescents. By using CLPM and RI-CLPM, this study brings to bear important developments in testing the relationships across these variables both the between- and within-person approach. Based on theoretical considerations it was hypothesized that bullying perpetration and moral disengagement would

predict one another bidirectionally (Hypothesis 1). It was also predicted that need for popularity would predict both subsequent bullying (Hypothesis 2) and subsequent moral disengagement (Hypothesis 3). Gender and age were treated as control variables because both boys and middle adolescents have consistently reported higher perpetration involvement than girls and early adolescents (Smith et al., 2019).

6.2. Methods

6.2.1. Participants and procedure

Participants were Spanish adolescents from a longitudinal study of risk and protective factors for bullying. A total of 3017 adolescents (49% girls) between 11 and 16 years participated from Grade 7 (n = 1,050; 46% girls; M_{ageW1} = 12.14, SD = 0.64), Grade 8 (n = 1,027; 50% girls; M_{ageW1} =13.19, SD = 0.70) and Grade 9 (n = 940; 53% girls; M_{ageW1} = 14.23, SD = 0.70), recruited from 115 classes at 13 middle schools. Data were collected over 18 months in 4 waves, 6 months apart. Ethical approval for the study was provided by the research ethics committee of the corresponding author's institution. After approval from the heads of school to participate in the study, permission from the regional government and active participants' parents were obtained. All data were collected in the students' home classroom during regular school hours. For each adolescent, a unique code based on their name and date of birth was generated and used to link the four data collection waves. Data were collected by trained and experienced interviewers. Adolescents received standardized instructions in which they were assured that no answers were right or wrong and that their participation in the study was confidential and voluntary, and that they could leave the study at any time or elect not to answer any question. The participants received no compensation. On average, it took students 30 min to complete the questionnaires.

Of the 3017 adolescents who took part in total, the average participation rate in the four waves was 83%: November 2017 (Wave 1) (n = 2790, 92% participation rate, 49% girls; M_{age} = 13.15, SD = 1.09); May 2018 (W2) (n = 2553, 85% participation rate, 50% girls; M_{age} = 13.61, SD = 1.13); November 2018 (W3) (n = 2362, 78% participation rate, 51% girls; M_{age} = 14.03, SD = 1.05); and May 2019 (W4) (n = 2361, 78% participation rate, 50% girls; M_{age} = 14.55, SD = 1.06). In total, 1788 completed all four waves (59%, 51% girls), 675 completed three waves (22%, 47% girls), 336 participated in two waves (11%, 49% girls) and 214

students completed only a single wave (7%, 41% girls). Reasons for missing a wave included absence from school on the day of data collection and having left the school or having joined the study due to changing schools.

6.2.2. Measures

6.2.2.1. Bullying perpetration

Bullying perpetration was measured with the subscale of the Spanish version of the European Bullying Intervention Project Questionnaire (EBIPQ) (Ortega-Ruiz et al., 2016). Example items on face-to-face overall perpetration include: "I have hit someone" and "I have excluded or ignored someone". Participants were informed about distinguishing bullying from aggressive behaviors via the intentionality, repetition over time and the power imbalance in bullying prior to answering. The subscale comprises 7 items rated on a 5-point Likert-type scale, ranging from 0 (*Never*) to 4 (*More than once a week*). The final score is the average of all items, with high scores reflecting higher levels of bullying perpetration. The reliability of the Spanish version of the bullying subscale was α = 0.77 (Ortega-Ruiz et al., 2016).

6.2.2.2. Moral disengagement

In the Spanish version of the adolescent Moral Disengagement Scale (Caprara et al., 1995; Romera et al., 2021), participants rated 24 items about moral exoneration of negative behavior on a 5-point Likert-type scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The reliability of the original scale was α = 0.85 (Caprara et al., 1995). The version used here included items from the adult version (Bandura et al., 1996) that were considered appropriate to measuring moral disengagement in an effective way in adolescents. The items focused on a variety of harmful behaviors and attitudes in daily contexts including: "teasing someone does not really hurt them" and "to hit obnoxious classmates is just teaching them a lesson". Although originally the scale was aimed at assessing the multiple moral disengagement mechanisms, a one-factor structure has been widely used in previous studies using the mean score (Paciello et al., 2008).

6.2.2.3. Need for popularity

Behaviors reflecting strong motivation for social status and popularity was measured with the Popularity Scale (Santor et al., 2000), with participants rating items on the importance of achieving social-status goals and the efforts they have made to gain popularity amongst

their peers. It comprises 12 items on a 7-point Likert-type scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Examples of items are: "I've neglected some friends because of what other people might think" and "I have done things to make me more popular, even when it meant doing something I would not usually do". Following the original conceptualization of the scale, the items were averaged to get an overall need for popularity score. Higher values indicate a greater need for popularity. The reliability of the original scale was $\alpha = 0.91$. The reliability in the Spanish version was $\alpha = 0.93$ and with acceptable psychometric properties (Del Rey et al., 2019).

6.2.2.4. Control variables

Gender (1 = *Boy*; 2 = *Girl*) and age at W1 were addressed as control variables.

6.2.3. Statistical analyses

Both cross-lagged panel models (CLPM) and random intercept cross-lagged panel models (RI-CLPM) were tested to explore the associations between the study variables over time. First, the CLPM was performed to explore the association between need for popularity, moral disengagement and bullying perpetration at the between-person level. The CLPM comprised stability paths (i.e., relative to other participants via autocorrelation), cross-lagged paths and cross-sectional covariances between the variables at the same time (from W2 to W4 the associations are focused on the residual covariances). The longitudinal influence in the associations between variables are contrasted with the group mean at the between-level (i.e., adolescents with higher scores relative to the mean moral disengagement at T1 predicts relatively higher bullying perpetration, again relative to the sample mean, at T2). Thus, significant cross-lagged paths indicate relative rank of a predictor accounting for changes in the relative rank of another variable at a subsequent time.

Secondly, a RI-CLPM was performed. At the between-person level, the associations between variables are analyzed based on time-invariant individual differences between adolescents using the random intercept factors. At the within-person level, the model comprised the same paths that in the CLPM. In this case, the cross-lagged paths capture the change in each variable in an individual that can be predicted by his or her own deviations in other variables from the previous wave (i.e., changes in need for popularity predict subsequent deviations in bullying perpetration compared to the individual's own levels). Gender and age

were introduced as time-invariant predictors of the observed variables in both models (Hamaker et al., 2015).

As preliminary steps, correlations between variables were run, and independent *t*-tests were applied to analyze the gender and age differences. Cronbach's alpha coefficients were calculated to analyze the internal consistency of the scales. The longitudinal measurement invariance of each scale was analyzed to test whether the construct remained constant across waves and thus whether associations between variables in the CLPM and the RI-CLPM would be reliable. This was analyzed using a confirmatory factor analysis (CFA) in which covariance between items or correlated errors were not allowed. Increasingly restrictive steps of measurement invariance from the baseline to more restrictive models were implemented: (a) Configural estimated without restrictions, in which factor loadings and intercepts were freely estimated; (b) Metric: equal factor loadings; and (c) Scalar: equal item intercepts in addition to equal loadings. In the analyses, adolescents were clustered within classrooms. The intraclass correlations (ICCs) for need for popularity, moral disengagement and bullying perpetration were computed to identify the variance that could be explained by stable differences among at the between-person relative to the variance explained by within-person fluctuations.

Since collecting data was gathered spatially separated over a period of approximately six months, a series of models of CLPM and RI-CLPM were compared by constraining different parameters, based on the principle of parsimony. A simplified model is preferred, because higher degrees of freedom increase the probability of rejection (Kline, 2015), while remaining conceptually consistent. Where no significant differences were reported between the simple (more degrees of freedom) and the complex model (less degrees of freedom), the simplest model was selected. The process of building the models involved four steps. First, the model was freely estimated without restrictions. Second, the autoregressive paths were constrained to be equal over time. Third, the constraints of the cross-lagged paths were included. Fourth, the residual covariances between the variables at the same time (from W2 to W4) were constrained over time.

Due to a high kurtosis and skewness found in the distributions of some variables (see Table 1), the robust maximum likelihood (MLR) estimator was used to account for non-normality. To assess model goodness of fit, the root mean square error of approximation

(RMSEA) and the comparative fit index (CFI) were used, with prerequisites for acceptable model fitset at RMSEA < 0.08, and CFI > 0.90 (Hu &Bentler, 1999). In the nested models, statistically significant differences were reported when two of the following three criteria were matched: $\Delta\chi^2$ at $p < 0.05$ (Satorra & Bentler, 2001), ΔCFI ≥ 0.01 and ΔRMSEA ≥ 0.015 (Chen, 2007). Analyses were performed using the Mplus 8.4 (Muthén & Muthén, 1998). The command "type = complex" was adopted for the analyses with the purpose of correcting the standard errors based on the classrooms as a variable cluster. The hierarchical data structure was due to adolescents grouped by classrooms. It implies that at the between-person level high levels are referred to as adolescents who are compared to the class group average.

Little's test (Little, 1988) of the study variables provided a significant result ($p < 0.001$) indicating that data were not missing completely at random (MCAR). The normed version of χ^2, which may be used to adjust the sensitivity to sample size (Bollen, 1989), was low (χ^2/df= 1.31), indicating that the data were likely missing at random (MAR). Given these results, the full information maximum likelihood (FIML) procedure was considered. FIML provides an unbiased and effective parametric estimate in longitudinal studies. Moreover, using all available data for each participant prevents the loss of statistical power and other issues associated with traditional methods such as listwise and pairwise exclusion (Enders, 2010).

6.3. Results

6.3.1. Preliminary steps

Correlation coefficients, descriptive statistics and Cronbach's alpha are reported in Table 1. Associations between variables were stable over the study period as shown by the correlation between waves: need for popularity ($0.49 \leq r \leq 0.66$), moral disengagement ($0.45 \leq r \leq 0.62$), and bullying ($0.30 \leq r \leq 0.46$). A positive association was found between need for popularity and moral disengagement, both within ($0.32 \leq r \leq 0.39$) and across waves ($0.18 \leq r \leq 0.31$). The association between need for popularity and bullying was also positive within ($0.32 \leq r \leq 0.41$) and across waves ($0.18 \leq r \leq 0.30$), as was that between moral disengagement and bullying, again both within ($0.40 \leq r \leq 0.48$) and across waves ($0.25 \leq r \leq 0.35$). Cronbach's alpha indicated the three scales had good reliability in each wave (see Table 1).

Gender and age differences between study variables were explored with independent *t*-test. Boys scored higher than girls on all three variables in all waves (see Table 2). Older participants (14–16 years old) had statistically higher scores than younger participants (11–13

years old) on moral disengagement (in all four waves), need for popularity and bullying (in two waves for each variable) (see Table 2). All differences had low effect sizes, as measured through Cohen's *d*.

Table 1

Correlations, Descriptive Statistics and Cronbach's Alpha

	1	2	3	4	5	6	7	8	9	10	11	12
1. Need for popularity W1	–											
2. Need for popularity W2	0.57***	–										
3. Need for popularity W3	0.53***	0.62***	–									
4. Need for popularity W4	0.49***	0.57***	0.66***	–								
5. Moral disengagement W1	0.39***	0.24***	0.22***	0.18***	–							
6. Moral disengagement W2	0.30***	0.35***	0.21***	0.23***	0.58***	–						
7. Moral disengagement W3	0.31***	0.28***	0.32***	0.26***	0.52***	0.56***	–					
8. Moral disengagement W4	0.27***	0.28***	0.24***	0.33***	0.45***	0.55***	0.62***	–				
9. Bullying perpetration W1	0.41***	0.25***	0.22***	0.18***	0.48***	0.35***	0.32***	0.32***	–			
10. Bullying perpetration W2	0.30***	0.33***	0.20***	0.18***	0.29***	0.45***	0.31***	0.30***	0.46***	–		
11. Bullying perpetration W3	0.29***	0.19***	0.32***	0.26***	0.30***	0.27***	0.43***	0.30***	0.38***	0.42***	–	
12. Bullying perpetration W4	0.22***	0.19***	0.29***	0.33***	0.25***	0.26***	0.31***	0.40***	0.30***	0.32***	0.43***	–
M	1.90	1.93	1.86	1.88	1.64	1.59	1.54	1.53	0.26	0.28	0.20	0.21
SD	1.02	1.01	0.96	0.99	0.55	0.55	0.51	0.53	0.44	0.45	0.38	0.36
Skewness	1.81	1.64	1.62	1.61	1.63	1.81	1.83	1.96	3.45	3.33	3.56	3.48
Kurtosis	3.56	2.99	2.83	2.65	3.53	4.24	4.88	5.19	6.52	15.96	16.67	19.27
Cronbach's α	0.87	0.89	0.89	0.90	0.89	0.90	0.89	0.90	0.82	0.81	0.81	0.78

*** $p < 0.001$.

Table 2

Gender and Age Descriptive Statistics

	Gender *M* (*SD*)				Age *M* (*SD*)			
	Boys	Girls	*t*-test	*d*	11-13 years	14-16 years	*t*-test	*d*
Need for popularity W1	1.99 (1.07)	1.80 (.99)	4.91***	0.19	1.85 (1.01)	1.96 (1.03)	-2.76**	0.11
Need for popularity W2	1.99 (1.04)	1.88 (.91)	2.69**	0.12	1.91 (1.03)	1.98 (.97)	-1.50	–
Need for popularity W3	1.91 (1.01)	1.82 (.96)	2.04*	0.09	1.80 (.93)	1.98 (.99)	-4.22***	0.19
Need for popularity W4	1.92 (1.01)	1.84 (.67)	2.01*	0.09	1.87 (1.00)	1.89 (.96)	-0.54	–
Moral disengagement W1	1.75 (.61)	1.52 (.44)	10.83***	0.44	1.58 (.53)	1.72 (.55)	-6.00***	0.25
Moral disengagement W2	1.70 (.61)	1.49 (.47)	9.25***	0.39	1.55 (.54)	1.65 (.55)	-4.04***	0.19
Moral disengagement W3	1.64 (.57)	1.45 (.43)	8.82***	0.38	1.50 (.51)	1.61 (.50)	-4.37***	0.21
Moral disengagement W4	1.64 (.60)	1.43 (.43)	9.11***	0.39	1.51 (.52)	1.57 (.51)	-2.46*	0.12
Bullying perpetration W1	0.33 (.52)	0.19 (.32)	8.27***	0.32	0.23 (.42)	0.31 (.46)	-4.53***	0.18
Bullying perpetration W2	0.34 (.52)	0.23 (.37)	6.10***	0.25	0.26 (.45)	0.33 (.46)	-3.30**	0.15
Bullying perpetration W3	0.26 (.45)	0.15 (.29)	6.69***	0.28	0.19 (.39)	0.21 (.36)	-1.15	–
Bullying perpetration W4	0.25 (.41)	0.17 (.30)	5.24***	0.22	0.20 (.35)	0.23 (.37)	-1.71	–

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Whether the constructs were invariant over time was explored by measurement invariance. The configural invariance model without restrictions showed good baseline model fit for all three variables (see Table 3). Next, with factor loadings constrained to be equal across waves to test for metric invariance, fit model remained good and unchanged for all variables, given that no more than two criteria were violated by comparing the nested models. Finally, for scalar invariance (strong invariance) with intercepts constrained across waves, no significant change in fit was found (see Table 3). Overall, testing for measurement invariance revealed an invariant structure across waves for each of the scales, making them suitable for examination of the longitudinal associations between the variables.

Table 3

Testing for Longitudinal Measurement Invariance

Model tested	Model fit indices			Model comparison		
	χ^2 (*df*)	CFI	RMSEA [90% CI]	$\Delta\chi^2$ (*df*)	ΔCFI	ΔRMSEA
Need for popularity						
Configural	1584.472 (1020)***	0.992	0.014 [0.012, 0.015]	–	–	–
Metric	1626.165 (1050)***	0.992	0.014 [0.012, 0.015]	165.824 (30)***	0.000	0.000
Scalar	1815.194 (1215)***	0.992	0.013 [0.012, 0.014]	289.043 (165)***	0.000	-0.001
Moral disengagement						
Configural	5708.196 (4318)***	0.977	0.010 [0.010, 0.011]	–	–	–
Metric	5780.256 (4384)***	0.977	0.010 [0.010, 0.011]	201.965 (66)***	0.000	0.000
Scalar	5984.136 (4596)***	0.977	0.010 [0.009, 0.011]	280.884 (212)**	0.000	0.000
Bullying perpetration						
Configural	550.613 (305)***	0.986	0.016 [0.014, 0.019]	–	–	–
Metric	560.394 (320)***	0.987	0.016 [0.014, 0.018]	28.867 (15)*	0.001	0.000
Scalar	596.223 (379)***	.988	0.014 [0.012, 0.016]	76.479 (59)	0.001	-0.002

*$p < 0.05$, ***$p < 0.001$.

The ICCs indicate that 58, 58 and 43% of the variance of need for popularity, moral disengagement or bullying perpetration respectively could be explained by the between-person differences denoted by the differences between the classrooms, while 42, 42 and 57% by fluctuations within-person. This indicated the need for models sensitive to within-person variance, such as the RI-CLPM.

6.3.1.2. Traditional Cross-Lagged Panel Modeling

To address the hypotheses of the present study at the between-person level, a standard CLPM was conducted to explore the association over time between need for popularity, moral disengagement and bullying perpetration. Model 1 without unconstrained paths had an

excellent fit (see Table 4). In model 2, the autoregressive paths were constrained to be equal over time ($\Delta\chi^2$ (6) = 17.13, $p < 0.01$, ΔCFI = −0.003 and ΔRMSEA = −0.003). Compared to model 1, model 2 was not significantly worse as two of the three criteria did not match. After the constraint of equality over waves of the cross-lagged paths were added in model 3, non-significant differences compared to model 2 were found ($\Delta\chi^2$ (12) = 23.25, $p < 0.05$, ΔCFI = −0.004 and ΔRMSEA = −0.005). Finally, in model 4 the residual covariances between variables within the same wave (from W2 to W4) were not allowed to vary across time. Again, this did not affect model fit compared to model 3 ($\Delta\chi^2$ (6) = 7.17, $p > 0.05$, ΔCFI = 0.000 and ΔRMSEA= −0.003). Given the lack of significant differences in model fitin CLPM, model 4, the most parsimonious model, was used to assess the associations between variables.

Table 4

Hierarchical Cross-Lagged Panel Model and Random Intercept Cross-Lagged Panel Model

| Model tested	Cross-lagged panel model			Random intercept cross-lagged panel model		
	χ^2 (*df*)	CFI	RMSEA [90% CI]	χ^2 (*df*)	CFI	RMSEA [90% CI]
Model 1	358.581 (33)***	0.948	0.060 [0.054, 0.065]	115.534 (27)***	0.986	0.034 [0.028, 0.041]
Model 2	384.254 (39)***	0.945	0.057 [0.052, 0.062]	152.797 (33)***	0.981	0.036 [0.041, 0.042]
Model 3	425.270 (51)***	0.941	0.052 [0.047, 0.056]	184.260 (45)***	0.978	0.033 [0.029, 0.039]
Model 4	432.048 (57)***	0.941	0.049 [0.045, 0.053]	176.265 (51)***	0.980	0.030 [0.025, 0.035]

*** $p < 0.001$.

The associations between the variables from the between-person effects in the CLPM are illustrated in Fig. 1 through the standardized coefficients. The autoregressive paths were significant across waves (see Fig. 1). Both associations between the different variables (W1) and their residual covariances (from W2 to W4) within the same wave were all significant. Based on the hypotheses posed in the between-person level, the cross-lagged associations between the different variables showed that those adolescents with relatively higher need for popularity and moral disengagement (relative to the classmate average) at specific waves, reported relatively higher bullying than their peers at the subsequent wave, while the reverse influences were not found. In addition, bidirectional relationships were between need for popularity and moral disengagement at each wave, indicating that relatively high scores on need for popularity predicted relatively high scores on moral disengagement at the next wave, and vice versa. According to the effects of the time-invariant predictors, girls showed lower levels of involvement in all three of the focal study variables (see Table 5). Younger

participants showed less need for popularity only in W3, less moral disengagement in W1, W2 and W3, and less bullying perpetration in W1 and W2 (see Table 5).

Figure 1

Traditional Cross-Lagged Panel Model
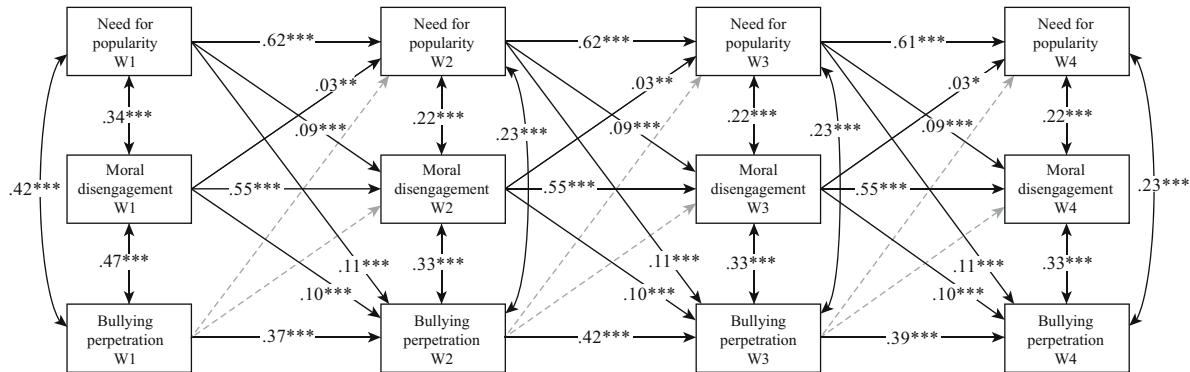
Note: The coefficients were standardized after estimation (model input was unstandardized). Dashed arrows show non-significant paths.

*** $p < 0.001$.

Table 5

Effects of Time-Invariant Predictors on Variables in CLPM and RI-CLPM

	CLPM				RI-CLPM			
	Gender		Age		Gender		Age	
	b	*SD*	*b*	*SD*	*b*	*SD*	*b*	*SD*
Need for popularity W1	-0.21***	0.01	0.06	0.04	-0.21***	0.01	0.06	0.04
Need for popularity W2	-0.15***	0.04	0.04	0.03	-0.15***	0.04	0.04	0.03
Need for popularity W3	-0.15***	0.04	0.08***	0.02	-0.14***	0.01	0.08*	0.02
Need for popularity W4	-0.12*	0.06	0.02	0.03	-0.13*	0.06	0.02	0.03
Moral disengagement W1	-0.25***	0.02	0.08***	0.02	-0.25***	0.02	0.07***	0.02
Moral disengagement W2	-0.24***	0.02	0.07***	0.02	-0.24***	0.02	0.07***	0.02
Moral disengagement W3	-0.22***	0.01	0.07***	0.01	-0.22***	0.00	0.07***	0.01
Moral disengagement W4	-0.22***	0.02	0.04	0.02	-0.22***	0.02	0.04	0.02
Bullying perpetration W1	-0.14***	0.00	0.04***	0.01	-0.14***	0.00	0.05***	0.01
Bullying perpetration W2	-0.13***	0.02	0.04**	0.02	-0.13***	0.02	0.04**	0.02

Bullying perpetration W3	-0.12***	0.02	0.01	0.01	-0.12***	0.02	0.02	0.02
Bullying perpetration W4	-0.09***	0.01	0.01	0.01	-0.10***	0.01	0.01	0.01

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

6.3.1.3. Random Intercept Cross-Lagged Panel Modeling

To address the hypotheses of the present study at the within-person level, a RI-CLPM was conducted to explore the association over time between need for popularity, moral disengagement and bullying perpetration. As in the CLPM, hierarchical models were estimated (see Table 4). Model 1 without unconstrained paths had an excellent fit. After the autoregressive paths was constrained in model 2, differences compared to model 1 were non-significant ($\Delta\chi^2$ (6) = 45.83, $p < 0.001$, ΔCFI = −0.005 and ΔRMSEA = 0.002). In model 3, the cross-lagged paths were not allowed to vary across time, which did not affect model fit compared to model 2 ($\Delta\chi^2$ (12) = 27.80, $p < 0.01$, ΔCFI = −0.003 and ΔRMSEA= −0.003). In model 4, the residual covariances between variables within the same wave (from W2 to W4) were constrained over time showing an excellent fit, and this did not differ significantly from the model 3 ($\Delta\chi^2$ (6) = 1.86, $p > 0.05$, ΔCFI = 0.002 and ΔRMSEA = −0.003) . Consequently, the model 4 was retain as the most parsimonious model.

The associations between the variables are illustrated in Fig. 2 through the standardized coefficients. First, at the between-person level, the random intercept accounted for the stable differences between adolescents (i.e., with respect to their classmates) on the study variables. The random intercepts of need for popularity were positively correlated with moral disengagement and bullying, and the random intercepts of moral disengagement and bullying were also positively correlated (see Fig. 2). This suggests that those adolescents with high levels–compared with the average classroom–on one of the focal variables during any of the four waves also tended to have high levels on the other focal variables.

Figure 2

Random Intercept Cross-Lagged Panel Model
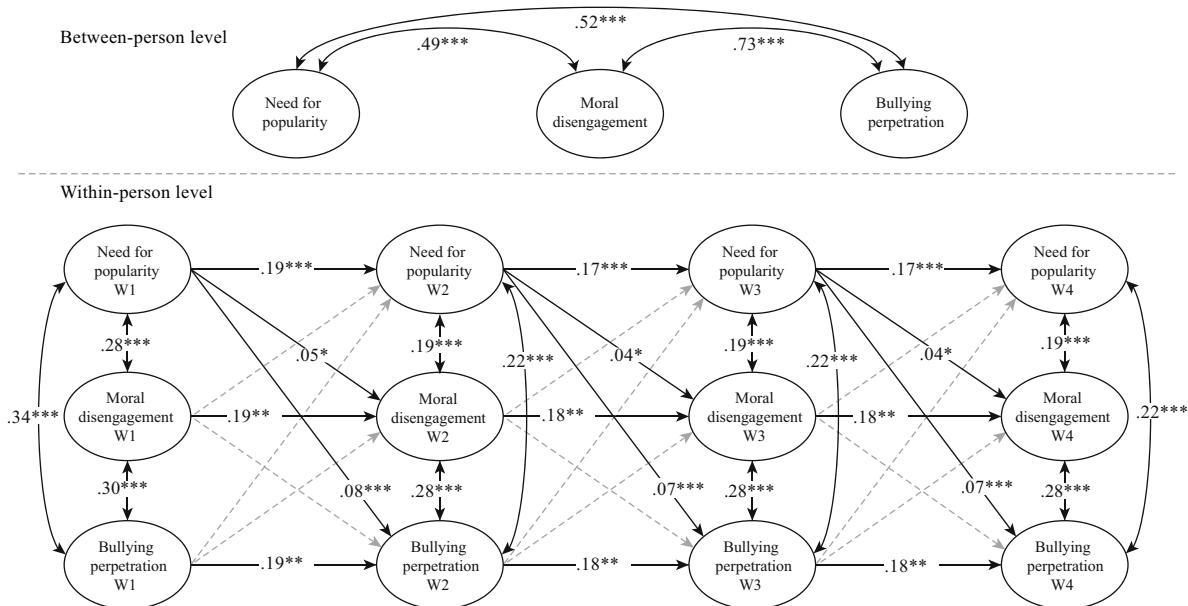
Note: The coefficients were standardized after estimation (model input was unstandardized). Dashed arrows show non-significant paths.

* $p < 0.05$; ** $p < 0.01$, *** $p < 0.001$.

According to the study's hypotheses at the within-person level, after accounting for the between-person variance, the autoregressive paths as well as the concurrent (within wave) correlations between the variables were all statistically significant. Furthermore, significant prospective associations highlighted that an increase in need for popularity yielded an increase in both moral disengagement and bullying perpetration in the subsequent wave, and this pattern held across all four waves (see Fig. 2). No significant cross-lagged was found in which moral disengagement and bullying perpetration were associated with subsequent waves of the other focal variables. After controlling for autoregressive effects and between-person variance, need for popularity predicted 4% of the explained within-person variance in moral disengagement six months later and between 4 and 5% in bullying perpetration. According to the effects of the time-invariant predictors, girls show a lower level of involvement in the study variables (see Table 5). Early adolescents showed less need for popularity only in W3,

less moral disengagement in W1, W2 and W3, and less bullying perpetration in W1 and W2 (see Table 5).

6.3.1.4. Sensitivity Analysis

Sensitive tests were conducted to guarantee the robustness of the results. Since the participants were clustered in schools, further analyses were performed taking into account this hierarchical structure. Through the command "type =complex" the analyses were re-run with the purpose of fixing the standard errors based on the school as a variable cluster. After obtaining a good fit index of the CLPM (χ^2 (57) = 266.327, $p < 0.001$, CFI= 0.948 and RMSEA= 0.036, 90% CI [0.032, 0.041]), the differences found (significant paths and size association between variables)–comparing when standard errors were controlled for classrooms–was that bullying perpetration predicted moral disengagement ($b = 0.08$, $SD = 0.02$, $p < 0.001$) and that need for popularity was not predicted by moral disengagement ($p > 0.05$). Regarding the RI-CLPM (χ^2 (51) = 104.182, $p < 0.001$, CFI= 0.987 and RMSEA= 0.019, 90% CI [0.014, 0.025]), after clustering among schools, differences were found in that changes in need for popularity did not produce subsequent deviations in moral disengagement ($p > 0.05$). Such results, however, should be taken with caution due to the low number of the clusters of the study (13 schools). Research has extensively discussed the minimum cluster size needed using hierarchical data structure; it has been consistently reported that with clusters smaller than 30, results should be treated cautiously as standard errors estimates may be biased (McNeish & Stapleton, 2016). Further information on the sensitivity analyses is available from the corresponding author on reasonable request.

6.4. Discussion

The roles of motivational and moral factors in bullying have been considered independently and predominantly from a cross-sectional standpoint. The present study contributes to the literature on analyzing the association between need for popularity and moral disengagement. Furthermore, the present study used a statistical approach that accounts for methodological limitations in traditional cross-lagged panel modeling. Studying the longitudinal association between variables in cross-lagged paths from between- and within-level approaches contributes substantively to understanding the moral and motivational nature of perpetration during adolescence. The aim of the present study was to explore the

prospective associations between moral disengagement, need for popularity and bullying perpetration in adolescents.

The proliferation of significant lagged-effects in data using traditional CLPM, where within-participant variance is not adequately accounted for, raises a serious question for prior studies: has evidence of lagged associations (Wang et al., 2017) been due to problematic analytic modeling of within-person variance? In the current study models, no support was found for the first hypothesis of bidirectionality over time between bullying perpetration and moral disengagement, once need for popularity was accounted for in the modeling. The traditional CLPM did, however, show a statistical influence of moral disengagement on subsequent bullying perpetration at each wave. The within-person findings suggest that deviations in moral disengagement and bullying perpetration were not significantly associated with changes within individuals on these variables. This suggests that between-person (time independent characteristics) differences may have been the primary determinant of significant longitudinal associations of previous studies (e.g., Visconti et al., 2015; Wang et al., 2017). Even though moral disengagement implies a process and a disposition, from a methodological view, it has been mainly conceptualized as an increasingly stable trait over time (Paciello et al., 2008). This study contributes to apply random intercepts in CLPM to the research of bullying. Future studies could examine whether a longer time interval than six months would capture influences on the changes between moral disengagement and bullying perpetration at the within-person level, or whether this influence begin prior to the age studied here.

This study furthers understanding of the longitudinal associations between need for popularity and bullying, accounting for both between-person and within-participant levels. Consistent with hypothesis, findings suggest that when adolescents have higher need for popularity than their peers, subsequent higher levels of bullying perpetration were also found (between-level). The within-level findings suggest that, for individuals who themselves become more focused on the need for popularity over time, their personal involvement in bullying perpetration is likely to increase as well, regardless of their 'rank' amongst their peers on these variables. These findings provide important evidence for the precedence of motivational factors in bullying perpetration, indicating that need for popularity may drive repeated increases within adolescents in their bullying perpetration over the six-month intervals assessed. In contrast, bullying did not appear to drive increases in the need for

popularity, when using analyses that account for between- and within-person level. The findings support that conclusion that bullying perpetration in adolescence may be largely a function of proactive, deliberate and intentional behavior serving as a means to an end (Hawley, 1999). In adolescence, when social status is a priority and scarce resource to get (Cillessen & Marks, 2011), this motive may be particularly potent in shaping bullying behavior. Adolescents may adopt the behavior of popular peers precisely because they aim to achieve the social status those peers hold. Popularity has been widely found to be associated with various antisocial behaviors at this age, when rebellious rule-breaking may attain visibility and prestige in the group, with the added perception of greater agency and independence (Veenstra et al., 2018). In fact, it has been evidenced the relation between popularity and bullying perpetration at these ages. According to the studies of popularity, adolescents may imitate aggressive behavior as a way to improve their social position into the group (Veenstra & Huitsing, 2021). The present findings add to prior studies that have suggested that popularity motives predict increases in aggression (Dumas et al., 2019), and that those such 'agentic' goals are important drivers of aggression in adolescence (Ojanen & Nostrand, 2014), after accounting for methodologic differences that could have resulted in spurious relationships in previous studies. The findings were based on four waves of data and the patterns of between- and within-person effects were consistent over time. Future research is needed that explores whether individuals who manage to increase their popularity, or conversely who fail to attain a greater social status, continue to use bullying and aggression and/or moral disengagement to achieve social status.

Similarly, support was found for the third hypothesis, that need for popularity would predict increases in moral disengagement over time at the between- and within-level. This finding is consistent with prior research into the effects of social goals on moral disengagement (Visconti et al., 2015). This finding is based on social cognitive theory that identifies moral disengagement as a social-cognitive orientation that is strongly affected by social motivations. Self-interested instrumental goal pursuit may play a strong role in driving moral decision making (Arsenio & Lemerise, 2004). However, little research to our knowledge has examined how social- and self-oriented motivations might influence the development of moral engagement. Further research on such "motivated moral decision making" is needed to deepen the understanding of the relationship between popularity

motivations and morality. Further research is needed, sensitive to development, to examine how motivations to achieve prestige and power within the peer group might serve as antecedents of moral disengagement.

6.4.1. Limitations and Future Lines of Research

One limitation of the current study is its reliance on adolescents' self-reports, which may have influenced findings through social desirability bias, acceptance bias, and participants' mood. Adding reports from peers and teachers and other techniques (e.g., peer nomination) in future multi-level perspective studies could alleviate this weakness. The study also did not account for social status within the group, as sociometric assessment would enable. Given that some studies have found popularity motivations were not a significant when controlling actual popularity (Malamut et al., 2020) and others finding a significant interaction between popularity motivations and actual popularity (Dawes & Xie, 2014), such research is needed to clarify the picture. As well, need for popularity was the only motivational variable assessed; other motivations may drive moral disengagement and/or bullying, including revenge motives and recreational motives in bullying (Runions et al., 2018). As well, the bullying measure averaged over four modes of aggression (physical, indirect, relational, and social exclusion). Future studies can address this gap by testing motivational and moral precursors of these different types of bullying perpetration. Although the study used a large sample of adolescents, the results should be interpreted with care, as it consisted of schools from a single Spanish region that were not selected randomly. Stratified random sampling that includes adolescents from different cultural backgrounds would increase confidence in the results' generality (Skrzypiec et al., 2018). Future studies should recruit adolescents belonging to minorities and marginalized groups. Regarding the methodology, whereas the RI-CLPM may capture changes from one time to the next and how the constructs are influenced, such findings could be further supported by considering prolonged changes over time (longer interval between waves and longer developmental spans of adolescence). Future research could employ methods such as growth modeling to explore whether possible trends of change over time in need for popularity, moral disengagement, and bullying perpetration are influenced by any other variables.

6.4.2. Practical Implications

The results of this study offer teachers and practitioners a better understanding of how their students' motivational strategies drive moral disengagement and bullying behavior. The robust evidence for need for popularity provides important direction for intervention. Within-person associations help to identify possible increases in need for popularity that may lead some adolescents to become targets for intervention. During adolescence, interventions that might aim to reduce aggression through addressing the need for popularity should consider peer group dynamics carefully: it is the group that gives and takes away popularity and the possible social benefits associated with it (Romera et al., 2019). If aggression no longer enhances popularity, the view that humiliating a peer will achieve benefits no longer makes sense. Promoting prosocial developmental goals may improve interpersonal relationships and thereby student wellbeing. Moreover, findings support that the most of relationship between variables were found at a dispositional level. It suggests that preventive efforts to address maladaptive behaviors should particularly target children from earlier ages, to promote that they learn to engage in a disposition to reject immoral actions, striving for aims of popularity and involvement in bullying behavior.

6.5. Conclusion

Understanding what drives young people to engage in bullying is essential for effective prevention, especially for adolescents. Motivational and moral accounts of bullying perpetration have been studied extensively, but not often together and at both between- and within-person level. The present study differs from the research on the topic in developing an analytic approach that better accounts for the between- and within-person variance in predicting lagged associations over time. The RI-CLPM provides strong support for the role of need for popularity by replicating the traditional modeling. The findings of the study reveal potentially causal precedence of the need for popularity as a driver of bullying and moral disengagement. Popularity motivations changes appear to be addressed as a precursor of further changes in moral disengagement and perpetration. However, the findings suggest that the effects of moral disengagement on need for popularity and bullying perpetration are evident at between-level, but not at the within- person level. When moral disengagement is treated as a state, rather than as a stable characteristic, no influence is reported. When addressing moral disengagement as a process, this state approach seems not to be enough to

capture a greater involvement in bullying six months later. The findings raise questions about the role of moral disengagement in the causal pathway to bullying in adolescence. This study opens a theoretical challenge in the study of the developmental importance of motivational mechanisms involved in bullying.

6.6. Authors' Contributions

E.M.R. conceived of the study, coordinated the data collection, conceived of the manuscript, coordinated and drafted the manuscript, participated in the interpretation of the data, performed statistical analyses; R.O.R. conceived of the study, participated in the drafting, revised the manuscript; K.R. participated in the drafting and revision of the manuscript; A.C. conceived of the manuscript, performed statistical analyses, participated in the interpretation of the data. All authors read and approved the final manuscript.

6.7. Funding

6.8. Data Sharing and Declaration

The datasets generated and/or analyzed during the current study are not publicly available but are available from the corresponding author on reasonable request.

6.9. Compliance with Ethical Standards

6.9.1. Conflict of Interest

The authors declare no competing interests.

6.9.2. Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The project was reviewed and approved by Biosafety and Bioethics Committee of the University of Cordoba.

6.9.3. Informed Consent

Written informed consent was obtained from the parents.

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CHAPTER

7

STUDY 2

RESEARCH ARTICLE

AGGRESSIVE BEHAVIOR / WILEY

Longitudinal associations between cybervictimization, anger rumination, and cyberaggression

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Abstract

Adolescents' involvement in cyberbullying has been a growing public health concern for some time. Cybervictimization and cyberaggression are two phenomena that previous research has often shown to be associated. However, longitudinal research into these associations and also into potential risk factors for these phenomena is less common. Anger rumination is a proven risk factor for aggressive behavior, but the relationship between anger rumination and victimization is not clear. The present longitudinal study investigated the associations between cybervictimization, anger rumination and cyberbullying in a sample of 3017 adolescents ($M_{W1} = 13.15$; $SD = 1.09$; 49% girls) from 7th to 9th grade. The European Cyberbullying Intervention Project Questionnaire and the Anger Rumination Scale were administered in four waves with 6 months intervals over a total period of 18 months. The associations between the variables were analyzed with a cross-lagged model. We found that: cybervictimization predicted anger rumination and cyberaggression; anger rumination was associated with later increases in both cybervictimization and cyberaggression: but involvement in cyberaggression predicted neither subsequent involvement in cybervictimization, nor in anger rumination. In addition, cybervictimization was found to mediate the association between anger rumination and cyberaggression. This study expands the understanding of the factors associated with cybervictimization and cyberaggression, and its results indicate that intervention programs should focus on boosting self-control to decrease impulsive behavior and protocols to prevent and intervene in cyberbullying.

Keywords: Adolescents, anger rumination, cross-lagged model, cyberbullying, longitudinal study.

7.1. Introduction

Cyberbullying is often described as an intentional and aggressive behavior perpetrated by an individual or a group of individuals through the use of information and communication technologies (Smith et al., 2008). Previous research has tried to identify characteristics in adolescents associated with a heightened involvement in cybervictimization and cyberaggression. There is a wide body of evidence showing that cybervictimization and cyberaggression are associated ($r = .21$ to $r = .80$) (see meta-analysis by Lozano-Blasco et al., 2020). A meta-analysis of the risk factors for cyberbullying found cybervictimization to be its strongest predictor ($r = .51$), but cyberaggression was not a risk factor for cybervictimization (Kowalski et al., 2014). There are different explanations for the association between victimization and aggression. The taxonomy of reasons (TOR) for involvement in aggressive behavior (Baumeister, 2001; Pinker, 2011) includes revenge (as planned behavior). Depending on their ability to cope with the negative emotions produced by cybervictimization, victims may experience a desire to take revenge and consequently get involved in reactive cyberaggression (Martins et al., 2019). Furthermore, aggression motivated by anger can also be impulsive, a form of self-defense (Connor et al., 2019). Therefore, when victims feel threatened and attacked, especially if they feel the attack is unjustified, some may respond with anger and aggression (Fluck, 2017). Finally, negative emotions produced by online victimization (including anger) could weaken the ability to deal with social stress efficiently, which may lead to hostile processing of social information, which in turn can lead to cyberaggression (Ak et al., 2015; Marín-López et al., 2019).

To design effective prevention programs, it is necessary not only to identify the risk and protective factors affecting involvement in cyberbullying, but also to understand the mechanisms underlying those relationships, and these remain largely unexplored (Romera et al., 2021). Anger rumination has received attention with regard to its association with (online) aggression, but its association with victimization remains less clear. This study examined the association of anger rumination, as a mechanism of internal state, with cybervictimization and cyberaggression. The possible mediating effects involving the association between variables were explored.

7.1.1. Anger rumination and cybervictimization

The response styles theory (Nolen-Hoeksema, 1991) is often applied to study the negative effects of traumatic events, such as victimization. Responses to victimization are classified as emotion-focused coping, aimed at minimizing distress by focusing on the affect related to the stressor, and problem-focused coping, aimed at removing or, when unavoidable, minimizing the impact of the experience by focusing on the stressor (Lazarus & Folkman, 1984). While problem-focused coping has been associated with prosocial and adaptive behavior, emotion-focused coping has been linked to antisocial and aggressive behavior (Eisenberg et al., 2006). Within the response styles theory, emotion-focused coping includes rumination, a cognitive process aimed at coping with negative experiences and feelings by repetitively and passively thinking about symptoms, causes and consequences (Nolen-Hoeksema, 1991). The literature has differentiated trait rumination, the tendency to ruminate as a stable personality characteristic (Just & Alloy, 1997) and state rumination, referring to a focus on negative feelings and problems at a given point in time (Nolen-Hoeksema & Morrow, 1993). The rumination referred to in the remainder of this article relates most closely to trait rumination. Previous studies about cyberbullying have found that anger was a common emotional response of adolescent victims (Ak et al., 2015; Ortega et al., 2012). In general, adolescents tend to regulate their emotions of anger, but the regulatory mechanisms do not always lead to an adaptive response. If an emotional state such as anger is retained over time, it can lead to rumination as a way to cope with the negative experience (Ray et al., 2008). Anger rumination can be understood as the tendency to focus on internal-state-related thoughts during an anger episode (Sukhodolsky et al., 2001). After such anger-inducing incidents, some adolescents succeed in managing the situation, while others cannot stop thinking about the episode and how it came about (Li et al., 2019). Anger rumination has been shown to reduce the scope for adjusted response, such as reappraisal and problem solving (Lyubomirsky et al., 2015). Previous research has indeed shown that cybervictimization predicted rumination (Liu et al., 2020), but so far, the specific association with anger rumination remains largely unexplored. Only one descriptive study showed that adolescents and adults who were cybervictimized reported higher levels of anger rumination compared to those not involved in cyberbullying (Zsila et al., 2018).

Whether a reverse relationship also exists, that is, whether anger rumination predicts an increase in (cyber)victimization has not been studied yet, but this might be expected. Individuals who engage in anger rumination may be more inclined to focus on the negative feelings caused by the stressful event, rather than on addressing the problem. Previous research suggests that such emotion-focused coping is associated with an increase in anxiety and depression (Izadpanah et al., 2017), which in turn are associated with cybervictimization (Wright & Wachs, 2019). Moreover, a deficit in self-control, which is widely associated with anger rumination (White & Turner, 2014), is a proven risk factor for victimization online (Álvarez-García et al., 2019). A meta-analysis found that internalizing problems predict increased peer victimization during youth (Reijntjes et al., 2010). This may be explained by the fact that impulsive individuals tend not to consider the consequences of their actions when engaging in risky behaviors (Gottfredson & Hirschi, 1990). It should be noted that in Pratt et al. (2014) meta-analysis the predictive effects of lacking self-control on victimization proved greater with noncontact forms of victimization, such as in cyberspace. Based on the discussion above, it is expected that anger rumination is a risk factor for and predicts a subsequent increase in cybervictimization.

7.1.2. Anger rumination and cyberaggression

Emotion-focused coping strategies activated by an anger-raising event aim at managing the intensity of the anger experience, reducing angry thoughts and avoiding impulsive actions to prevent aggression (Denson et al., 2011). The multiple systems model of anger rumination (MSM) (Denson, 2013) has been applied in explaining how anger rumination might disturb the mechanisms of emotion regulation and thereby facilitate aggressive behavior. Through different levels of analysis (cognitive, neurobiological, affective, executive control, and behavioral, the MSM aims to understand why people engage in such cognitive processing after identifying an event as provocative. According to the model, the affective and neurobiological response, moderated by the cognitive response (e.g., through the mode of processing), influence executive control and aggressive behavior. The repetitive and passive thinking within anger rumination can overload cognitive processing (Denson, 2013) and consequently self-control (White & Turner, 2014). Therefore, people with a high level of anger rumination and weak executive control have greater difficulties implementing the emotional regulation strategies that seek to decrease the arousal level, and thereby a greater

propensity to behave aggressively, either impulsively or deliberately. Moreover, anger rumination can take the form of angry afterthoughts, thoughts of revenge, angry memories, and a focus on causes. Such processes tend to exacerbate and extend the anger emotion, and reconstructing the background of the threat or injury can create a willingness to engage in subsequent aggressive behavior (Denson et al., 2011).

On the empirical level, many studies have shown that anger rumination predicts higher levels of aggression (Quan et al., 2020; Salguero et al., 2020; Wang et al., 2019), but the opposite association, whether involvement in aggressive behavior predicts an increase in anger rumination, has not been analyzed. Moreover, with regard to cyberaggression specifically, as far as we know only one study—with a cross-sectional design and using middle adolescents— has found an association with anger rumination (Yang et al., 2020). The scarcity of evidence relating to the association with cyberbullying perpetration is surprising, given cyberspace's abovementioned nature of anonymity (Barlett, 2015), which facilitates the possibility to take revenge with a lower probability of retaliation (Wright & Li, 2012). This warrants further investigation into anger rumination as a risk factor for cyberbullying perpetration, especially through longitudinal analysis.

7.1.3. The present study

Using the MSM as a theoretical foundation, the present panel study into the associations between cyberaggression, anger rumination and cybervictimization, therefore offers an important contribution to the existing literature about risk factors for cyberbullying among adolescents. With the analysis of these associations, worth considering is also whether other factors, such as gender and age, influence these relationships. In a review of risk and protective factors for cyberbullying a definite relationship between gender and cyberbullying was not found, but the studies in this review that did report gender differences showed boys were more likely to be cyberbullying perpetrators, while girls were more likely to be cyberbullied (Kowalski et al., 2019). Regarding age, a recent study comparing pre-adolescents and later adolescents found higher levels of involvement in both cybervictimization and cyberaggression in the older group (González-Cabrera et al., 2019). With regard to anger rumination, higher levels have been found in girls than in boys (Zsila et al., 2019), and there is no existing information about differences between early and middle adolescents. Although there is some prior information to guide our expectations about level-differences in these

variables between boys and girls, and between early and middle adolescents, very little is known about the effect of gender and age, as moderating factors, on the associations between cybervictimization, anger rumination and cyberaggression. The limited studies that exist suggest gender does not influence the association between cybervictimization and cyberaggression (Chan et al., 2019), and between anger rumination and aggressive behavior (e.g., Guerra & White, 2017; White & Turner, 2014). While gender differences in the association between anger rumination and cybervictimization have not been explored yet.

In this study, we focus on adolescence because it is a life stage in which the presence of stressors increases (e.g., the unfair treatment from peers) (Lucas-Thompson et al., 2018) and depending on attribution and coping style, a time when beneficial or maladaptive traits that affect later life are often adopted (Seiffge-Krenke, 2013). The prevalence of cyberbullying increases during adolescence (González- Cabrera et al., 2019), reaching its peak in the later phases of middle school (Kowalski et al., 2014). Based on the abovementioned theoretical and empirical research, we formulated the following hypotheses: Adolescents who have been cybervictimized subsequently become more involved in cyberaggression (Hypothesis 1a); involvement in cyberaggression does not lead to a later increase or reduction in cybervictimization (Hypothesis 1b); cybervictimized adolescents show an increase in anger rumination (Hypothesis 2a), and anger rumination predicts an increase in cybervictimization (Hypothesis 2b); anger rumination predicts an increase in cyberaggression (Hypothesis 3a), but there is no reverse relationship (Hypothesis 3b). Finally, we expect that boys and girls do not differ in the associations between cybervictimization, anger rumination and cyberaggression (Hypothesis 4a), and that, due to the narrow age range of the study's participants (11–16 years, 7th–9th grade) there are no differences in the associations between early and middle adolescents (Hypothesis 4b).

The possible indirect effects were analyzed. We hypothesized that anger rumination would mediate the association between cybervictimization and cyberaggression (Hypothesis 5a). This is consistent with previous studies which found the mediating role of anger rumination as a risk mechanism of aggression with trait self-control, trait anger and hostile attribution bias as predictors (Li et al., 2019; Quan et al., 2019; Wang et al., 2018). In a recent study, indirect effects of victimization and perpetration via anger rumination were found (Malamut & Salmivalli, 2021). In addition, as found in a longitudinal study the mediating role

of victimization between depressive symptoms and violent behavior (Yu et al., 2018), we hypothesized that cybervictimization would mediate the association between anger rumination and cyberaggression (Hypothesis 5b).

7.2. Methods

7.2.1. Participants

The participants were drawn from a large longitudinal study into personal and ecological developmental risks and protective factors during adolescence. The convenience sample comprised 3,017 adolescents (49% girls; 51% boys) between 11 and 16 years old, attending Grades 7–9, and included 115 classes from 13 middle schools in Southern Spain. In this study, we analyzed four waves of data collected during the years 2017–2019 at 6-month intervals. At each data collection point the sample varied due to temporary absence or changes of school. Wave 1 (W1 hereafter) in November 2017 included 2790 adolescents (49% girls, M_{age} = 13.15, SD = 1.09, 92% participation rate); Wave 2 (W2) in May 2018 included 2553 (50% girls, M_{age} = 13.61, SD = 1.13, 85% participation rate); Wave 3 (W3) in November 2018 included adolescents 2362 (51% girls, M_{age} = 14.03, SD = 1.05, 78% participation rate); and Wave 4 (W4) in May 2019 included 2361 adolescents (50% girls, M_{age} = 14.55, SD = 1.06, 78% participation rate). Of the total sample, 59% participated in all four waves, 22% participated at three time points, 11% at two time points, and 7% took part at only one time point.

7.2.2. Measures

7.2.2.1. Cyberbullying

We measured cybervictimization and cyberaggression using the European Cyberbullying Intervention Project Questionnaire (Del Rey et al., 2015). This scale has shown good validity and reliability in a Spanish population (Ortega-Ruiz et al., 2016) and in cross-cultural populations (Herrera-López et al., 2017). The questionnaire includes 22 items that assess the frequency of cyberbullying behavior in two dimensions: 11 items assess cybervictimization (e.g., "Someone said nasty things about me to others either online or through text messages") and 11 items assess cyberaggression (e.g., "I posted embarrassing videos or pictures of someone online"). The items were all answered on a 5-point scale, ranging from 0 (no) to 4 (yes, more than once a week). Responses to the items were averaged

within each dimension. Higher scores correspond to higher levels of cybervictimization and cyberaggression. The internal consistency of the scale in our study is presented in the Results section.

7.2.2.2. Anger rumination

Anger rumination was measured with the Anger Rumination Scale (Sukhodolsky et al., 2001). This scale has shown good validity and reliability in Spanish populations (Uceda et al., 2016). The questionnaire includes 19 items (e.g., "When something makes me angry, I turn this matter over and over again in my mind," "When someone provokes me, I keep wondering why this should have happened to me"). The items were answered on a 4-point scale, ranging from 1 (almost never) to 4 (almost always). In line with previous studies using this scale, items were averaged to extract a global anger rumination score (Wang et al., 2019). Higher scores correspond to a higher level of anger rumination. The internal consistency of the scale in our study is presented in the Results section.

7.2.3. Procedure

Ethical approval was obtained from the research ethics committee of the corresponding author's institution. Before data collection, informed consent was obtained from government and school authorities, as well as from the participants' parents. The instruments were implemented in self-report form in the classroom during regular school hours and included instructions on how to complete the questionnaire. Interviewers trained and experienced in psychological research supervised the data collection using standardized instructions. These included the assurance to participants that there were no right or wrong answers, that the data would be anonymous and treated confidentially, that participation was voluntary, and they could stop participating at any time. The researchers provided verbal reading support for those students with reading difficulties. The questionnaires were administered in paper-and-pencil format. Data from different waves was linked through a code composed of the first characters of the participants' given names and surnames, together with their dates of birth. On average, it took 30 min to answer the questionnaires.

7.2.4. Statistical analyses

Preliminary steps in the analysis included running descriptive statistics, correlations and independent *t*-tests to explore gender (1 = boys; 2 = girls) and age (1 = early adolescents:

2 = middle adolescents) differences. The internal consistency of the scales was assessed with Cronbach's alpha. Longitudinal measurement invariance was analyzed to verify the consistency of the constructs over time (Little et al., 2013). Anger rumination was considered a global construct, while cybervictimization and cyberaggression were analyzed on the cyberbullying scale as two independent and correlated factors. It was done in a confirmatory factorial analysis by comparing three increasingly restrictive models. First, to test for configural invariance the model was estimated with the factor loadings and intercepts allowed to vary freely without restrictions. Then, metric invariance (weak) was analyzed after imposing equal factor loadings across time. Finally, scalar invariance (strong) was explored by imposing equal intercepts across time. Model fit of the three consecutive models was compared with determine the degree of invariance of the constructs. With regard to the comparison between models, ΔCFI < 0.01 and ΔRMSEA < 0.015 (Chen, 2007), they were considered to represent a statistically nonsignificant difference in model fit. The associations between cybervictimization, anger rumination and cyberaggression were explored in a cross-lagged model. This included the following paths: (a) autoregressive paths within the same variable over adjacent waves (e.g., anger rumination W1 $\rightarrow$ anger rumination W2); (b) cross-lagged paths between different variables in adjacent waves (e.g., cybervictimization W1 $\rightarrow$ anger rumination W2); and (c) covariances between different variables measured at the same wave (e.g., anger rumination W1 $\leftrightarrow$ cyberaggression W1), from W2 to W4, the covariances are based on the residual variances. To allow an efficient and systematic interpretation of the associations, we compared several models with decreasing constraints imposed on the estimation of abovementioned paths. Models were built in four steps: in Model 1 the cross-lagged paths, autoregressive paths, and the residual covariances between the variables in the same wave were constrained to be equal over time (from W2 to W4); in Model 2 the residual covariances were freely estimated; in Model 3 the residual covariances and cross-lagged paths were also freely estimated; and in addition, in Model 4 the residual covariances, cross-lagged paths and autoregressive paths were freely estimated. The Scaled χ^2 Difference test (Satorra & Bentler, 2001) was considered to analyze whether the less constraint model fit better. In case of an improvement, the model with fewer constraints is retained, while no differences between the models are found, the model with higher constraints is used for further comparison with the next model. To analyze whether the longitudinal associations between cybervictimization, anger rumination, and cyberaggression differed between boys and girls,

and early and middle adolescents, we ran multigroup analyses and verified results using Wald tests (Muthén & Muthén, 2017).

Analyses were conducted in Mplus Version 8.4 (Muthén & Muthén, 2017). Models were estimated using the Maximum Likelihood Robust estimator (Satorra & Bentler, 2001) to account for non-normality of the data. We reported standard fit indices, including the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker–Lewis index (TLI). RMSEA values < .08 and .05, and CFI and TLI values > .90 and .95 indicated acceptable and good model fit, respectively. To adjust the standard errors, we employed a "type = complex" sampling estimator, with classroom as a cluster variable, as adolescents were nested within previously defined groups. 5000 bootstrapping samples were conducted to estimate the confidence intervals for indirect effects through using INDIRECT model test in Mplus to analyze the possible mediations between the variables from Time 1 to Time 4 (i.e., Time 1 → Time 2→ Time 3→ Time 4). Missing data character was explored though the Missing Completely at Random test (MCAR). Although Little's MCAR test provided a significant result ($p < .001$), correction of this result for sensitivity to sample size through the normed χ^2 (χ^2/ df= 1.34) (Bollen, 1989) suggests data were missing at random (MAR). Full Information Maximum Likelihood (FIML) estimation was used to handle missing data, meaning all participants of the study were included in the analyses. By using all available data, FIML overcomes concerns associated with traditional missing data techniques, and provides an efficient estimation in longitudinal designs (Graham et al., 2001).

7.3. Results

7.3.1. Preliminary steps

The means, standard deviations, and Cronbach's alpha of the main variables are displayed in Table 1, together with the independent *t*-test results used to analyze gender and age differences. Girls scored higher on anger rumination than boys, while boys had higher cyberaggression scores in all waves and higher cybervictimization scores in W1. Two age groups were created to explore age differences, representing early (11–13 years) and middle (14–16 years) adolescence. Middle adolescents reported more cybervictimization anger rumination, and cyberaggression than early adolescents. Following Cohen (1977), these effect sizes are considered small. Correlation analyses (see Table 2) showed that all variables were

stable over time: $r = .39$ to $r = .45$ for cybervictimization; $r = .47$ to $r = .62$ for anger rumination; $r = .24$ to $r = .36$ for cyberaggression. All variables were significantly correlated cross-sectionally and longitudinally in all waves. Respective coefficients of cross-sectional and longitudinal correlation had the following ranges: for cybervictimization and anger rumination: $r = .22$ to $r = .33$; $r = .12$ to $r = .24$; for cybervictimization and cyberaggression: $r = .64$ to $r = .72$; $r = .19$ to $r = .35$; and for anger rumination and cyberaggression: $r = .14$ to $r = .28$; $r = .10$ to $r = .16$.

Table 1

Descriptive Statistics and Gender and Age Differences

Variable	*M*	*SD*	α	Gender *t*-test	*d*	Age *t*-test	*d*
1. Cybervictimization (T1)	0.24	0.45	0.88	2.04*	0.09	-5.10***	0.21
2. Cybervictimization (T2)	0.21	0.38	0.86	-0.98	-	-4.01***	0.18
3. Cybervictimization (T3)	0.19	0.39	0.87	-0.26	-	-3.57***	0.16
4. Cybervictimization (T4)	0.20	0.38	0.88	0.22	-	-2.72***	0.13
5. Anger rumination (T1)	2.03	0.67	0.92	-3.94***	0.17	-5.67***	0.25
6. Anger rumination (T2)	2.08	0.72	0.93	-6.11***	0.27	-2.80**	0.13
7. Anger rumination (T3)	2.04	0.71	0.94	-5.71***	0.25	-2.69**	0.13
8. Anger rumination (T4)	2.11	0.74	0.95	-6.40***	0.28	-1.97*	0.09
9. Cyberaggression (T1)	0.15	0.35	0.87	5.36***	0.21	-7.16***	0.29
10. Cyberaggression (T2)	0.15	0.36	0.90	2.79**	0.11	-3.43***	0.15
11. Cyberaggression (T3)	0.12	0.32	0.90	2.35*	0.10	-3.61***	0.16
12. Cyberaggression (T4)	0.12	0.31	0.90	2.02*	0.09	-2.27*	0.10

Note. The *t*-test results show the differences of girls compared to boys and middle adolescents compared with early adolescents. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2

Correlations Between Variables

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Cybervictimization (T1)	-										
2. Cybervictimization (T2)	0.39***	-									
3. Cybervictimization (T3)	0.44***	0.45***	-								
4. Cybervictimization (T4)	0.37***	0.41***	0.45***	-							
5. Anger rumination (T1)	0.33***	0.24***	0.22***	0.20***	-						
6. Anger rumination (T2)	0.21***	0.27***	0.20***	0.20***	0.56***	-					
7. Anger rumination (T3)	0.20***	0.18***	0.26***	0.19***	0.51***	0.61***	-				
8. Anger rumination (T4)	0.14***	0.12***	0.19***	0.22***	0.47***	0.55***	0.62***	-			
9. Cyberaggression (T1)	0.64***	0.23***	0.35***	0.24***	0.28***	0.16***	0.16***	0.16***	-		
10. Cyberaggression (T2)	0.24***	0.70***	0.25***	0.22***	0.12***	0.20***	0.14***	0.13***	0.24***	-	
11. Cyberaggression (T3)	0.30***	0.29***	0.72***	0.32***	0.13***	0.13***	0.17***	0.13***	0.32***	0.33***	-
12. Cyberaggression (T4)	0.19***	0.25***	0.28***	0.62***	0.12***	0.10***	0.13***	0.14***	0.24***	0.24***	0.36***

*** $p < .001$.

To test for longitudinal measurement invariance of the scales, the factor loadings and intercepts were constrained to be equal over time in increasingly restrictive steps. The results indicated a good model fit for both scales (see Table 3). The nested model comparisons (Configural vs. Metric; Metric vs. Scalar) showed the increased constraints did not significantly affect model fit (ΔCFI < 0.01 and ΔRMSEA < 0.015).

Table 3

Model Fit: Testing for Longitudinal Measurement Invariance

Model tested	Model fit indices				Model comparison		
	χ^2 (*df*) *p* value	CFI	TLI	RMSEA [90% CI]	$\Delta \chi^2_{S-B}$ (*df*) *p* value	ΔCFI	ΔRMSEA
Cyberbullying							
Configural	4913.270 (3728)***	0.976	0.976	0.010 [0.010, 0.011]	—	—	—
Metric	4952.604 (3783)***	0.977	0.976	0.010 [0.009, 0.011]	91.75 (55)**	0.001	0.000
Scalar	5138.342 (3978)***	0.977	0.978	0.010 [0.009, 0.011]	311.310 (195)***	0.000	0.000
Anger rumination							
Configural	7136.792 (2775)***	0.970	0.969	0.023 [0.022, 0.024]	—	—	—
Metric	7198.826 (2826)***	0.970	0.970	0.023 [0.022, 0.023]	127.149 (51)***	0.000	0.000
Scalar	7337.146 (2940)***	0.970	0.971	0.023 [0.022, 0.023]	389.668 (114)***	0.000	0.000

** $p < .01$, *** $p < .001$.

7.3.2. Cross-lagged model

We estimated and compared hierarchical cross-lagged models to which constraints were introduced in a stepwise manner. Model 1 (with all paths constrained) had good model fit: χ^2 (57) = 165.090, p < .001; CFI = 0.979, TLI = 0.975; and RMSEA = 0.025, 90% CI [0.021–0.030]. After the covariances between variables in the same wave were allowed to vary over time, Model 2 did not reveal fit better than Model 1, consequently Model 1 was retained: (51) = 157.135, p < .001; CFI = 0.979, TLI = 0.973; and RMSEA = 0.026, 90% CI [0.022–0.031], $\Delta\chi^2$ (6) = 9.24, p > .05. Model 3, with additional unconstraint to the cross-lagged paths, again showed good fit: χ^2 (40) = 136.671, p < .001; CFI = 0.981, TLI = 0.969; and RMSEA = 0.028, 90% CI [0.023–0.034]. Fit indices did not improve significantly from Model 1, $\Delta\chi^2$ (11) = 20.31, p > .05. Finally, Model 4, in which autoregressive paths were allowed to vary over time once more showed good fit: χ^2 (34) = 118.020, p < .001; CFI = 0.984, TLI = 0.968; and RMSEA = 0.029, 90% CI [0.023–0.035]. Model fit did not improve in comparison with Model 1, $\Delta\chi^2$(23) = 33.1, p >.05. Given the lack of significant differences between the models, the Model 1 was used to analyze the associations between the variables.

The results of the cross-lagged model are shown in Figure 1. The autoregressive paths were significant for all variables, as were all associations between variables within the same wave (W1) and the residual covariances (from W2 to W4). The cross-lagged associations between different variables in adjacent waves indicate that: (a) cybervictimization predicted later anger rumination and cyberaggression, (b) anger rumination predicted later cybervictimization and cyberaggression; and (c) cyberaggression neither predicted later cybervictimization nor anger rumination. Sensitivity analyses were performed using multigroup modeling to test for gender and age differences: this implied constraining the cross-lagged paths to be equal between: (a) boys and girls; and (b) early and middle adolescents. This did not lead to significant differences in any of the paths (ps > .05 for all Wald tests), indicating an absence of gender and age differences with regard to the associations. Based on the results found, the INDIRECT models were added to analyze the possible mediations between variables. The statistically significant mediated paths are presented in Table 4. The associations found in the cross-lagged between the variables at two subsequent times are again confirmed through the indirect effects between Time 1 and Time

4. Furthermore, cybervictimization was found to mediate the association between anger rumination and cyberaggression.

Figure 1

Cross-Lagged Model
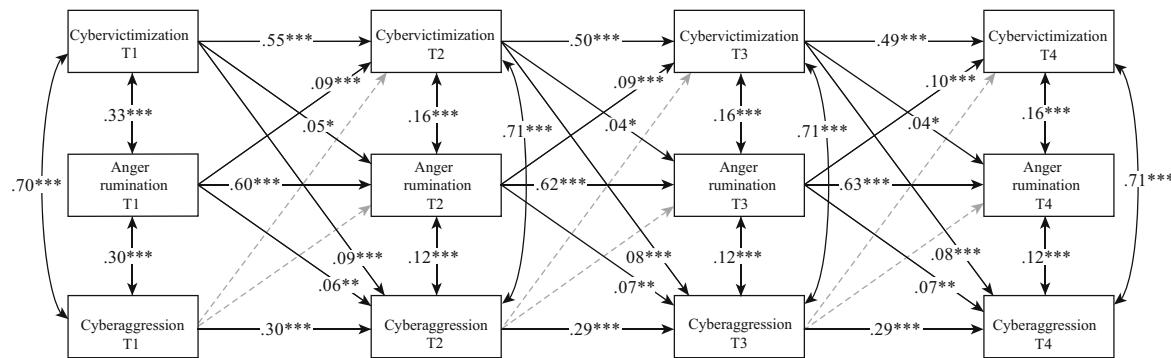
Note: The coefficients provided are the standardized values. Dashed arrows show nonsignificant paths. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4

Significant Indirect Paths Using Bootstrap Analysis

	b [95% CI]	SE	t	p
CV T1 → CV T2 → CV T3 → CV T4	0.130 [0.087, 0.172]	0.02	55.59	< .001
CV T1 → CV T2 → CV T3 → AR T4	0.011 [0.001, 0.021]	0.01	2.25	< .02
CV T1 → CV T2 → AR T3 → AR T4	0.015 [0.001, 0.028]	0.01	2.15	< .05
CV T1 → AR T2 → AR T3 → AR T4	0.019 [0.000, 0.038]	0.01	1.97	< .05
CV T1 → CV T2 → CV T3 → CA T4	0.022 [0.013, 0.031]	0.01	4.69	< .001
CV T1 → CV T2 → CA T3 → CA T4	0.013 [0.006, 0.020]	0.00	3.44	< .01
CV T1 → CA T2 → CA T3 → CA T4	0.008 [0.001, 0.014]	0.00	2.21	< .05
AR T1 → AR T2 → AR T3 → AR T4	0.230 [0.200, 0.261]	0.02	14.30	< .001
AR T1 → CV T2 → CV T3 → CA T4	0.003 [0.002, 0.005]	0.00	3.72	< .001
AR T1 → CV T2 → CA T3 → CA T4	0.002 [0.001, 0.003]	0.00	7.06	< .001
AR T1 → AR T2 → CV T3 → CA T4	0.004 [0.002, 0.007]	0.00	3.22	< .01
AR T1 → AR T2 → AR T3 → CA T4	0.026 [0.005, 0.046]	0.00	2.41	< .05
AR T1 → AR T2 → CA T3 → CA T4	0.012 [0.008, 0.015]	0.00	6.16	< .001
AR T1 → CA T2 → CA T3 → CA T4	0.005 [0.003, 0.007]	0.00	5.48	< .001
AR T1 → AR T2 → AR T3 → CV T4	0.035 [0.013, 0.058]	0.01	3.08	< .01
AR T1 → AR T2 → CV T3 → CV T4	0.027 [0.015, 0.040]	0.01	4.17	< .001
AR T1 → CV T2 → CV T3 → CV T4	0.021 [0.014, 0.028]	0.00	5.73	< .001

Abbreviations: AR, anger rumination; CA, cyberaggression; CV, cybervictimization.

7.4. Discussion

We looked at the longitudinal associations between anger rumination, cybervictimization and cyberaggression, as the possible mediation effects.

In previous research, cybervictimization and cyberaggression were strongly associated (Brewer & Kerslake, 2015), and our results support this: cybervictimization and cyberaggression would be positive and unidirectional. Our results supported that cybervictimization predicted further involvement in cyberaggression, not only through cross-lagged effects but also through indirect effects between Time 1 and Time 4. However, a significant reverse relationship was not found. These findings are in line with Kowalski et al. (2014). Some adolescents may try to cope with the negative emotions caused by victimization through hostile reactions, either impulsively or deliberately. An additional explanation of the association is that the stress produced by victimization may result in an overly hostile interpretation of other social situations, which may then lead to cyberaggression that is not necessarily targeted at the original aggressor (Ak et al., 2015).

In our second hypothesis we formulated the expectation of a bidirectional association between anger rumination and cybervictimization. Via indirect and cross-lagged effects, we indeed found that cybervictimization predicted a later increase in anger rumination, but perhaps more importantly as this had not been explored in the literature before, also found evidence of the reverse relationship: anger rumination predicted later victimization. With regard to the first of these associations, it was already known that some adolescents faced with cybervictimization will think repetitively about the experience and its causes, that is, that they turn to rumination (Liu et al., 2020). Furthermore, anger rumination also, or subsequently, predicts a greater likelihood of cybervictimization. This may be because adolescents who ruminate may be more vulnerable to impulsivity and consequently more likely to engage in risky behavior (Gottfredson & Hirschi, 1990), which in turn may upset or provoke others (e.g., teasing or joking with others), potentially leading to new episodes of victimization. The suggested explanation through impulsivity and risky behavior finds support in a result by Pratt et al. (2014) whose meta-analysis showed that lower self-control predicted subsequent cybervictimization. Our findings therefore highlight that the activation of anger rumination could be a strategy that leads to maladaptive behaviors, such as social anxiety or social maladjustment (Romera et al., 2016). An interesting element for future study related to this

finding but not explored here, is how the level of social support and the role in/of the peer group (Romera et al., 2020) affects the association between anger rumination and cybervictimization. It can be imagined that an increase in risky behavior or a drop in self-control is more likely to lead to further episodes of victimization for those adolescents with lower social support in their peer group.

In our third hypothesis we expected that anger rumination would predict a later increase in cyberaggression, but not the reverse. This pattern is indeed what we found through indirect and cross-lagged effects, and is consistent with other studies (Yang et al., 2020). Our results highlight the importance of seeing anger rumination as a cognitive mechanism that increases the risk of adolescents turning to cyberaggression. According to the MSM, anger rumination may aggravate and sustain an internal state of aggressive thoughts and high arousal, and thereby lead cognitive processes to overload, which undermines appraisal and decision-making abilities, and hence decreases the likelihood of self-regulation and increases the likelihood of impulsive behavior (Denson, 2013). Anger rumination retrieves the offensive fact that caused the anger, leading to its intensification, which increases the probability of aggression. The anonymity and resulting reduced probability of retaliation offered by cyberspace lowers the bar for aggressive behavior. Cyberaggression offers adolescents an outlet to cope with the strained challenges they face on a daily basis, and this is an indication of the effects that their worries, perceptions and expectations have on the ability to process adverse experiences.

The expectations in the fourth hypothesis were met: the relationships between these variables did not differ between age groups or between boys and girls. This suggests that intervention programs aimed at anger rumination as a risk factor for cyberbullying should equally benefit boys and girls, as well as early and middle adolescents. While gender and age did not influence the associations, prevalence of rumination and bullying did differ between these groups: boys were more involved in cyberaggression, and girls more frequently reported rumination. Results for cybervictimization are ambivalent as there were differences at only one wave, with boys showing greater involvement than girls. With respect to age, middle adolescents showed greater involvement in all three study variables. Finally, the present study extends the scope of the analysis beyond the reciprocal relationships between the variables, and furthermore the indirect effects revealed cybervictimization as a mediator, while anger

rumination did not. In contrast to expectations and a recent study on face-to-face bullying (Malamut & Salmivalli, 2021), the association between cybervictimization and cyberaggression was not mediated by anger rumination (Hypothesis 5a). These considerations should remain cautious, as this study analyses rumination from a trait approach. Future research could clarify whether state anger rumination may act as a mediator, by activating such cognitive processes after the cybervictimization experience and subsequently lead to an increased probability of being involved in online aggression. On the other hand, despite extensive evidence of the association between anger rumination and aggressive behavior, the pathways linking them remain largely unknown. Our findings suggest that trait anger rumination is associated with aggression via victimization in the online context (Hypothesis 5b). This result extends beyond the current literature to understand why anger rumination is associated with cyberaggression. Adolescents at higher levels of anger rumination were at more risk of getting victimized online, and victimization experiences further increased the risk of aggression.

The results of this study should be interpreted in light of several limitations. First, although the sample of adolescents was large, we did not use a random sample. In future studies, our findings ideally should be replicated with a stratified random sample to ensure representativeness. Second, the novel study results need to be examined through other research techniques such as qualitative studies for a better understanding. This study only used self-report instruments, which in future could be improved by the inclusion of multi-informant data (e.g., from peers or family members). Finally, the students in this study all fell into a relatively narrow age range, which limits the ability to generalize our results to other age groups. Future studies may also want to assess whether the associations between cybervictimization, anger rumination and cyberaggression differ between those just starting to use technology as pre-adolescents and later adolescents or emergent adults with more experience in cyberspace.

In spite of these limitations, this study offers a contribution to the growing body of research into factors associated with cybervictimization and cyberaggression among adolescents. As an empirical contribution, our findings show that anger rumination predicts an increase in later involvement in cybervictimization and cyberaggression, and that cybervictimization experiences and the anger they cause will in some adolescents lead to

(higher levels) of anger rumination and cyberaggression. Finally, the study contributes to further insights into the association between anger rumination and cyberaggression by highlighting cybervictimization as a mediating mechanism between both.

The results of our study also have practical implications; they highlight the importance to develop cognitive strategies that improve self-control to decrease impulsive and risky behavior and consequently victimization and aggression online. Denson et al. (2012) show how cognitive reappraisal strategies, such as dampening anger that is induced by flashbacks of anger can be successful. Their approach achieved adaptive processing of memories and promoted early reductions in anger experience through distraction strategies. Furthermore, other treatments such as mindfulness (Wright et al., 2009) and cognitive behavioral therapy (Querstret & Cropley, 2013) have proven effective in reducing anger rumination. In this line, previous studies highlight the main role that maladaptive cognitive emotion regulation strategies, like rumination and self-blame, might play with regard to cyberbullying episodes (Rey et al., 2020) and how the promotion of forgiveness may decrease this association (Quintana-Orts, Rey, 2018). In addition, it is particularly necessary that schools have evidence-based protocols in place to prevent cyberbullying, and also intervention through restorative justice and reparation of damage (Del Rey et al., 2018; Williford et al., 2013). Our study supports that inclusion of such techniques and programs to prevent cyberbullying is likely to have beneficial effects.

7.5. Acknowledgments

7.6. Conflict of interests

The authors declare that there are no conflict of interests.

7.7. Data availability statement

The data that support the findings of this study are available on request from the corresponding author.

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CHAPTER

8

Cybergossip, cyberaggression, problematic Internet use and family communication

Cibercotilleo, ciberagresión, uso problemático de Internet y comunicación con la familia

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Abstract

Research into risky online behaviour among children and adolescents is on the rise, with more studies being conducted into the factors which can influence this phenomenon, above all in relation to school and family life. In the latter sphere, one relevant factor is the degree of genuine trust children have in their parents when using the Internet. The main objective of this study is to verify the effects of child disclosure about cyberaggression, in addition to the mediating role of problematic Internet use and cybergossip, and the moderating role of gender and age. A total of 866 primary school children (53% girls) between 10 and 13 years old ($M = 11.21$; $SD = 0.90$) were surveyed using self-reporting. The data processing followed a moderated serial mediation model using "Process". The results revealed the effects of child disclosure about cyberaggression and the mediation of problematic Internet use and cybergossip. Unlike gender, age moderated the effects of the mediation model. The results highlight the need to foster a climate of trust and communication in the family environment to reduce involvement in risky online behaviour, in which children feel understood and supported by their parents, which in turn encourages open communication about Internet use.

8.1. Introduction

Cyberaggression is a problem that affects a significant number of boys and girls worldwide at an increasingly younger age. Young cyberbullies engage in behaviour that harms their peers psychologically and morally, damaging social connections, which are such a key influence at these ages. Internet provides a different context from face-to-face bullying, although one partly feeds on the other, with even more damaging consequences. Cyberaggressors are given the chance to bully others anonymously (Dennehy et al., 2020), round the clock (24/7 attack), thus making the victim even more vulnerable to their attacks and instilling in them a self-learned helplessness and psychological maladjustment (Zych et al., 2019). The publication of embarrassing photos, hacking the identity of an individual on social media, sharing intimate personal details or images, the threats of revealing private information, insults or spreading rumours through digital devices are all typical of the aggressive behaviour which is facilitated by communication technology and its all-pervasive digital software (Livingstone & Smith, 2014).

A recent study in Spanish schoolchildren between 11 and 12 years old revealed a rate of cyberaggression of about 6.3% (Garmendia et al., 2019). Compared with international figures, it should be noted that the figures for prevalence in Spain are lower than those found in other European countries (Sorrentino et al., 2019), or between Europe and America (Herrera-López et al., 2017; Smith et al., 2019). As well as descriptive studies, more research is needed to further our knowledge of the causal, or at least correlational, factors. The existing research has focused mainly on personal factors and factors related to the school context and the quality of coexistence, with less attention focused on the family context and its differential factors (Álvarez-García et al., 2019).

Some studies in this field have pointed to the key role of intra-family communication, and particularly child disclosure, as one of the differential elements in the quality of family life. The information which sons and daughters disclose to their parents, which is understood as an indirect form of parental recognition and control (Kerr et al., 2012), has been shown to reduce involvement in cyberaggressive behaviour (Buelga et al., 2017). We now need to go one step further and analyse the factors that can help us understand how child disclosure can influence involvement in cyberaggression. To achieve this, we analysed the mediating role of

problematic Internet use and cybergossip, whose link with cyberaggression has previously been established (Romera et al., 2018).

Most of the research work at this level has focused on adolescents, among whom the use of digital devices is widespread (Wang et al., 2016), although they begin using them much earlier (Smahel et al., 2020): hence the need to research the final years of primary school.

8.1.1 Child disclosure and cyberaggression

The influence of the family context on children's Internet behaviour has focused mainly on studying the norms of control and supervision of the use of information and communication technologies (ICTs). These studies show that parental control which imposes strict limits on children's activities and continuously demands information about what they are doing is in fact an ineffective strategy for reducing risky behaviour in adolescence, including cyberaggression (Baldry et al., 2019; Sasson & Mesch, 2014). In particular, studies on the forms of parental communication used to control their children's online behaviour indicate that attempts to obtain information through direct requests and questions and a certain level of intrusion is associated with higher levels of cyberaggression (Shapka & Law, 2013).

In contrast, the creation of a positive, trusting relationship with both parents leads to better social adjustment and well-being in their children, and acts as a protective factor, especially if child disclosure is encouraged, by which the family knows what the children are doing because the children tell them, without the need for parental control (Machimbarrena et al., 2019). Here, a number of studies have highlighted the fact that the risk of involvement in cyberaggression decreases with the use of parental strategies based on communication and trust (Buelga et al., 2017).

8.1.2. Problematic Internet use and cybergossip as potential mediators

Over 24% of young people use their digital devices on a daily basis to communicate with friends on social media, and over half of these connect several times a day (Areepattamannil & Khine, 2017). However, it constitutes problematic Internet use when it becomes compulsive and produces cognitive concern and a deterioration of intrapersonal and interpersonal relations (Caplan, 2010) and stronger symptoms of depression (Lozano-Blasco & Cortés-Pascual, 2020). Although it has been noted that personal factors can influence this excessive use of technology, other studies indicate that the family plays a key role in

preventing and reducing it (Garmendia et al., 2019; Sela et al., 2020). Various studies have revealed how parental mediation, which is understood as how parents manage the relationship between their children and the media, is a major factor in young people's Internet use (Bartau-Rojas et al., 2018). Studies such as Saunders and Varma (2016) show that an inductive or instructive parenting style favours less intensive Internet use and that young people exposed to fewer hours on Internet have higher rates of parental support and communication (Tur-Porcar et al., 2019). The recent meta-analysis by Chen and Shi (2019) argues that, although restrictive mediation is more effective in reducing the amount of time children spend online, active parental mediation and joint use, are more effective in reducing the incidence of online risks.

In addition, cyberaggression studies have highlighted that the mere fact of spending more time online and making excessive and frequent use of Internet is considered a risk factor that could lead to negative effects (Baldry et al., 2019). In addition, Spanish studies have indicated that problematic Internet use is linked to cyberaggression (Cerezo et al., 2016).

Excessive Internet use seems to stimulate or exaggerate tendencies in social communication which exist in all cultures, such as online gossip, making it available to a wider audience (Subrahmanyam et al., 2008). Cybergossip is a type of online behaviour which involves sharing comments (positive, negative or neutral) among a group of two or more people about another person who is not present.

Although some research has identified this type of behaviour as a kind of indirect aggression, the two are different, in that in cyberaggression there is a clear intention to do harm that does not necessarily exist in cybergossip. In fact, it has also been recognised as having the function of lending the group greater cohesion and improving interpersonal relationships (Foster, 2004). This means that cybergossip and cyberaggression need to be studied in a differentiated way and with instruments that adjust to the nature of their respective online behaviour (Romera et al., 2018). It does not follow, however, that the practice of cybergossip is completely devoid of risky online behaviour. Although there has been little research into the relationship between cybergossip and other risky online behaviour, recent studies have shown that cybergossip can increase involvement in cyberaggression (Kisfalusi et al., 2019). In the virtual context, it is more difficult for the sender of the comments to convey

their exact communicative intention and for the receiver to interpret it, and this could lead to misunderstandings and, therefore, risky online behaviour such as cyberaggression.

8.1.3. The present study

Previous research has shown not only the negative consequences associated with being involved in cyberaggression, an immoral practice in which a large number of adolescents, boys and girls alike, become involved at an increasingly early age, but also the important role of the family in its prevention. However, further research is needed looking into the family context in the development of this kind of online behaviour performed by children and adolescents. Not only is it important to identify what family styles and strategies are most effective in preventing online bullying, but also to explore how they can promote online behaviour that can help reduce involvement in risky online behaviour and, therefore, foster positive online coexistence. In this context, the present study aims to examine the mediating effect of problematic Internet use and cybergossip between child disclosure and involvement in cyberaggression.

Because a large number of studies have highlighted which parental communication strategies, mainly those that enhance child disclosure, reduce the risk of involvement in aggressive behaviour (Law et al., 2010), we expected to find that child disclosure about online behaviour reduced cyberaggression (Hypothesis 1). Most previous work has focused on the effects of this relationship, albeit without taking into account possible mediators. We also expected to find that problematic Internet use and cybergossip mediated the relationship between child disclosure and cyberaggression (Hypothesis 2). Due to the fact that boys tend to be more involved in risky online behaviour than girls throughout adolescence, and that child disclosure is more common among girls and during childhood (Arpaci et al., 2020; Smahel et al., 2020), we expected the effects of child disclosure on risky online behaviour to be lower in late childhood (Hypothesis 3a) and in girls (Hypothesis 3b), compared to early adolescents and boys.

8.2. Materials and methods

8.2.1. Participants

The incidental sample consisted of 866 schoolchildren (53% girls), from six state primary schools (58%) and subsidized schools (42%), in both rural (36%) and urban (64%)

areas in the provinces of Córdoba and Jaén (Spain). The schools were selected through non-probability sampling for accessibility (Singleton & Straits, 2004). The children's ages ranged from 10 to 13 years old ($M = 11.21$; $DT = 0.90$), with a distribution by primary school year as follows: 28.8% in 4th year ($n = 249$), 28.9% in 5th year ($n = 250$) and 42.3% in 6th year ($n = 366$).

8.2.2. Instruments

Cyberaggression was assessed using 8 items on a five-point Likert-scale ranging from 0 = *never*, 1 = *once or twice*, 2 = *once or twice a month*, 3 = *about once a week*, to 4 = *more than once a week*. Examples of the items for cyberaggression included: "I posted embarrassing videos or pictures of someone online" or "I spread rumours about someone on the Internet" in the last two months. This scale was part of an adaptation for primary school of the European Cyberbullying Intervention Project Questionnaire, ECIPQ (Del-Rey et al., 2015), consisting of two dimensions, cybervictimization and cyberaggression. We used only the second dimension for this study, taking the mean scores of the items, with higher values denoting a higher frequency of being involved in cyberaggression. For this research, the validity indices were optimal: $\chi^2_{\text{S-B}} = 56.4149$; $df = 20$; $p < .001$; NNFI = .98; CFI = .98; RMSEA = .04; SRMR = .05, and the reliability index was good for the dimension of cyberaggression, $\omega = .74$.

Child disclosure was measured with four items about how often the children told their parents about their online activities, taken from the adaptation by Law et al. (2010) on Stattin and Kerr's Parenting Questionnaire (Stattin & Kerr, 2000). An ad hoc simple five-point Likert-type scale was used, ranging from "*never*" to "*always*". The following items were used: "I tell my parents when I open a new account on social media", "I tell my parents when I chat to new people on social media/WhatsApp", "I tell my parents the content of the messages I send or receive through social media/WhatsApp" and "I tell my parents before revealing information about myself to other people through social media/WhatsApp". Optimal indices were obtained for reliability ($\omega = .83$) and validity: $\chi^2_{\text{S-B}} = 17.7493$; $df = 2$; $p < .001$; NNFI = .98; CFI = .99; RMSEA = .06; SRMR = .02.

Problematic Internet use was measured using the Internet-Related Experiences Questionnaire scale (Beranuy et al., 2009), which uses a 10-item Likert scale with 4 points of frequency, from "*never*" to "*quite a lot*". The items included the following: "I prefer to talk to

my friends through social media/WhatsApp rather than in person", "I feel anxious when I cannot connect to social media/WhatsApp". A unidimensional distribution of the items was taken into account and optimal values were obtained with the study sample for reliability (ω = .78) and validity: χ^2_{S-B}=51.3417; df = 35; p < .001; NNFI = .99; CFI = .99; RMSEA = .02; SRMR = .03.

Cybergossip was measured using the Cybergossip Questionnaire (Romera et al., 2018). This is a one-dimensional survey consisting of nine items measured on a Likert scale with values from 0 (*never*) to 4 (*always*). The items included: "I tell my friends on social networks or WhatsApp about things I hear about that happen to others", "I talk about others on social networks or WhatsApp because it makes me feel closer to my group of friends". Optimal indices were obtained for the study sample for reliability (ω = .80) and validity, χ^2_{S-B}=100.7370; df = 27; p < .001; NNFI = .96; CFI = .97; RMSEA = .05; SRMR = .05.

8.2.3. Procedure

The school management teams at the different schools were contacted to inform them about the aims of the study. Those schools which expressed interest received detailed information on the data collection procedure. Written consent was obtained from the students' families and the participants gave their verbal consent. The study complied with the Declaration of Helsinki on confidentiality, privacy and informed consent, and was approved by the Ethical Committee for Bioethics and Biosafety of the University of Córdoba.

The questionnaires were administered individually on paper in the students' classroom. The children were informed that the test was voluntary and anonymous. Data collection was done by previously trained researchers, who informed the children about the collection procedure and answered any questions they had about how to complete the questionnaire. The teachers in charge of the class were absent during the process. Response time ranged from 15 to 20 minutes. The data was collected in 2017.

2.4. Data analysis

Due to the skewness shown by the variables of cybergossip and cyberaggression, both were subjected to square root transformation, following the recommendations by Tabachnick and Fidell (2007). All future references refer to these transformed variables.

The preliminary analyses were performed using mean and standard deviation, together with the Spearman correlation coefficient for each of the study factors which were to be verified in the theoretical model.

Similarly, Students' t test was performed to contrast the existence of differences by gender and age (late childhood = 10-11 years old; early adolescence = 12-13 years old), considering Cohen's d to control the effect size. These analyses were performed using the IBM SPSS Statistics 20 statistical package.

Finally, a serial mediation model was performed using "Process" v3.4 (Hayes, 2013) (Model 6) to evaluate the mediating effect of problematic Internet use (first mediator) and cybergossip (second mediator) in the relationship between child disclosure (independent variable) and cyberaggression (dependent variable). The moderation effects were analysed using Model 92, in order to evaluate whether gender and age influenced the associations between the study variables. "Process" is a macro used in SPSS which employs least squares regression to estimate the importance and size of direct and indirect effects in mediation models. "Process" performs better than the traditional causal step approach (both in terms of statistical power and detecting type I error). The indirect effects were inferred using the Bootstrapping method, after generating an empirical representation of the sample distribution of indirect effects. Bootstrapping is suitable for linear hypotheses where the variables have a non-normal distribution (Chernick, 2008), as was the case in the present study. In the mediation model, the total effect denoted the basic relationship between child disclosure and cyberaggression. The relationship between the indirect effect and the total effect (*PM*) shows the measurement of the mediation effect (Wen & Fan, 2015). All the variables were standardized before the analyses to facilitate the interpretation of the results.

8. 3. Results

Table 1 shows the descriptive analyses of the study variables. Boys and early adolescents showed a greater involvement in cyberaggression and problematic Internet use. Early adolescents also showed greater use of cybergossip. Girls and late childhood participants showed higher levels of child disclosure. The effect size was low-moderate. A positive relationship was observed between the variables of cyberaggression, cybergossip and

problematic Internet use, with scores ranging between .39 and .55. Child disclosure negatively correlated with all the study variables (Table 1).

Table 1. Correlations, descriptive statistics and differences by gender and age														
				Differences by gender						Differences by age				
Variables	Correlations			Boys		Girls		Student't		Late childhood		Early adolescence		Student't
	1	2	3	M	SD	M	SD	t^1	d	M	SD	M	SD	t^2	d
1. CA	-			.29	.35	.23	.28	2.51*	.17	.20	.29	.33	.33	-6.17***	.42
2. CC	.53	-		.47	.40	.45	.38	1.34	-	.39	.36	.57	.41	-7.00***	.49
3. PIU	.35	.47	-	.84	.74	.66	.61	4.30***	.29	.67	.66	.85	.69	-3.46***	.24
4. CD	-.25	-.24	-.24	2.26	1.36	2.68	1.25	-4.69***	.32	2.59	1.35	2.35	1.27	2.63***	.18

Nota. M = mean; SD = Standard Deviation; t = Student's t; d = Cohen's d; CA = Cyberaggression; CC = Cybergossip; PIU = Problematic Internet Use; CD = Child disclosure; * $p < .05$; ** $p < .01$; *** $p < .001$. [1] 1 Boys; 2 = Girls. [2] 1 = Late childhood; 2 = Early adolescence.

A serial mediation analysis was carried out with 5,000 bootstrap samples. Table 2 shows the coefficients of the mediation model. The total effect of child disclosure on cyberaggression was significant: $\beta = -.27$, $t = -8.15$, $p < .001$. We then analysed the models of the mediating variables, problematic Internet use and cybergossip, and of the dependent variable, cyberaggression. Child disclosure was significantly associated with problematic internet use and cybergossip. Problematic internet use was significantly associated with cybergossip and cyberaggression. Cybergossip was also significantly associated with cyberaggression. After controlling for the effects of mediators, the direct effect of child disclosure on cyberaggression remained significant. The bootstrap procedure was used to evaluate the indirect effect and the confidence intervals (CI). An indirect effect was significant if the CI did not include the value 0. In addition, a significant indirect effect was obtained for the Child disclosure → Problematic Internet use → Cyberaggression path, $\beta = -.04$, 95%CI [-.06, -.02], $PM = .14$. The Child disclosure → Cybergossip → Cyberaggression path produced a significant indirect effect, $\beta = -.05$, 95%CI [-.09, -.02], $PM = .20$. Finally, the Child disclosure → Problematic Internet use → Cybergossip → Cyberaggression path showed a significant indirect effect, $\beta = -.15$, 95%CI [-.19, -.10], $PM=.55$. Thus, problematic internet use and cybergossip were shown to have a partial mediating role in the effect of child disclosure on cyberaggression.

Table 2. Serial mediation between child disclosure and cyberaggression						
Predictors	**Problematic Internet Use**		**Cybergossip**		**Cyberaggression**	
	β	t	β	t	β	t
Child disclosure	-.26***	-8.04	-.12**	-3.89	-.12***	-4.19
Problematic Internet use			.45***	14.77	.14***	4.45
Cybergossip					.45***	14.03
R^2	.07***		.25***		.34***	
F	(1, 857) 64.68		(2, 856) 141.77		(3, 855) 145.11	

*Nota. *p<.05; **p<.01; ***p<.001.*

The moderation results indicate that there were no statistically significant differences between boys and girls in the associations between variables (*ps*>.05). Age proved to be a determining variable in the effects of child disclosure on problematic Internet use: β = -.20, t = -2,95, *p* < .01. The effects were significantly greater in early adolescence in comparison to late childhood (See Figure 1).

Figure 1

*Moderating Role of Age in the Effects of Child Disclosure on Problematic Internet Use*
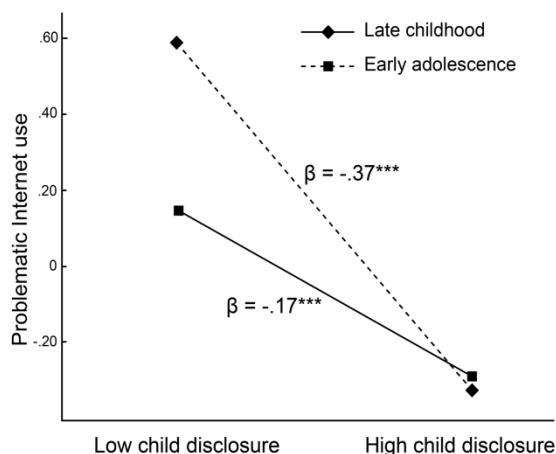
*Note. ***p<.001.*

Age was found to influence the effects of problematic Internet use on cybergossip: β=.21, t= .51, p<.001. These effects were significantly greater in early adolescence in comparison to late childhood (Figure 2). Indirect effects show how the Child disclosure → Problematic Internet Use → Cyberaggression path was significant in early adolescents, $β_{Early adolescence}$ = -.07, 95%CI [-.12, -.03], but not in late childhood, $β_{Late childhood}$ = -.02, 95% CI [-.04,

.00]. As regards the Child disclosure → Cybergossip → Cyberaggression path, there were no significant differences between the two groups, $\beta_{\text{Early adolescence – late childhood}}$= .00, 95%CI [-.06, .06]. Finally, as for the Child disclosure → Problematic Internet use → Cybergossip → Cyberaggression path, early adolescents showed statistically greater effects, $\beta_{\text{Early adolescence}}$=-.09, 95%CI [-.13, -.06], $\beta_{\text{Late childhood}}$=-.02, 95%CI [-.04, -.01], $\beta_{\text{Early adolescence – late childhood}}$=-.06, 95%CI [-.11, -.03].

Figure 2

Moderating Role of Age in the Effects of Problematic Internet Use on Cybergossip
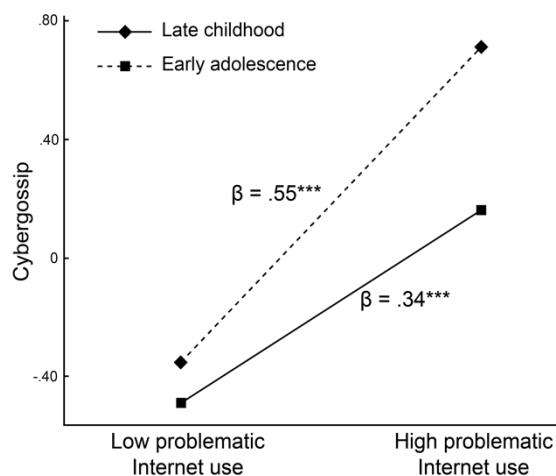
Note. ***p<.001.

8.4. Discussion and conclusions

The aim of this research was to advance our scientific knowledge about the cyberaggression phenomenon, which occurs in the digital world shared by boys and girls and which has its beginnings in the last years of primary education. The problem was addressed by looking at the relationship of cyberaggression with the possible risk and protection factors present in school and family settings. As mentioned in Hypothesis 1, we expected the results to indicate that establishing family relationships based on communication and trust reduces the risk of being involved in cyberaggression. Although the protective effect of child disclosure has already been recognized in previous research (Buelga et al., 2017), it remains to be seen how this relationship is enhanced, in particular, by finding out what types of online behaviour can mediate the effect of this communication on cyberaggression. To achieve this, we formulated and examined a mediation model based on the integration of problematic

Internet use and cybergossip, two types of online behaviour whose relationship with cyberaggression has been demonstrated (Cerezo et al., 2016; Kisfalusi et al., 2019).

This study enables us to advance in the identification of certain online activities that can potentially mediate the relationship between child disclosure and cyberaggression: problematic Internet use and cybergossip. These results suggest that both forms of online behaviour mediate the effects of such communication on cyberaggression (Hypothesis 2). Previous studies have shown that a greater online presence increases exposure to risks such as cyberaggression (Cerezo et al., 2016; Baldry et al., 2019), and in turn, that child disclosure reduces problematic Internet use (Chen & Shi, 2019). Likewise, it has been shown how making evaluative comments about other people on Internet increases the risk of cyberaggression (Romera et al., 2018). The reason for this is that cybergossip is behaviour which is developed in a group and clearly fulfills a function of enhancing group cohesion. The evaluative nature of the comments shared in that group not only affects the behaviour of its members, but also serves as a stimulus to boost the kind of behaviour which is valued within the peer group. By posting messages about others, these boys and girls normalise hurtful behaviour in order to maintain their social position and status within the group. This is why it is so important to address this kind of online behaviour, because, although it is not initially intended to do any harm, it is susceptible to misunderstandings and therefore increases the risk of engaging in cyberaggression behaviour. The relationship between parental educational practices and cybergossip has not yet been explored, so this study represents an advance by stressing the need for parents to talk with their children about their online activity: not just their individual behaviour, but the conduct and attitudes they assume as part of their peer group, from which they learn their social conduct. Helping them to interpret the content of messages and understand the emotional nuances behind them, while learning not to instinctively assign hostile intentions to messages, are some of the key areas to work on, and this is especially vital at the age when children begin to maintain interpersonal relationships online. The findings for mediation suggest that child disclosure about children's online behaviour can serve as a protective factor against involvement in cyberaggression by reducing inappropriate Internet use and involvement in cybergossip, which are factors that also influence cyberaggression.

As was expected, the moderation results show that late childhood is the key time for implementing educational strategies aimed at promoting appropriate Internet use through open family communication. It has been observed how, mainly in early adolescence, high levels of child disclosure are related to low levels of problematic Internet use, just as more problematic Internet use is associated with greater involvement in cybergossip (Hypothesis 3a). The fact that these relationships are strengthened in early adolescence highlights the transition to the adolescent stage as a key evolutionary period to promote safe online use, as well as underlining the need to pay attention at these vital, transformative ages to the most important variables that can reduce problems of cyberaggression, which tend to increase considerably during adolescence (Smahel et al., 2020). In contrast, gender did not moderate the associations between the study variables (Hypothesis 3b). This suggests that, even though girls engage in more child disclosure and are less commonly involved in risky online behaviour, being a boy or a girl does not increase the probability that problematic Internet use or cybergossip is associated with cyberaggression. These results coincide with previous studies which reveal that gender is not a differentiating variable in the effects of parental communication on Internet use (Huang et al., 2019).

A number of limitations must also be taken into account in this study. First of all, although the sample is relatively large, it comes from one geographical region, so these relationships would need to be explored with participants from other regions and cultures in order to be able to generalise the results. In addition, the study includes measurements taken on one single occasion, so that causal relationships between the study variables cannot be established. In addition, although the child disclosure scale explores certain types of behaviour shared with families, it would be interesting to investigate the reasons that encourage children to talk about their online behaviour, as well as how adults respond to this information. Another limiting factor is the type of instrument used, self-report scales, not only because they are associated with desirability, but also because, due to the age of the children taking part, some difficulties may be encountered in the reading comprehension of the items. Further visual aids and qualitative studies could be used to support the reliability of the results obtained, and an analysis of the family context (education, socio-economic level or parenting strategies) would help us to understand better the established relationships. Further research could apply a longitudinal design to allow us to explore the causal nature of the study variables. We need to

delve deeper, too, into the role of the peer group in online behaviour, following developmental studies which highlight the influence of social media on individual social behaviour. Similarly, it would be of interest to explore cultural differences in the links between parental educational practices and the prevention of online risks (Shapka & Law, 2013).

Despite these limitations, this is the first study to examine the mediating relationship between problematic Internet use and cybergossip in the relationship between child disclosure about children's and adolescents' online behaviour and cyberaggression. The results we present here constitute a significant step forward for research in this line, as well as providing guidance for the design of cyberaggression prevention programs. They also highlight the importance of raising awareness in the family context in favour of building a positive online coexistence that fosters communication and trust, which facilitate and encourage children and adolescents to share their experiences on the social media with their parents, whose role it is to help them reflect, experience emotions and make moral judgements. It is therefore vital that families are involved, so that children can learn to manage their online relationships well. Not only is it a question of families worrying about how to avoid cyberaggression, but they should also be involved in building a positive online coexistence, striving to make the use of Internet problem-free and to ensure that the interactions and group dynamics set up do not result in the bullying of others. These results can also provide guidance for designing cyberaggression prevention programs, which would require training for families to help them manage the relationships with their children about their Internet use, and to teach them about the different aspects of online behaviour which may constitute a risk.

8.5. Funding agency

8.6. References

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CHAPTER
9

Discussion and conclusions

The thesis, presented in three independent but interrelated articles, aims to explore different mechanisms—cognitive (anger rumination), moral (moral disengagement), motivational (need for popularity), behavioral (problematic use of the Internet), and social (victimization, child disclosure, and cybergossip)—that help to understand why schoolchildren may engage in bullying and cyberbullying.

Under the influence of different theories—*cognitive-social theory, moral agency theory, resource control theory, social information-processing theory, social identity theory* and *coping styles theory*—the studies attempt to contribute to the literature to understand different causes and underlying mechanisms of bullying perpetration, as well as its effect on these mechanisms.

This chapter presents a detailed discussion of the results of each of the studies in relation both to the underlying theory and the scientific progress implied by these results.

9.1. Motivational and moral mechanisms in bullying

Moral disengagement and the need for popularity have both been previously associated with externalizing and antisocial behaviors. Specifically, in the field of bullying, both constructs, of a moral and motivational nature, have been linked to perpetration (Garandeau & Lansu, 2019; Killer et al., 2019). Previous studies have mainly explored the cross-sectional relationship between moral disengagement and the need for popularity with bullying, in order to explain why boys and girls engage in bullying perpetration (Gini et al., 2014; Romera et al., 2017). However, studies are still needed to analyze their longitudinal relationship and possible reciprocal influence at a between-person level (trait characteristics) and a within-person level (state characteristics) (McDonald & Asher, 2018; Thornberg et al., 2021). Likewise, to date, there is no evidence on how moral disengagement and the need for popularity may influence each other.

The first study aimed to compare the bidirectional relationships at the between- and within-person levels between the need for popularity, moral disengagement, and bullying perpetration. From an interpersonal perspective, moral disengagement predicted bullying, but not vice versa. This means that adolescents with higher levels of moral disengagement are subsequently associated with higher levels of bullying perpetration. In contrast, from the intrapersonal perspective at the within-person level, the two variables were not associated,

such that changes in an individual's moral disengagement compared to themselves were not associated with subsequent changes in bullying perpetration or vice versa.

The study's findings highlight the need to differentiate between the between- and within-person levels when relating moral disengagement and bullying perpetration. Thus, the main relationship between the two is established at the between-person level through an intersubject analysis; that is, when schoolchildren are compared to their peers. On the other hand, this association cannot be extrapolated to the within-person level after the intersubject effects have been taken into account.

These results shed light on the literature when it comes to interpreting how adolescents engage in perpetration through the mechanisms of moral disengagement. It seems clear that short-term changes (six months) at the state level may not be enough to influence subsequent changes in involvement in bullying perpetration. Rather, this association derives from the interpretation at the intersubject level, the trait level, where a greater tendency to activate cognitive strategies to morally disengage is subsequently linked to high levels of involvement in bullying perpetration.

At the theoretical level, these findings suggest that interpreting the relationship between moral disengagement and bullying perpetration through traditional methods of data analysis (e.g., linear regression, structural education model, or cross-lagged panel model) should be done with caution because these methods do not allow capturing the within-person level. Therefore, moral disengagement is not a mechanism that helps to understand why an individual can engage in bullying. Instead, the results are linked to a between-person perspective, where individuals are compared with each other (intersubject effect) and it is not possible to establish causal relationships in comparisons with themselves (intrasubject effect).

This thesis helps understand schoolchildren's involvement in bullying as immoral behavior (Ortega & Mora-Merchán, 1996). Under this prism, adolescents who tend to legitimize their harmful behavior towards others through self-justifications may be more involved in bullying, compared to the rest of their peers. Bandura's *socio-cognitive theory* (2002, 2018) helps understand how moral disengagement inhibits linking moral standards to moral behavior. The deactivation of moral self-healing leads to an absence of moral emotions (e.g., shame, guilt, or remorse) associated with antisocial behavior. This implies that, although

a priori, bullying behavior may be condemned by the majority, in certain groups of peers, such immoral behavior can be perceived as legitimate (Romera, Casas, et al., 2019).

Concerning the interaction of the need for popularity and aggression, the former predicted bullying perpetration at the between-person level. Thus, adolescents with high levels of need for popularity were subsequently associated with more involvement in perpetration. These results were also obtained at the within-person level, as changes in the need for popularity were associated with changes in bullying perpetration in the same direction.

The results of the first study have an important scientific impact. Regardless of whether intra- or intersubject effects are taken into account, the need for popularity seems to be an explanatory mechanism for the engagement in bullying by boys and girls. Short-term (six months) changes in bullying perpetration involvement may be associated with previous changes in the need for popularity. This could explain why some schoolchildren, a priori labeled as "ethical" or with moral criteria, could attack other classmates.

When schoolchildren prioritize achieving status within the peer group, there is a greater likelihood of being involved in bullying. In this sense, bullying can be considered a deliberate strategy; that is, an instrument to achieve an end (for example, being popular) (Pouwels et al., 2018). According to the *resource control theory* (Hawley, 1999; Huitsing et al., 2014), adolescents can perform apparently prosocial strategies, masked through manipulation, which at the same time are hostile towards others, to achieve access to the social benefits associated with status.

The *social information-processing theory* (Crick & Dodge, 1994; Dodge, 2014) holds that such benefits can become expectations. Decision-making is determined by the perception of the behavior's effectiveness in achieving one's expectations. In that sense, in a peer context where popularity is linked to perpetration, one's desire to be visible and admired by others can justify any immoral act in order to achieve the coveted status. Individuality and social ethics are opposed and require taking a stance for one or the other (Ortega-Ruiz, 2020). Strategies of solidarity, empathy, respect, and consideration of others are required to ensure the common good.

The relationship between the need for popularity and moral disengagement was reciprocal at a between-person level. Schoolchildren with a high need for popularity were

more likely to present later higher moral disengagement. On another hand, boys and girls with high levels of moral disengagement were also subsequently associated with high levels of need for popularity. According to the results at the within-person level, compared with themselves, changes in the need for popularity were later associated with changes in the same direction in moral disengagement, but not the reverse.

Although previous research had revealed the role of social goals as a mechanism involved in moral disengagement (Visconti et al., 2015), no study to date had analyzed such effects taking into account the need for popularity. The study's findings underscore the importance of social motivation in understanding the processes of involvement in bullying.

The *socio-cognitive theory* (Bandura, 2002, 2018) holds that moral disengagement, as a set of cognitive strategies, is influenced by social motivations. Instrumental goals, such as popularity goals, can affect moral decision-making because they significantly influence decisions about the behavior to be executed (Thomas, 2021). To achieve the desired social reward, adolescents can disconnect their moral self-censorship at any given time and legitimize their immoral behavior, leading to a greater likelihood of engaging in antisocial behaviors (Gini et al., 2014; Paciello, Ballarotto, et al., 2020), specifically, bullying (Killer et al., 2019).

Overall, Study 1 explores the differentiation of longitudinal associations between motivational and moral mechanisms in bullying perpetration at a between- and within-person level. The study also contributes to the understanding of the interaction between the mechanisms involved in bullying, such as the need for popularity and moral disengagement.

9.2. Anger rumination and cyberbullying

The development of cyberbullying prevention and intervention programs requires research to delve into the nature of the phenomenon and the identification of factors associated with its development and maintenance. Cyberaggression and cybervictimization have been widely linked. Specifically, a possible overlap between the two has been highlighted, as well as an influence over time, especially of victimization on aggression (Marciano et al., 2020; Walters, 2020). As a consequence, during the last few years, interest in research of the different mechanisms involved in cyberbullying has been gradually increasing.

Anger rumination, an emotion-focused strategy within the *coping style theory* (Nolen-Hoeksema, 1991), is a factor widely associated with involvement in aggression (Denson, 2013; Salguero et al., 2020). However, there are also theoretical and empirical links between anger rumination and victimization. Due to the scant research on anger rumination in online interaction (Yang et al., 2021), as well as the mechanisms involved both in cybervictimization and cyberaggression, Study 2 aimed to explore the longitudinal relationship between anger rumination, cybervictimization, and cyberaggression.

The results showed that adolescents with higher levels of cybervictimization were subsequently associated with high levels of cyberaggression. However, cyberaggression was not subsequently associated with cybervictimization. In the *general aggression model* (Allen et al., 2018; Anderson & Bushman, 2002), cybervictimization is considered as a contextual factor that can generate a mood of discomfort. This could lead to possible revenge and, therefore, involvement in cyberaggression, thus triggering the so-called *cycle of violence* (Allen et al., 2018; Widom, 1989). In addition, the *socio-cognitive theory* (Bandura, 1986) holds that, when victims suffer aggression, they may be learning certain patterns of aggression at the same time. To this are added the characteristics of the Internet (24/7 connection and availability, and anonymity), which can generate the appropriate context for aggression to be experienced as a form of relief or reaction to prior victimization.

The findings showed that adolescents with higher levels of cybervictimization were subsequently associated with anger rumination. Likewise, those with high levels of anger rumination also subsequently showed a high involvement in cybervictimization.

The experience of online victimization can trigger anger rumination as a maladaptive coping strategy. To cope with victimization, adolescents may focus on the emotional part of the experience, specifically the feelings of anger, through passive and repetitive thoughts (Malamut & Salmivalli, 2021). As a consequence of the episodes of victimization, cognitive processing may be biased, generating limitations in anger management. However, not only is victimization a disruptive agent linked to high levels of anger rumination during adolescence but also other social circumstances and environmental stressors can predict high anger rumination. In this line, this thesis contributes to the literature by linking passive and repetitive cognitive strategies to cope with stressful and anger-inducing events with greater involvement in cybervictimization. This creates a reciprocal influence between anger rumination and

cybervictimization that leads to the emergence of a maladaptive circle with implications for these adolescents' psychosocial maladjustment.

This thesis contributes to the longitudinal link between anger rumination and aggression in the context of cyberbullying. When different social experiences are a source of stress in adolescents, those who implement maladaptive rumination strategies focused on anger are more likely to subsequently become involved in online aggression. Within the framework of the *multiple systems model* (Denson, 2013), the subjective experience of social experiences is influenced by cognitive processing. When emotion-focused strategies such as anger rumination are used, this experience can lead to a negative mood, which, in turn, leads to less self-control. The exacerbation of anger, along with the 24/7 accessibility and anonymity of the Internet, make these individuals more likely to engage in episodes of cyberaggression (Runions & Bak, 2015).

Sex and age were not moderating mechanisms, showing that anger rumination is linked to cyberbullying regardless of adolescents' sex or age.

Through the second study, it was also shown that cybervictimization is a mediating mechanism linking anger rumination with subsequent involvement in cyberaggression. This relationship is partially explained by cybervictimization, such that anger rumination strategies affect both aspects of cyberbullying. However, those who also suffer online victimization are more likely to engage in cyberaggression. In contrast, unlike a recent study in the context of bullying (Malamut & Salmivalli, 2021), anger rumination was not an explanatory mechanism for the longitudinal association between cybervictimization and cyberaggression.

9.3. Communication with the family and risky cyberbehavior

There is social concern about the autonomous access to digital devices at increasingly younger ages. Although its use involves a wide range of opportunities for learning and expanding social relationships, inadequate use of the Internet makes children more vulnerable to the dangers associated with the network (Cabello-Hutt et al., 2018).

Cyberbullying, as one of the most prevalent harmful phenomena on the network, has been the target of study during the last decades. Research has been aimed primarily at identifying protective and risk mechanisms that help understand why schoolchildren engage

in online aggression (Chen et al., 2017; Zych et al., 2019).

Child disclosure, which involves children's spontaneous communication to their parents about what they do on the Internet, has been widely linked to less involvement in risky behaviors on the Internet. The findings of Study 3 represent an important advance in the investigation of this relationship, highlighting the mediating role of problematic Internet use and cybergossip. This integrated model indicates that adolescents who communicate spontaneously about their Internet use with their parents are less prone to problematic use, which, in turn, leads to less involvement in cybergossip and, subsequently, in cyberbullying.

Promoting child disclosure requires a warm and open family environment that helps children feel comfortable sharing information with their family (Kerr et al., 2012). This context of safety encourages the desire to voluntarily share with their parents the emotions generated by the social networks or simply to report the use they make of the Internet. The children see their parents as support figures, which increases the need to share their fears, doubts, or concerns about their experiences in the network.

The disclosure of everyday activities on the Internet allows parents to discuss the most appropriate behaviors, while teaching their children to care about other people's well-being. The parents have the opportunity to provide assistance, guidance, or solutions to their children if the children tell their parents about something that is worrying them. This aid translates into a reduction of risky cyberbehavior (Bartau-Rojas et al., 2018). This type of transparent communication can protect children from problematic behaviors. The parent's greater knowledge about their children's Internet use can help them be more responsive to potential challenges.

As shown in the moderation results, the last years of childhood are very important to learn the keys to the safe use of the Internet, where the relationship between parents and children is paramount. During the transition from childhood to adolescence, children gradually begin to acquire greater autonomy and depend less on their parents (Inchley et al., 2020). This explains why, compared to early adolescence, during childhood, child disclosure has a greater protective impact on problematic Internet use. As shown in the moderation results, children with high levels of problematic Internet use are more likely to develop high levels of cyberaggression during the early adolescent years compared to late childhood.

In conclusion, this study highlights that child disclosure is a powerful mechanism not only for cyberaggression, but also for other risky cyberbehaviors that can precede cyberbullying, such as problematic Internet use and cybergossip, with the early adolescent years being a key stage for the development of such communication strategies.

9.4. Practical implications

The findings of this thesis allow to support the psycho-educational implications for the improvement of school, family, and online convivencia, as well as for the prevention of bullying and cyberbullying during late childhood and adolescence.

To a greater extent, anti-bullying and anti-cyberbullying programs have emphasized empathy and social and emotional learning as the main contents to be addressed (Espelage et al., 2019). The findings of this thesis show the need to include other variables, allowing to deepen the study of the influence of children's moral and emotional strategies and motivations in bullying and cyberbullying behaviors.

Based on the findings of Study 1, psycho-educational programs applied in classrooms should emphasize motivation and morality (Ortega-Ruiz, 2020). Prevention should promote awareness of children's moral reasoning to learn to self-regulate and take responsibility for their thoughts, emotions, and behaviors in social interactions (Romera, Casas, et al., 2019).

The peer group is a very important element to consider in bullying prevention. From the *social cognitive theory* (Bandura, 2002), it is acknowledged that the group contributes to the development of self-efficacy, provides collective support for adherence to moral norms, and facilitates the selective activation and deactivation of moral self-regulation depending on the situation (Romera, Casas, et al., 2019). This requires considering that, sometimes, individual motivation or moral strategies are no more than an adaptation to the reference group.

Social motivation requires special attention in the school and classrooms, due to the significant increase of popularity goals in adolescence (Dawes & Xie, 2017). Schoolchildren associate popularity with short-term social benefits, although long-term problems, such as involvement in aggression or low-quality friendships, may be reported. In addition, the results at the within-person level further emphasize the importance of the need for popularity, not

only in those schoolchildren who present high levels but also in those who, at some time, may feel increased motivation for greater social prestige.

Preventing aggression and moral disengagement by decreasing the need for popularity requires considering the relevance of the peer group. We cannot ignore that the group gives and takes away popularity and the possible social benefits associated therewith (Romera, Casas, et al., 2019). If aggression ceases to be considered a popular behavior, then considering that to humiliate a classmate is a positive behavior may no longer make sense. Promoting social development goals that lead to improved interpersonal relationships is an educational task. But it also requires the schoolchildren to be able to experience the benefits of having classmates who care about them and can be counted on when they need them.

The findings of the second study have practical implications for the need to develop problem-focused strategies as a resource for coping with stressful experiences. Schoolchildren face a series of social challenges daily that produce psychological discomfort (among which is cybervictimization). When schoolchildren face these experiences with anger rumination, an emotion-focused strategy, its link with cyberaggression and cybervictimization is evident.

Research has identified some evidence-based procedures to provide schoolchildren with problem-focused coping skills to face anger-inducing experiences. In children with high levels of anger rumination, the adaptive recall of anger-inducing experiences can be promoted through cognitive reappraisal techniques such as flashback-induced anger (Denson, Moulds, et al., 2012). Recalling the anger of experiences in controlled situations reduces the intensity of that emotion, as well as its subsequent passive and repetitive cognitive processing.

Mindfulness is one of the relaxation techniques linked to psychosocial development through emotion regulation that has been shown to be effective in reducing anger rumination (Takebe & Sato, 2021; Wright et al., 2009). Mindfulness refers to the development of continuous, sustained, and non-evaluative awareness, which affects cognitive development to emit an adaptive behavioral response. Through this practice, the capacity of schoolchildren with high levels of anger rumination can be improved. Awareness of angry memories, understanding the causes that provoke anger, or thoughts of revenge without value judgments and in the absence of dire consequences can lead to the extinction of responses and behaviors previously provoked by the anger experience.

Acceptance and commitment therapy, as a strategy that helps maintain or change behavior to achieve personal goals, is another effective technique in reducing anger rumination among schoolchildren with high levels (Garavani et al., 2021). These types of behavioral strategies tend to modify children's reactions to experiences that provoke anger rumination. For this purpose, behaviors that are consistent with one's priorities and alien to the adverse experiences are used, instead of trying to modify the intensity of the rumination.

Within the cyber context, the third study highlights the protective role of child disclosure about children's involvement in risky cyberbehavior. Although most parents are concerned about their children's use of the Internet, the development of educational proposals for the prevention of risky cyberbehavior in schoolchildren is addressed mainly from the school (Ng et al., 2020; Romero-Saletti et al., 2021). However, it is important to bear in mind that the family must be actively involved and coordinated with the educational centers in the construction of cyber-convivencia so that the children develop adaptive skills that allow them to use the Internet safely (Ortega-Ruiz, 2020).

The results of this thesis point to late childhood as a key stage for the promotion of communication habits between parents and children. During this stage, child disclosure is an important factor in protecting them from risky cyberbehavior. As of this stage, schoolchildren acquire greater autonomy in the use of electronic devices. However, if, during these first interactions, parents demand information about what their children do when they surf the Internet through reproaches, hostile attitudes, and recriminations, the parent-child communication relationship can produce the opposite effect, implying an element of rupture and distrust between the children and their family. Control and supervision strategies for the use of the Internet limit child disclosure (Liu et al., 2020). These types of strategies generate children's expectations linked to the fear that their parents will react harmfully and intrusively to certain behaviors that the children may perform in cyberspace.

Strategies linked to active mediation and shared use promote a scenario that facilitates parent-child communication, so important for children's voluntary disclosure. This parent-child bond favors the development of cyber-convivencia through secure attachment and a positive emotional bond from parental accompaniment in the use of the Internet. This context is characterized by the family's acceptance, understanding, and warmth, which favors the children's development, making them more willing to talk about how they use cyberspace.

In short, this thesis highlights the need to include different elements of a cognitive, emotional, and moral nature within programs of prevention and intervention of bullying and cyberbullying. The variety of factors involved reflects the interdisciplinary nature that such programs should address to reduce schoolchildren's involvement in aggressive behaviors.

9.5. Limitations and future lines of research

The present findings support the assumptions formulated, with implications for theory and practice. However, their contribution must be contextualized, considering a series of limitations that support future research.

Data collection was carried out through self-report questionnaires, which can influence the results through social desirability bias, acceptance bias, or participants' mood. Such biases are relevant in the context of perpetration (Zych et al., 2016). Future research could consider multiple sources, such as peers, parents, or teachers, to increase the reliability of the findings.

Despite the large sample of schoolchildren, the selection of the sample was incidental. This may limit the generalization of results to other schoolchildren. In future studies, random probabilistic sampling could be considered as an alternative that leads to greater representativeness of the data. Likewise, the studies focus on a specific region with homogeneous socio-cultural characteristics. Future studies could propose cross-cultural methodological designs to analyze whether certain social or cultural characteristics can act as moderators between the associations of the variables linked to this doctoral thesis.

In Study 3, the exploratory design of the research is cross-sectional. This limits the causal relationship in the mediation model of problematic Internet use and cybergossip on the effects of child disclosure in cyberaggression. To provide a better link to causality between variables, serial mediation should be considered prospectively over time. In future studies, a longitudinal design could be established to contrast whether such associations are maintained over time through indirect longitudinal effects (Little, 2013).

The factors analyzed in this thesis, although they are related to the social field, were analyzed from the perspective of the individual. In future research, to understand why schoolchildren adopt aggressive behaviors, the way the variables of this thesis interact with the close social context through family factors (e.g., socioeconomic context or parental styles) and peer group factors (e.g., class or peer norms) could be considered.

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ANEXOS

Anexo 1: Escala ad hoc de revelación filial

RF-1	Cuando me creo una nueva cuenta en las redes sociales se lo cuento a mis padres [I tell my parents when I open a new account on social media]
RF -2	Cuando hablo con personas nuevas por las redes sociales o Whatsapp se lo cuento a mis padres [I tell my parents when I chat to new people on social media/WhatsApp]
RF -3	Le cuento a mis padres el contenido de los mensajes que envío o recibo por las redes sociales o WhatsApp [I tell my parents the content of the messages I send or receive through social media/WhatsApp]
RF -4	Antes de enviar información sobre mí a otras personas por las redes sociales o WhatsApp se lo digo a mis padres [I tell my parents before revealing information about myself to other people through social media/WhatsApp]

Anexo 2: Escala MDS-24 de desconexión moral

MDS-1	Está bien pegar a alguien que insulta a tu familia [It is alright to beat someone who bad mouths your family]
MDS-2	Está bien pelearse con quien amenaza el honor de tu grupo [It is alright to fight when your group's honour is threatened]
MDS-3	Está bien pelearse para proteger a tus amigos [It is alright to fight to protect your friends]
MDS-4	Pegar a compañeros o compañeras que son insoportables (desagradables) es solo darles una "lección" [To hit obnoxious classmates is just giving them "a lesson"]
MDS-5	Coger la bici de alguien sin su permiso es solo "tomarla prestada [Taking someone's bicycle without their permission is just "borrowing it"]
MDS-6	No hay nada de malo en "colocarse" (tomar drogas) de vez en cuando [It is not a bad thing to "get high" once in a while]
MDS-7	Robar algo de dinero no es tan grave si lo comparas con aquellos que roban mucho dinero [Stealing some money is not too serious compared to those who steal a lot of money]
MDS-8	Está bien insultar a un compañero/a de clase, lo peor sería pegarle [It is okay to insult a classmate because beating him/her is worse]
MDS-9	En comparación con las cosas ilegales que la gente hace, coger/tomar algunas cosas de una tienda sin pagarlas no es muy grave [Compared to the illegal things people do, taking some things from a store without paying for them is not very serious]
MDS-10	No se puede culpar a los chicos/as por decir palabrotas (usar malas palabras) cuando todos sus amigos lo hacen [Kids cannot be blamed for using bad words when all their friends doit.]
MDS-11	Si los chicos/as viven en malas condiciones no se les puede culpar por comportarse de manera agresiva [If kids are living under bad conditions they cannot be blamed for behaving aggresively]
MDS-12	No se puede culpar a los chicos/as por portarse mal si sus amigos les presionaron para que lo hiciera [Kids cannot be blamed for misbehaving if their friends pressured them to do it]
MDS-13	Un chico/a que solo sugiere romper las normas/reglas no debería ser culpado si otros chicos/as van y lo hacen [A kid who only suggests breaking rules should not be blamed if other kids go ahead and do it]
MDS-14	Si los miembros de un grupo deciden juntos hacer algo malo no es justo culpar a algún chico/a del grupo por ello [If a group decides together to do something harmful it is unfair to blame any kid in the group for it]
MDS-15	No es justo culpar a un chico/a que solo ha participado un poco en algún daño causado por el grupo [It is unfair to blame a child who had only a small part in the harm caused by a group]
MDS-16	Burlarse de otro en realidad no le hace daño [Teasing someone does not really hurt them]
MDS-17	Está bien decir pequeñas mentiras porque en realidad no hacen daño [It is okay to tell small lies because they don't really do any harm]
MDS-18	Los insultos entre chicos/as no hacen daño a ninguno [Insults among children do not hurt anyone]
MDS-19	Los chicos/as que reciben maltrato normalmente han hecho algo para merecérselo [Kids who get mistreated usually do things that deserve it]
MDS-20	No se puede culpar a los chicos/as por portarse mal cuando sus padres les exigen demasiado [Children are not at fault for misbehaving if their parents force them too much]
MDS-21	Si los chicos/as se pelean o se portan mal en la escuela es culpa del profesor/a [If kids fight and misbehave in school it is their teacher's fault]
MDS-22	Está bien tratar mal a alguien que se comportó como un "gusano" [It is okay to treat badly somebody who behaved like a "worm"]
MDS-23	Algunas personas merecen ser tratadas como animales (de manera cruel) [Some people deserve to be treated like animals]
MDS-24	Alguien que es odioso (repugnante) no se merece ser tratado como un ser humano [Someone who is obnoxious does not deserve to be treated like a human being]