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**Análisis de las actitudes de los adolescentes hacia la
violencia en el noviazgo y propuestas de intervención para
población en riesgo**

Analysis of adolescents' attitudes toward dating violence and
intervention proposals for at-risk populations

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List of Abbreviations

AAUW = American Association of University Women

ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes Scale

AFC = Análisis Factorial Confirmatorio

ASI = Ambivalent Sexism Inventory

CADRI = Conflict in Adolescent Dating Relationships Inventory

CDC = Centers for Disease Control and Prevention

CF = Control Group

CFA = Confirmatory Factor Analysis

CFI = Comparative Fit Index

CI = Confidence Interval

DIF = Differential Item Functioning

DV = Dating Violence

EG = Experimental Group

FRA = European Union Agency for Fundamental Rights

IPV = Intimate Partner Violence

IPVAW = Intimate Partner Violence Against Women

IRI = Interpersonal Reactivity Index

IRT = Item Response Theory

JBİ = Joanna Briggs Institute

LRT = Log-Likelihood Ratio Test

MLR = Maximum Likelihood with Robust standard errors

N.R. = Not Reported

OR = Odds Ratio

PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses

PROSPERO = International Prospective Register of Systematic Reviews

PS-ADV = Perceived Severity of Adolescent Dating Violence

PS-IPVAW = Perceived Severity of Intimate Partner Violence against Women

RCT = Randomized Controlled Trial

RMSEA = Root Mean Squared Error by Approximation

SD = Standard Deviation

SEM = Structural Equation Modeling

SMD = Standardized Mean Difference

TDV = Teen Dating Violence

TLFB-DV = Timeline Follow-Back-Dating Violence

TLI = Tucker-Lewis's Index

TRI = Teoría de Respuesta al Ítem

UN = United Nations

USA = United States of America

VB-IPVAW = Victim-Blaming in cases of Intimate Partner Violence against Women

VN = Violencia en el Noviazgo

VPMRP = Violencia contra la Mujer en las Relaciones de Pareja

WHO = World Health Organization

WLSMV = Weighted Least Squared Mean- and Variance-Adjusted

Abstract

Dating violence (DV), a widespread social issue, is increasingly prevalent among adolescents worldwide. While previous research has primarily focused on attitudes of acceptability and tolerance toward DV, a comprehensive understanding of the DV phenomenon requires addressing other relevant attitudes. These include victim-blaming attitudes and perceived severity of DV. To do so, it is necessary to develop psychometrically sound and appropriate tools to assess these types of attitudes toward DV in the adolescent population. Additionally, regarding DV prevention programs, previous systematic reviews have mainly focused on examining the effectiveness of universal programs. The lack of systematic reviews specifically targeting programs for at-risk adolescents limits our understanding of the effectiveness of these programs and key aspects within these specific populations more vulnerable. Therefore, this doctoral thesis has two main objectives: 1) to learn about and evaluate the effectiveness of existing DV prevention programs aimed at adolescents at risk of suffering and/or experiencing this type of violence (Study 1); and 2) to provide new measures for assessing victim-blaming attitudes and perceived severity of DV in the adolescent population (Studies 2 and 3). The Study 1 evaluated the effectiveness of existing DV prevention programs for adolescents at risk of DV through a systematic review with meta-analysis of existing randomized controlled trials in the literature. The study considered variables related to physical, psychological, and sexual violence, as well as attitudes toward DV. Composite measures of perpetration and victimization of DV (physical, psychological, sexual and cyber DV) were also considered. The results of composite measures are very promising because they suggest that interventions targeting these at-risk groups reduce both perpetration and victimization of DV. In Study 2, the Victim-Blaming Attitudes in cases of IPVAW scale (VB-IPVAW; Martín-Fernández et al., 2018) was adapted, and the new ADV-VBA scale evaluating victim-blaming attitudes in cases of DV among adolescent populations was validated. In Study 3, the Perceived Severity of IPVAW scale (PS-IPVAW; Martín-Fernández et al., 2022) was adapted and validated in the adolescent population, resulting in the PS-ADV scale. The results from Studies 2 and 3 demonstrated that both new scales are reliable and valid instruments, allowing for a thorough evaluation of victim-blaming attitudes and perceived severity of DV. In conclusion, the results of this doctoral thesis represent progress in DV research, providing a deeper understanding

of the phenomenon. Emphasizing the importance of evaluating DV programs specifically for at-risk adolescents independently from universal programs, as well as the need for reliable instruments to assess attitudes toward DV, the goal is to enhance prevention and intervention strategies related to DV.

Keywords: dating violence; attitudes; victim-blaming; perceived severity; adolescent; measurement; systematic review

Resumen

1. Introducción

La violencia en el noviazgo (VN) conocida en inglés como “dating violence”, es definida como cualquier acto de violencia física, psicológica, sexual y/o de acoso, cometido en persona u online, que ocurre dentro de una relación de noviazgo entre adolescentes que no viven juntos ni comparten vínculos legales (Cascardi et al., 2018; Centers for Disease Control and Prevention [CDC], 2019; Niolon et al., 2017). La VN posee unas características, dinámicas y tipologías particulares por lo que debe diferenciarse de la violencia contra la mujer en las relaciones de pareja (VMRP) en población adulta. La presente tesis se centra en el periodo de la adolescencia, definido como el rango de edad entre los 10 y 19 años (Singh et al., 2019), y en el contexto de la VN, específicamente en la violencia perpetrada por adolescentes varones contra sus parejas mujeres.

La VN se ha convertido en un problema social generalizado con una prevalencia cada vez mayor entre adolescentes de todo el mundo (Collibee et al., 2021; Vives-Cases et al., 2021; Wincentak et al., 2017). Según la World Health Organization (World Health Organization [WHO], 2021), este tipo de violencia está cada vez más presente en edades más tempranas: el 24% de las adolescentes de entre 15 y 19 años han sufrido violencia física y/o sexual por parte de su pareja al menos una vez en su vida. Este tipo de violencia en el noviazgo puede tener importantes consecuencias físicas, psicológicas, conductuales y sociales para los adolescentes, tanto a corto como a largo plazo (Hossain et al., 2020; Taquette y Monteiro, 2019; Wincentak et al., 2017). Algunos ejemplos incluyen el abuso de sustancias, la ansiedad, la depresión, el trastorno de estrés postraumático y un rendimiento académico deficiente (Chiodo et al., 2012; Exner-Cortens et al., 2017; Greenman y Matsuda, 2016; Park et al., 2018; Ramiro-Sánchez et al., 2018; Sunday et al., 2011; Taquette y Monteiro, 2019). Además, la VN puede generar miedo a iniciar una nueva relación, dificultades para establecer una buena comunicación con la pareja (Park et al., 2018), y un aumento del riesgo de victimización y perpetración de la VMRP en la vida adulta (Chiodo et al., 2012; Exner-Cortens et al., 2017; Fernández-González et al., 2020; Ramiro-Sánchez et al., 2018; Sunday et al., 2011).

Dada la prevalencia y las consecuencias negativas asociadas a la VN, es importante identificar los factores de riesgo de este tipo de violencia (Brem et al., 2018). A nivel individual, se incluyen la edad temprana, el bajo nivel educativo, los problemas de salud mental, iniciarse tempranamente en relaciones sexuales, tener antecedentes de VN, el consumo de sustancias y las actitudes que aceptan y justifican la violencia (Duval et al., 2020; Niolon et al., 2017). A nivel relacional, estos factores de riesgo incluyen el hecho de haber experimentado previamente violencia en la familia, haber recibido un escaso control parental, haber estado implicado en situaciones de violencia entre iguales, y poseer escasas habilidades de comunicación (Capaldi et al., 2012; CDC, 2014; Heise, 2011; Lavoie et al., 2002). A nivel sociocultural, se han identificado que los altos niveles de desigualdad de género son un factor de riesgo de la VN. Además, la aceptación de las normas tradicionales de género y el mayor poder/control masculino en las relaciones se ha asociado con un mayor riesgo de VN (Browning, 2002; CDC, 2014; Willie y Kershaw, 2020).

La literatura sobre la VN en adolescentes ha destacado el papel que tienen las actitudes hacia este tipo de violencia, considerándolas un importante factor de riesgo (Duval et al., 2020; Reyes et al., 2016; Rubio-Garay et al., 2015; Vagi et al., 2013). Investigaciones previas han indicado que los adolescentes que muestran una mayor aceptación de la VN tienden a ser más propensos a participar en situaciones de VN en sus relaciones de noviazgo posteriores (Brendgen et al., 2002; Courtain y Glowacz, 2021; Foshee et al., 2001; Josephson y Proulx, 2008; Malik et al., 1997). Estas actitudes de mayor tolerancia hacia la VN pueden llevar a las víctimas adolescentes a sentir culpa y vergüenza por la violencia que reciben. En consecuencia, pueden recibir menos apoyo y ayuda, a la vez que el comportamiento violento del agresor se ve reforzado (Niolon et al., 2017). Por tanto, las actitudes hacia la VN son cruciales para explicar y comprender el comportamiento tanto de las víctimas como de los agresores (Orozco et al., 2022).

La investigación previa sobre las actitudes hacia la VN se ha centrado principalmente en las actitudes de aceptabilidad y tolerancia de este tipo de violencia. Sin embargo, hay otros tipos de actitudes públicas que son fundamentales para comprender el entorno social en el que se manifiesta la violencia de pareja (Gracia, 2014; Powell y Webster, 2018). Entre ellas, hay que destacar las actitudes de culpabilización a la víctima y la gravedad percibida de la VN. Este tipo de actitudes ha recibido una menor atención

a pesar de ser un factor importante para la violencia en las relaciones de pareja, como se ha demostrado en el contexto de VMRP entre adultos (Gracia et al., 2020).

Las actitudes de culpabilización a la víctima contribuyen a crear un clima social en el que la VMRP se percibe como un comportamiento normativo (Gracia, 2014; Waltermaurer, 2012). Cuando la causa de la violencia recae en las víctimas, es más probable que se minimicen los incidentes, lo que justifica la violencia y la convierte en un comportamiento más aceptable (Gracia et al., 2018; Waltermaurer, 2012). La percepción de quién es responsable de la violencia es importante porque influye en la respuesta del público a estos incidentes de violencia (Gracia, García et al., 2009; Martín-Fernández et al., 2018, 2022; Taylor y Sorenson, 2005; Waltermaurer, 2012). En cuanto a la gravedad percibida de la VN, está relacionada con cuestiones importantes como la aceptación o tolerancia pública de la VN, una mayor justificación de la violencia hacia las víctimas, una menor probabilidad de que las víctimas busquen ayuda y una menor intervención de los testigos ante incidentes de VN (Bowen et al., 2013; Casey et al., 2017; Cho et al., 2023; Edwards et al., 2022; Rojas-Solís y Romero-Méndez, 2022; Smith et al., 2005).

Evaluar estos tipos de actitudes hacia la VN es fundamental tanto para comprender mejor el complejo problema de la VN, como para una mejor orientación de las políticas y prácticas de prevención de la VN (Exner-Cortens, 2018; Leen et al., 2013). Sin embargo, la investigación sobre las actitudes de culpabilización a la víctima en adolescentes es escasa, y estos estudios presentan a su vez limitaciones en cuanto a las propiedades psicométricas de los instrumentos (Morrison et al., 2023). En relación con la gravedad percibida de la VN, investigaciones previas se han centrado en estudios cualitativos, aunque rara vez este tipo de actitudes son su foco principal. Por lo tanto, existe una clara necesidad de desarrollar instrumentos psicométricamente sólidos que midan la culpabilización a la víctima y la gravedad percibida de la VN en adolescentes, para su uso tanto en entornos de investigación como de intervención.

En relación con la prevención de la VN, se han desarrollado diferentes estrategias de prevención. Entre ellas destaca el desarrollo de programas centrados en formar a la población adolescente sobre lo que constituye una relación de noviazgo sana y respetuosa, y en la identificación de conductas violentas (Rivas et al., 2015). Existen diferentes tipos de programas según la población a la que va dirigida y su finalidad. El primer tipo de programas, son los denominados “*programas universales*” dirigidos a toda la población

adolescente, y que se desarrollan mayoritariamente en entornos educativos. El segundo tipo de programas son los “*programas para adolescentes en riesgo*”, que se dirigen a adolescentes que presentan una serie de características que los sitúan en mayor riesgo de experimentar o perpetrar VN (Antle et al., 2011). Este tipo de programas se suele desarrollar tanto en entornos educativos como comunitarios. Por último, los “*programas de intervención de testigos*” dirigidos a jóvenes para que intervengan si presencian como testigos comportamientos abusivos en relaciones de noviazgo. Estos suelen desarrollarse con jóvenes en instituciones de educación superior.

En cuanto a la efectividad de estos programas, la investigación arroja resultados dispares. En relación con los programas de prevención universal, es fundamental continuar examinando los efectos de estos programas tanto en las variables conductuales como actitudinales, dada la variabilidad de sus características, su duración y contenido. En relación con los programas dirigidos a adolescentes en riesgo, existe una falta de revisiones sistemáticas que evalúen la efectividad de estas intervenciones de forma independiente de los resultados de programas universales. Esto limita el conocimiento sobre la eficacia de este tipo de intervenciones. Por último, la evaluación de programas con testigos se ha centrado en evaluar la violencia sexual y la VN, mostraron resultados dispares en cuanto a la reducción de estos tipos de violencia. Las investigaciones futuras deberían investigar de forma persistente la eficacia de estas intervenciones, teniendo en cuenta su contexto, características específicas de la población, y las características de las intervenciones.

La presente tesis, intenta dar respuesta a dos de las problemáticas presentadas en esta introducción sobre la VN. El primer problema que se va a abordar, está relacionado con los programas de prevención de la VN dirigidos específicamente a adolescentes en riesgo de sufrir y/o experimentar este tipo de violencia. Es fundamental conocer las características de este tipo de programas y evaluar su eficacia independientemente de los programas dirigidos a la población adolescente en general. Estudiar estos programas será clave para entender qué funciona con esta población específica y así poder desarrollar futuras estrategias de mejora. El segundo problema abordado hace referencia a las actitudes de los y las adolescentes hacia la VN. En general, las actitudes constituyen una parte central de las intervenciones contra la VN, pero suelen centrarse principalmente en actitudes de aceptación, dejando de lado otras actitudes públicas que pueden tener un gran impacto en la concurrencia de la VN. En ausencia de estudios en la literatura que se

centren en otras actitudes públicas hacia la VN, así como la ausencia de instrumentos psicométricamente sólidos para evaluarlas, en la presente tesis se validarán dos medidas para evaluar dos tipos de actitudes (culpabilización a las víctimas y la gravedad percibida) hacia la VN en población adolescente.

2. Objetivos

Los principales objetivos que aborda esta tesis doctoral para dar respuesta a las problemáticas planteadas en el contexto de la VN fueron dos. El primer objetivo, consistió en conocer y evaluar la efectividad de los programas existentes de prevención de la VN dirigidos a adolescentes en riesgo de experimentar y/o sufrir este tipo de violencia en las relaciones de noviazgo. El segundo objetivo, se centró en analizar diferentes tipos de actitudes públicas hacia la VN, mediante la validación de dos medidas para evaluar dichas actitudes en población adolescente. Para dar respuesta a estos objetivos, la presente tesis está formada por tres estudios. El Estudio 1 da respuesta al primer objetivo planteado, mientras que los Estudios 2 y 3 corresponden al segundo objetivo de la tesis.

El Estudio 1, tuvo como objetivo conocer y evaluar la eficacia de los programas existentes de prevención de la VN en adolescentes en riesgo. Para ello, se realizó una revisión sistemática y un metaanálisis de este tipo de programas y se evaluó la efectividad de los mismos sobre las variables de violencia física, psicológica, sexual y actitudes hacia la VN, y una medida compuesta de perpetración y victimización de la VN (física, psicológica, sexual y cibernética).

Los Estudios 2 y 3, se centraron en proporcionar nuevas medidas para evaluar adecuadamente dos tipos de actitudes públicas hacia la VN en población adolescente. Por un lado, se midieron las actitudes de culpabilización a las víctimas, a partir de la adaptación de la escala de actitudes de culpabilización a la víctima en casos de VMRP (VB-IPVAW; Martín-Fernández et al., 2018), y fue validada para población adolescente. Por otro lado, se midió la gravedad que percibían los y las adolescentes hacia situaciones de VN, a partir de la adaptación de la escala de gravedad percibida de la VMRP (PS-IPVAW; Martín-Fernández et al., 2022) a población adolescente, y su posterior validación.

3. Metodología

El Estudio 1, consistía en una revisión sistemática que se llevó a cabo de acuerdo con las recomendaciones PRISMA (Moher et al., 2009), y se registró en la International Prospective Register of Systematic Reviews (PROSPERO 022: CRD42022308245). La búsqueda sistemática se realizó en septiembre de 2020 y se repitió en diciembre de 2021, consultado las bases de datos: Web of Science, PsycINFO y Scopus. La estrategia de búsqueda combinó términos relacionados con la VN, los adolescentes en riesgo, los programas de intervención y sus contextos de aplicación. Los criterios de inclusión fueron: 1) estudios publicados en revistas revisadas por pares; 2) ensayos controlados aleatorizados o estudios cuasiexperimentales; 3) adolescentes identificados de alto riesgo de victimización o perpetración de VN (menores de 18 años) (Antle et al., 2011); 4) la intervención tenía que tener como objetivo explícito prevenir la VN; y 5) intervenciones con periodos de seguimiento superiores a un mes. Se evaluó el riesgo de sesgo de los ensayos controlados aleatorizados mediante la herramienta RoB 2 incluidos en las revisiones Cochrane (Sterne et al., 2019), y para los estudios cuasiexperimentales se utilizó la herramienta Joanna Briggs Institute (JBI) Critical Appraisal Checklist (Aromataris y Munn, 2020). El metaanálisis se realizó utilizando un modelo de efectos aleatorios de varianza inversa (DerSimonian y Laird, 1986) con el programa informático Review Manager Versión 5.4.

Los Estudios 2 y 3 consistieron en la adaptación y validación de dos medidas para evaluar las actitudes de culpabilización a la víctima y la gravedad percibida hacia la VN. La muestra seleccionada en ambos estudios fueron estudiantes de secundaria con edades comprendidas entre los 12 y los 18 años. La recogida de datos se empleó mediante un método de muestreo por conglomerados estratificado en dos etapas. En ambos estudios se utilizaron dos muestras. La primera muestra se utilizó en ambos estudios para evaluar las propiedades psicométricas de las escalas, en el Estudio 2 la escala de actitudes de culpabilización a la víctima de la violencia en el noviazgo en adolescentes (ADV-VBA), y en el Estudio 3 la escala de percepción de la gravedad de la violencia en el noviazgo en Adolescentes (PS-ADV). En cuanto a la segunda muestra, en el Estudio 2 se utilizó para adaptar la versión corta de la escala, y en el Estudio 3, para evaluar la invarianza de medida de la escala a través de diferentes géneros.

Las variables examinadas en los Estudios 2 y 3 fueron las siguientes. En primer lugar, en ambos estudios se recogieron datos de variables sociodemográficas como la

edad, género, nacionalidad, nombre del centro educativo, curso académico que estaban estudiando, nivel socioeconómico, y si tenían en ese momento pareja. La segunda variable examinada en ambos estudios fue el sexismo ambivalente a través del instrumento *Ambivalent Sexism Inventory* (ASI; Glick y Fiske, 1996). La siguiente variable, se midió en el Estudio 2 y fueron las actitudes de culpabilización a la víctima, para ello se empleó el instrumento *The Adolescent Dating Violence Victim-Blaming attitudes Scale* (ADV-VBA). Además, la otra variable que se midió en el Estudio 2 fue el abuso verbal-emocional y el abuso físico, a través del instrumento *Conflict in Adolescent Dating Relationships Inventory* (CADRI; Wolfe et al., 2001). En cuanto al Estudio 3, se midió la gravedad percibida de la VN mediante el instrumento *Perceived Severity of Adolescent Dating Violence Scale* (PS-ADV), y la empatía a partir de la versión breve del *Interpersonal Reactivity Index* (IRI; Davis, 1980; Ingolia et al., 2016).

En cuanto al procedimiento, se diseñó una encuesta presencial para recoger los datos en los institutos que participaron en los Estudios 2 y 3. Entre noviembre de 2021 y mayo de 2022, se distribuyeron los cuestionarios y se recogieron los datos. Los estudios fueron aprobados por el Comité Ético de Investigación Experimental de la Universidad de Valencia.

En la validación de los instrumentos en los Estudios 2 y 3, se realizaron pruebas de validez basadas en el contenido test. Para adaptar las escalas VB-IPVAW y PS-IPVAW a población adolescente, un grupo de cuatro expertos en VMRP y VN revisó los ítems para modificarlos y adaptarlos a la VN. Para ello, dos expertos modificaron la redacción de los ítems utilizando un vocabulario más familiar para los y las adolescentes, y los otros dos expertos evaluaron la claridad y representatividad de los ítems para evaluar el constructo. Posteriormente, todos los expertos discutieron los ítems en un grupo de discusión, y obtuvieron finalmente la versión definitiva de ambas escalas.

En relación con las pruebas de validez basadas en la estructura latente, en los Estudios 2 y 3 se realizó un análisis descriptivo calculando la media de las respuestas a los ítems, las desviaciones típicas y los estadísticos de asimetría y curtosis. Para la consistencia interna, se calcularon el alfa de Cronbach y las correlaciones corregidas entre cada ítem y el resto de la prueba. En el Estudio 2, la consistencia interna se evaluó también mediante el Omega de McDonald.

La estructura latente de ambas escalas se evaluó mediante un análisis factorial confirmatorio (AFC), donde se replicó el modelo de un factor de las escalas originales con población adulta (Martín-Fernández et al., 2018, 2022). En el Estudio 2, se utilizó la estimación por mínimos cuadrados ponderados ajustados a la media y la varianza, porque este método proporciona estimaciones precisas de los parámetros cuando se trata de datos categóricos (Li, 2016). En el Estudio 3, se utilizó la máxima verosimilitud robusta (MLR) como método de estimación, que garantiza estimaciones precisas de los parámetros incluso cuando se trata de datos distribuidos de forma no gaussiana (Bandalos, 2014; Yilmaz, 2019). Para evaluar la bondad del ajuste del modelo, en ambos estudios se utilizó una combinación de índices de ajuste: valores del índice de ajuste comparativo (CFI) y del índice de Tucker-Lewis (TLI) iguales o superiores a 0,95, y valores del error cuadrático medio por aproximación (RMSEA) iguales o inferiores a 0,06, 0,08 y 0,10 se consideraron ajuste excelente, bueno y regular, respectivamente (Hu y Bentler, 1999).

En el Estudio 2, se realizó un análisis del funcionamiento diferencial de los ítems (DIF) para comprobar si los ítems de la escala eran invariantes entre chicos y chicas. Para ello, se utilizó el método de regresión logística ordinal para analizar ítems politómicos (Crane et al., 2006; French y Miller, 1996). A continuación, se aplicó el modelo de respuesta graduada de Samejima (1969) y evaluamos la bondad de ajuste del modelo mediante el estadístico C2 (Monroe y Cai, 2015). Este proceso nos permitió estimar las puntuaciones de la teoría de respuesta al ítem (TRI) para la escala.

En el Estudio 3, se evaluó la invarianza de la medición de la escala en función del género utilizando una segunda muestra y realizamos un AFC multigrupo. Además, realizamos pruebas de invarianza configuracional, métrica y de escala (Putnick y Bornstein, 2016). La invarianza métrica examina si las cargas factoriales de los ítems son equivalentes entre chicos y chicas, así como si los ítems tienen una relevancia comparable para ambos géneros. Se utilizó la MLR como método de estimación, y todos los modelos se compararon utilizando la prueba de razón de verosimilitud logarítmica (LRT) junto con las directrices de Cheung y Rensvold (2002) para datos continuos.

En referencia a las pruebas de validez basadas en la relación con otros constructos, se incluyeron la validez de criterio y la validez predictiva. En el Estudio 2, la validez de criterio se examinó correlacionando las puntuaciones del ADV-VBA con las puntuaciones de las subescalas de sexismo hostil y benevolente. Para evaluar la validez predictiva, se realizaron dos análisis de modelos de ecuaciones estructurales (SEM), que

incluyeron la culpabilización a la víctima, el género y la nacionalidad como predictores de la perpetración y victimización de la VN. En el Estudio 3, para evaluar la evidencia de validez de la escala PS-ADV, se utilizaron puntuaciones factoriales para analizar la relación de la gravedad percibida hacia la VN con el sexismo ambivalente y la empatía.

En el Estudio 2, se presentó una versión abreviada de 5 ítems de la escala ADV-VBA. Se evaluaron las propiedades psicométricas de los ítems seleccionados mediante el análisis de sus estadísticos de consistencia interna. Además, se examinó la validez de criterio mediante la correlación entre las puntuaciones de la escala y el sexismo ambivalente. Además, exploramos la relación entre la ADV-VBA completa y la versión breve.

4. Resultados y conclusiones

En el Estudio 1 de la tesis, se realizó una revisión sistemática con metaanálisis para comprobar la efectividad de los programas de prevención de la VN para adolescentes en riesgo. Tras las búsquedas en las bases de datos se obtuvieron un total de 17 estudios que fueron incluidos en el análisis cualitativo, de los cuales 11 fueron ensayos controlados aleatorizados que se incluyeron en el metaanálisis. Los resultados de las medidas compuestas del metaanálisis mostraron que la implementación de programas de prevención de la VN para adolescentes en riesgo redujo la perpetración y victimización de la VN. Cuando se analizaron los diferentes tipos de VN por separado, los resultados indicaron reducciones significativas en la perpetración de la VN física y sexual, y en la victimización por VN física. Sin embargo, no hubo reducciones significativas en la victimización por VN sexual ni en la perpetración y victimización por VN psicológica. En relación con las actitudes hacia la VN, no se obtuvieron cambios significativos.

En cuanto al análisis cualitativo, la mayoría de los programas incluidos en la revisión sistemática se realizaron en Estados Unidos. En cuanto a las características de riesgo de la población, variaron entre estudios. Entre los participantes de los estudios, se incluyeron adolescentes que habían experimentado previamente VN, adolescentes que habían estado expuestos a la VN durante su infancia, jóvenes que vivían en barrios desfavorecidos, adolescentes pertenecientes a minorías étnicas, y adolescentes en residencias que habían experimentado previamente violencia. En relación con el contexto de intervención, debe tenerse en cuenta que la mayoría de los estudios incluidos en la revisión se realizaron en entornos escolares. Por lo tanto, es posible que los estudiantes

con mayor riesgo de VN hayan abandonado el entorno escolar y no sean elegibles para estas intervenciones. La comparación de las intervenciones realizadas fuera del ámbito escolar con las implementadas en ámbitos de tipo comunitario es desafiante debido a la limitada disponibilidad de intervenciones no escolares. En cuanto a los componentes de intervenciones consideradas eficaces, se abordan contenidos como la educación y la formación en habilidades para promover relaciones sanas y habilidades de resolución de conflictos en las relaciones. En cuanto a los instrumentos de medida más frecuentemente utilizados, el CADRI fue el más empleado para evaluar variables físicas, psicológicas y sexuales. Para la medida de las actitudes hacia la VN se utilizan diferentes instrumentos, por lo que la estandarización de la evaluación de las actitudes hacia la VN es esencial para permitir comparaciones significativas de los resultados entre los estudios.

En conclusión, el Estudio 1 constituye la primera revisión sistemática centrada en programas de prevención de la VN dirigidos específicamente a adolescentes en riesgo. Además, el metaanálisis representa el primer intento de evaluar la violencia física, psicológica, sexual y cibernética, junto con las actitudes hacia la VN, dentro de la población de riesgo. Otro aspecto a destacar es que la revisión sistemática ha incluido programas de prevención independientemente del ámbito donde se desarrollara (escolar, comunitario, centros médicos, etc.), ya que la prioridad era seleccionar programas dirigidos a adolescentes en riesgo de VN en todos los ámbitos. En cuanto a los resultados obtenidos en las medidas compuestas, son muy prometedores, ya que sugieren que las intervenciones dirigidas a estos grupos de riesgo podrían reducir tanto la perpetración como la victimización de la VN. Es crucial hacer hincapié en estas intervenciones y reconocer la necesidad de evaluar de forma independiente los resultados específicos para esta población, distintos a los de la población general de adolescentes. La investigación futura debe profundizar en los factores críticos que contribuyen a la eficacia de estos programas en la prevención de la VN (Shorey et al., 2012; Wilkins et al., 2014).

El Estudio 2 se centró en adaptar la escala de culpabilización a las víctimas en casos de VMRP (VB-IPVAW; Martín-Fernández et al., 2018) y validarla en población adolescente. Los resultados de este estudio mostraron que la escala ADV-VBA proporcionó fuertes evidencias de fiabilidad y validez tanto para la versión larga como para la corta. Además, estas medidas exhibieron asociaciones con otros constructos relevantes, incluyendo sexismo ambivalente, perpetración y victimización de abuso físico y verbal-emocional, junto con disparidades de género y edad. Sobre la base de la

estructura latente, el ADV-VBA replicó con éxito el modelo de un factor propuesto por Martín-Fernández et al. (2018). Este modelo unidimensional explica eficazmente la variabilidad en las actitudes de culpabilización a las víctimas relacionadas con la VN entre los adolescentes.

Los resultados del análisis de la TRI, indicaron que a medida que aumentaban las actitudes culpabilizadoras a las víctimas, la escala ADV-VBA se volvía más precisa. Así, el uso de la escala ADV-VBA sería apropiado en poblaciones de adolescentes en riesgo de VN, ya que puede discriminar bien entre encuestados con niveles moderados y altos de actitudes de culpabilización a la víctima. En cuanto a cómo puede influir el género en la interpretación de los ítems, el análisis DIF no reveló diferencias significativas entre chicos y chicas. En cuanto a las pruebas de validez derivadas del análisis de la relación de la escala ADV-VBA con otras variables, se encontró que las actitudes de culpabilización a la víctima estaban fuerte y positivamente relacionadas con el sexismo hostil y benevolente. Esto es consistente con investigaciones previas sobre VMRP, donde los encuestados con actitudes sexistas eran más propensos a culpar a la víctima (Capezza y Arriaga, 2008; De Judicibus y McCabe, 2001; Gracia et al., 2014; Scott y Straus 2007; Valor-Segura et al., 2011; Vidal-Fernández y Megías, 2014).

Según nuestros resultados, las actitudes de culpabilización a la víctima predicen tanto la victimización como la perpetración de la VN. Este hallazgo está en línea con investigaciones previas que relacionan las actitudes de aceptabilidad con la VN (Brendgen et al., 2002; Foshee et al., 2001; Josephson y Proulx, 2008; Malik et al., 1997). Con respecto al abuso verbal-emocional, observamos un efecto significativo de las actitudes de culpabilización a la víctima y del género en la perpetración del abuso verbal-emocional, y un efecto significativo de estas actitudes, la edad y la condición de inmigrante en abuso físico. Nuestros resultados indicaron que, por término medio, las mujeres declararon cometer más abusos verbales-emocionales que los hombres, y que a medida que aumentaban las actitudes de culpabilización a la víctima, también lo hacía la perpetración declarada de este tipo de violencia. Estos resultados son consistentes con investigaciones previas en las que las mujeres mostraron un mayor uso del abuso verbal-emocional que los hombres en las relaciones de pareja (Fernández-Fuertes et al., 2006; Gómez et al., 2014; Sears et al., 2007). En cuanto a la edad, nuestros resultados indicaron que la VN física fue más prevalente entre los adolescentes más jóvenes. Para el abuso físico, las actitudes de culpabilización a la víctima predijeron la perpetración de abuso

físico, los participantes más jóvenes informaron de un mayor riesgo de perpetración, y los participantes inmigrantes mostraron una mayor perpetración de este tipo de violencia que los participantes españoles.

Para la victimización de la VN, nuestros resultados mostraron que las actitudes de culpabilización a las víctimas predecían la victimización por abuso verbal-emocional y físico, y que las mujeres y los participantes inmigrantes informaron más victimización por abuso físico que los hombres y los encuestados españoles, respectivamente.

Los resultados relacionados con la versión corta de la escala mostraron que esta tiene una fuerte consistencia interna y una validez satisfactoria, particularmente en relación con el sexismo hostil y benevolente. Esta escala abreviada puede ser útil en situaciones en las que el tiempo o el espacio son limitados.

El Estudio 3 se centró en adaptar la escala de gravedad percibida de la VMRP (PS-IPVAW; Martín-Fernández et al., 2022) y validarla en población adolescente. Los resultados mostraron que el instrumento replica el modelo de un factor de la escala original (Martín-Fernández et al., 2022) y demuestra una excelente consistencia interna. Es decir, evalúa eficazmente la gravedad percibida de la VN entre los adolescentes.

En cuanto a la invariabilidad de género, los resultados mostraron que tanto los chicos como las chicas tenían una conceptualización similar de la gravedad percibida de la VN. Además, nuestros resultados indicaron que los chicos tendían a percibir las situaciones de VN como menos graves que las chicas, en consonancia con investigaciones previas en el contexto de la VMRP (Dardis et al., 2017; Martín-Fernández et al., 2022; Villagrán et al., 2022).

En cuanto a las pruebas de validez, nuestros resultados mostraron que la gravedad percibida se relacionaba con las actitudes de culpabilización a las víctimas, el sexismo ambivalente y la empatía. En cuanto a las actitudes de culpabilización a la víctima, nuestros resultados indicaron una relación significativa entre la gravedad percibida y las actitudes de culpabilización. Los adolescentes que percibían como menos graves los escenarios de VN eran más propensos a mostrar niveles más altos de actitudes de culpabilización a las víctimas. Nuestros resultados son consistentes con investigaciones previas que han vinculado la gravedad percibida con actitudes de culpabilización a la víctima en el contexto de la VMRP (Gracia et al., 2018; Lelaurain et al., 2021; Martín-Fernández et al., 2018, 2022; Villagrán et al., 2020, 2023). En cuanto a las actitudes

sexistas, observamos una relación negativa significativa entre la gravedad percibida y el sexismo ambivalente. En concreto, los adolescentes que percibían una menor gravedad en los escenarios de VN mostraban niveles más altos tanto de sexismo hostil como de sexismo benevolente. Estos hallazgos se alinean con investigaciones previas, que han mostrado consistentemente que la gravedad percibida está asociada con ambas formas de sexismo en poblaciones adultas (Lelaurain et al., 2021; Martín-Fernández et al., 2022; Villagrán et al., 2023). En cuanto a la empatía, nuestros resultados mostraron una relación positiva entre la gravedad percibida de la VN y las subescalas de toma de perspectiva y fantasía del instrumento IRI. Los adolescentes que percibían la VN como muy grave tendían a empatizar más con los personajes de ficción, y mostraban una mayor capacidad de ponerse en el lugar de la otra persona. También encontramos una fuerte correlación positiva entre cómo percibían los adolescentes la gravedad de las situaciones y su preocupación empática. Esto, a su vez, sugiere que aquellos que percibían una mayor gravedad eran más capaces de identificar cuando otras personas estaban experimentando acontecimientos negativos. Estos resultados van en línea con estudios previos donde los niveles más bajos de empatía se asociaron con una mayor probabilidad de comportamientos violentos (Euler et al., 2017; Hartmann et al., 2010; Martos Martínez et al., 2021; Vachon et al., 2014).

En conclusión, la presente tesis doctoral representa un avance significativo en la comprensión de la VN, analizando las actitudes de los adolescentes hacia la VN y realizando una revisión sistemática de los programas de prevención de la VN existentes para adolescentes en riesgo. Esta revisión sistemática respondió a la escasez de estudios previos centrados en evaluar la efectividad de los programas de VN con adolescentes en riesgo y, a su vez, respondió a la investigación que destaca la importancia de dirigirse a esta población específica de forma independiente. Nuestros resultados son alentadores porque indican que estas intervenciones dirigidas a adolescentes en riesgo reducen eficazmente tanto la perpetración como la victimización de la VN. Por lo tanto, pone de relieve la importancia de saber qué funciona con los adolescentes en situación de riesgo para poder mejorar las intervenciones existentes con el fin de reducir y prevenir la VN.

En cuanto al análisis de las actitudes, la adaptación y validación de las escalas ADV-VBA y PS-ADV al contexto de la VN entre la población adolescente supone un importante avance en la comprensión de las actitudes hacia la VN. Estas dos nuevas escalas han demostrado ser fiables y válidas, por lo que permiten evaluar con suficientes

garantías las actitudes de culpabilización a la víctima y la gravedad percibida de la VN. Este tipo de herramientas permiten comprender mejor el fenómeno explorando su conceptualización, evaluación, prevalencia y factores sociales que pueden influir en estas actitudes, con el objetivo de mejorar las estrategias de prevención e intervención en el contexto de la VN. Además, estas escalas son útiles tanto para ser aplicadas a población general de adolescentes, como para la identificación de adolescentes con mayor riesgo de VN.

CHAPTER 1

Introduction

1. Dating violence

Dating violence (DV), also known as “teen dating violence” or “adolescent dating violence,” is defined as any act of physical, psychological, sexual, and/or stalking violence, committed in person or online, that occurs within a romantic relationship between teens who do not live together or share legal ties (Cascardi et al., 2018; Centers for Disease Control and Prevention [CDC], 2019; Niolon et al., 2017). This type of violence should be distinguished from intimate partner violence (IPV), which occurs in intimate relationships between adults. DV is characterized by its occurrence during adolescence, a key period during which adolescents undergo major social, physical, cognitive and emotional changes. Adolescence is defined as the period between 10 and 19 years of age (Singh et al., 2019). The romantic relationships that emerge during these years represent a completely new dynamic for adolescents. The characteristics, dynamics and typologies of violence will differ from those of adulthood, and it is therefore necessary to focus research on DV.

Adolescents often believe that certain behaviors, such as teasing or derogatory comments, are a normal part of a relationship, but these can evolve into forms of abuse and manifest as serious violence (CDC, 2019). DV encompasses a wide variety of typologies of violence that can occur in romantic relationships between adolescents, as well as different contexts and means through which abusive behaviors can occur. DV includes physical violence, which is the violence most easily identified by adolescents because it involves the use of physical force with the intent to harm the partner (Breiding et al., 2015; Gasperecz & Temple, 2023). For example, scratching, pushing, biting,

pulling hair, choking, slapping, or any other form of aggression that uses physical force. Dating sexual violence consists of forcing or attempting to force a partner to engage in sexual activity or sexual touching when the partner does not consent or is unable to consent or refuse (Niolon et al., 2017). With the increasing use of new technologies and social media, this type of violence is manifesting itself in online spaces through non-physical behaviors, such as posting a photo or sexual text messages of one's partner without their consent (Zweig et al., 2013). Psychological violence includes the use of verbal and nonverbal communication with the intent to cause mental or emotional harm and exert control over a partner, such as threatening, ridiculing, humiliating, intimidating, or ignoring (Niolon et al., 2017). This type of violence often goes unnoticed by adolescents, yet the consequences can be as severe or more severe than those of physical violence. Stalking refers to a pattern of repeated and unwanted attention by a current or former partner that causes the victim fear, anxiety, and worry (Vagi et al., 2013). This harassment can occur online, which is known as cyber DV, and includes cyber-aggression and cyber-control. It is characterized, among other behaviors, by controlling the partner by constantly sending messages or looking at a partner's cell phone without their permission (Cava et al., 2020; Fernet et al., 2019; Zweig et al., 2013).

DV has become a pervasive social problem with increasing prevalence among adolescents worldwide (Collibee et al., 2021; Vives-Cases et al., 2021; Wincentak et al., 2017). According to the World Health Organization (World Health Organization [WHO], 2021), IPV is present at increasingly younger ages: 24% of adolescent girls aged 15-19 years have experienced physical and/or sexual violence by a partner at least once in their lifetime. In the Wincentak et al. (2017) meta-analysis of the overall prevalence of physical and sexual DV among adolescents aged 13-18 years, the prevalence for physical violence was 20% and 9% for sexual violence. In addition, Wincentak et al. (2017) disaggregated the data by gender, where the prevalence of physical victimization was 21% for boys and girls, while perpetration of this type of violence was 25% for girls and 13% for boys. For sexual violence, sexual victimization was 14% for girls and 8% for boys, and perpetration was 3% for girls compared to 10% for boys. Within Europe, Vives-Cases et al. (2021) uncovered that DV victimization affected 34% of girls and 26.7% of boys aged 13-16 years. Regarding psychological DV, the prevalence stood at 28.1% for girls and 21% for boys. In Spain, Valdivia-Salas et al. (2021) reported a prevalence of 25.6% of girls and 16.9% of boys aged 11-17 years for perpetrating physical violence, and 58.8% of boys

and 73.5% of girls reported using psychological violence against their partner in the past 12 months. In terms of victimization, 59.3% of boys and 64.8% of girls reported experiencing psychological violence, and 29.2% of boys and 20% of girls reported experiencing physical violence (Esparza-Martínez et al., 2019).

In recent decades, preventive measures have been implemented worldwide to reduce the incidence of intimate partner violence against women (IPVAW) in our societies. In this regard, in 1993, the United Nations (UN) Declaration on the Elimination of Violence against Women was issued, followed in 2015 by the establishment of the UN 2030 Agenda for Sustainable Development, which includes the goal of eliminating all forms of violence against women and girls in both the public and private spheres. Also, in 2016, a Global Plan of Action was established to strengthen the health system and provide a national response to address situations of violence against women and children (WHO, 2021). It was expected that all these measures should lead to a gradual decline in incidence among younger generations. However, international prevalence data suggest otherwise (Gracia et al., 2023). To address the issue of violence against women in intimate partner relationships, and in particular at youngest ages, this thesis focuses on DV perpetrated by adolescent males against their female partners.

DV can have significant short- and long-term physical, psychological, behavioral, and social consequences for adolescents (Hossain et al., 2020; Taquette & Monteiro, 2019). These consequences may include substance abuse, anxiety, depression, post-traumatic stress disorder, poorer academic results, physical and mental health problems (Chiodo et al., 2012; Exner-Cortens et al., 2017; Greenman & Matsuda, 2016; Park et al., 2018; Ramiro-Sánchez et al., 2018; Sunday et al., 2011; Taquette & Monteiro, 2019). Other negative effects include reluctance to initiate new relationships, difficulty establishing effective communication with partners, and feelings of social isolation (Park et al., 2018). In addition, experiencing DV increases the risk of both victimization and perpetration of IPV in adulthood (Chiodo et al., 2012; Exner-Cortens et al., 2017; Fernández-González et al., 2020; Ramiro-Sánchez et al., 2018; Sunday et al., 2011).

Given the prevalence and negative consequences associated with DV, it is essential to identify the predictors and risk factors of this phenomenon (Brem et al., 2018). The risk of perpetrating DV among adolescents is increased by a number of factors (Brem et al., 2018; Leadbeater et al., 2018). At the individual level, risk factors include young

age, low educational level, mental health problems, early sexual initiation, history of DV, alcohol and other substance use, and attitudes that accept and justify violence (Duval et al., 2020; Niolon et al., 2017). At the relational level, these factors are a history of family violence, low parental control, involvement in peer violence, and poor communication skills (Capaldi et al., 2012; CDC, 2014; Heise, 2011; Lavoie et al., 2002). At the sociocultural level, high levels of gender inequality have been identified as a risk factor. Acceptance of traditional gender norms and greater male power/control in relationships have been associated with DV (Browning, 2002; CDC, 2014; Willie & Kershaw, 2020).

2. Attitudes toward dating violence

Public attitudes toward IPV are a fundamental element in understanding the social environment in which this type of violence manifests, influencing its prevalence or prevention in society (Gracia, 2014; Powell & Webster, 2018). In the area of IPV in the adult context, research highlights the importance of public attitudes toward IPV, as these are closely related to incidence rates, responses by public sector professionals, and response by victims themselves (Browning, 2002; Gracia et al., 2011; Gracia, García et al., 2009). These attitudes can influence the ways in which IPV is perceived and justified, as well as the explanations offered and the intentions to act in situations of violence (Gracia & Lila, 2015). Therefore, attitudes of both victims and perpetrators need to be addressed in intervention and prevention (García-Moreno et al., 2015).

In the adolescent population, attitudes toward DV are also an important risk factor (Bell & Bailey, 2021; Courtain & Glowacz, 2021; Leen et al., 2013; McCauley et al., 2013; Stith et al., 2004; Vagi et al., 2013). Acceptance of violence as normative behavior in adolescent romantic relationships is a risk factor of perpetration of DV (Karlsson et al., 2016; Temple et al., 2016). Existing research has indicated that adolescents who exhibit greater acceptance of DV tend to be more prone to participating in subsequent DV (Brendgen et al., 2002; Courtain & Glowacz, 2021; Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). Therefore, attitudes toward DV are crucial in explaining and understanding the behavior of both victims and perpetrators (Orozco et al., 2022). Adolescents often have difficulty recognizing abusive behaviors in their dating relationships, especially those related to controlling behaviors, such as controlling their partner's cell phone, or not allowing them to go out with their friends. There is a normalization of these behaviors, often justified by myths of romantic love or sometimes considered as a "joke". These types of beliefs and attitudes that normalize DV promote

the occurrence of this type of violence among adolescents (Caridade, 2011; Temple et al., 2016). In turn, disclosing of tolerance toward DV can evoke feelings of personal guilt and shame in adolescent victims. Consequently, this situation could lead to diminished assistance and support for them, thereby potentially reinforcing the violent actions of the perpetrator (Niolon et al., 2017).

Research in DV has focused primarily on attitudes of acceptance and tolerance of violence, but there are other types of public perceptions and attitudes, such as victim-blaming or perceived severity, that have received less attention despite being an important factor associated with issues of IPV (Gracia et al., 2020).

2.1 Victim-blaming attitudes toward victims of dating violence

Public attitudes that blame victims of violence often reflect a lack of empathy for them, creating a psychological separation between victims and those who observe them (Gracia, 2014; Kogut, 2011). These attitudes contribute to a social climate in which IPV is perceived as normative behavior (Gracia, 2014; Waltermaurer, 2012). When the reason for violence is blamed on the victims, incidents are more likely to be minimized, and makes it more acceptable behavior (Gracia et al., 2018; Waltermaurer, 2012). Therefore, victim-blaming attitudes show public tolerance for violence and, under certain circumstances, legitimize it (Gracia, 2014). These attitudes can give aggressors a sense of public support that their violence is justified, and their violent behavior can feel reinforced (Gracia, 2014; Taylor & Sorenson, 2005; Waltermaurer, 2012). The perception of who is responsible for the violence is important because it influences the public's response to these incidents of violence (Gracia, García et al., 2009; Martín-Fernández et al., 2018, 2022; Taylor & Sorenson, 2005; Waltermaurer, 2012). When victims are held responsible, their acquaintances tend to be less inclined to report this form of violence, resulting in diminished support from their informal social circle (Gracia et al., 2018; Waltermaurer, 2012).

Assessing these types of attitudes toward DV among adolescents is critical both to better understand the complex public health problem of DV and to guide policies and practices to prevent DV (Exner-Cortens, 2018; Leen et al., 2013). However, there are no validated instruments in the context of DV that focus exclusively on victim-blaming attitudes in the adolescent population. In the systematic review by Exner-Cortens et al. (2016), they collected several psychometrically tested measures of attitudes toward DV.

These included the *Attitudes Towards Dating Violence Scales* (Price et al, 1999); the *Attitudes About Aggression in Dating Situations* (Slep et al., 2001); the *Justification of Verbal/Coercive Tactics scale* (Slep et al., 2001); the *Attitudes Towards Interpersonal Violence scale* (Slep et al., 2001); the *Adolescent Attitudes Regarding Dating Relationships scale* (Davidson, 2005); the *Prescribed Norms/Normative Beliefs about Aggression scale* (Edelen et al., 2009); the *Articulated Thoughts in Simulated Situations scale* (Rayburn et al., 2007). However, existing instruments mainly measure attitudes of acceptability towards different types of violence (psychological DV, physical DV, and sexual DV). Furthermore, they have limitations as many empirical studies use measures of attitudes towards DV that are untested and do not provide further evidence of reliability beyond internal consistency (Exner-Cortens, 2018). Therefore, the number of measures with good reliability and validity is limited.

Previous research in the context of IPVAV highlights the importance of addressing victim-blaming attitudes in the adult population (Martín-Fernández et al., 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). In this context, Martín-Fernández et al. (2018) developed the *Victim-Blaming Attitudes in cases of IPVAV* (VB-IPVAV) instrument, which measures victim-blaming attitudes. This instrument is characterized by strong evidence of reliability and validity based on its content, internal structure, and relationships with other variables. It represents an important step in the study of attitudes toward IPVAV. It is also necessary to advance these types of attitudes in the context of DV with adolescent populations by developing an instrument that specifically measures these types of attitudes, as adolescents may perceive violent behaviors and DV in intimate partner relationships very differently from adults (Goldman et al., 2016).

2.2 Perceived severity of dating violence situations

Public perception of the seriousness of incidents of violence against women in relationships is an important risk factor. The perceived severity is related to important issues such as public acceptance or tolerance of violence, individuals' sense of personal responsibility, attitudes toward intervention, and the responses of the public, professionals, and victims (Gracia et al., 2020). If an incident of IPV is perceived as not serious, and only a few acts of violence are considered serious, it is more likely that this violence will be accepted and tolerated. As a result, people who are unaware of these incidents will reduce their intervention and involvement, even reducing the victim's efforts to seek help (García et al., 2009; Gracia et al., 2018; Leon et al., 2022). This can

lead to the justification of violence and reinforce the aggressor's violent behavior (Taylor & Sorenson, 2005; Waltermaurer, 2012).

Previous studies in the context of IPV have indicated that lower perceived severity is related to greater acceptability of this type of violence, as well as greater victim-blaming (Gracia & Tomás, 2014; Lila, et al., 2013; Martín-Fernández et al., 2018, 2022). These studies highlight the importance of knowing and accurately measuring perceived severity, as it could be an important step in understanding and more effectively preventing IPV. In this context, Martín-Fernández et al. (2022), validated the *Perceived Severity of IPVAW scale* (PS-IPVAW), which has robust psychometric properties for accurately assessing the perceived severity of IPVAW in the general population and IPVAW perpetrators. This measure was related to IPVAW acceptance, willingness to intervene in IPVAW cases, victim-blaming attitudes, and hostile sexism.

In the context of DV, perceived severity is associated with greater adolescent acceptance of DV, greater justification of violence toward victims, less likelihood of victims seeking help, and less bystander intervention in DV incidents (Bowen et al., 2013; Casey et al., 2017; Cho et al., 2023; Edwards et al., 2022; Rojas-Solís & Romero-Méndez, 2022; Smith et al., 2005). Therefore, adolescents who do not perceive DV as a serious problem are less likely to intervene and prevent it from recurring (Casey et al., 2017; García-Díaz et al., 2018). Previous research that has attempted to measure the perceived severity of DV has focused on qualitative studies, and this has rarely been the central focus. As a result, more research is needed to assess the perceived severity of this type of violence among adolescents (Black & Weisz, 2004; Bowen et al., 2013; Storer et al., 2020). The availability of psychometrically sound instruments is key to the accurate assessment of perceived severity. Therefore, there is a clear need to develop a psychometrically sound instrument that measures adolescents' perceived severity of DV for use in both research and interventions settings.

3. Strategies to prevent dating violence

Prevention of DV is understood as a set of interventions aimed at avoiding the occurrence and reducing the incidence of any type of abusive and violent behavior (Rivas et al., 2015). Prevention in this area focuses on educating adolescents about what constitutes a healthy and respectful relationship and on identifying violent behaviors in relationships. DV is not a problem limited to adolescent couples, it has a significant

impact on their families, communities, and society in general, which is why prevention strategies are developed that consider all the actors involved. It is critical that all of these stakeholders work together in an interconnected network, sharing a unified perspective and adhering to common principles (Rivas et al., 2015).

In this section, we will present a series of strategies for prevention of DV and support at both the individual and community levels. These include three main types of programs developed in different implementation settings and with different populations, such as the general adolescent population, adolescents at risk of DV, and adolescent witnesses of DV. In addition, the main results of previous research on the effectiveness of these interventions will be discussed.

3.1 Universal programs

Universal prevention programs target all adolescent regardless of their level of risk of experiencing DV. These programs are part of primary prevention and are therefore developed before the onset of violent behavior. This type of program has certain advantages. One of them is that by targeting all adolescents, participants are not labeled. In addition, it makes it possible to reach those who are not considered high risk and also provides support to potential victims (Rivas et al., 2015).

The main objective of these interventions is to provide education and resources to promote healthy and respectful relationships and prevent DV by reducing risk factors while increasing protective factors. The strategies used in these types of programs are to promote healthy and non-violent relationship expectations and teach skills to develop and maintain them (CDC, 2017). These strategies also include the promotion of attitudes of respect, care, and nonviolence in dating relationships and are based on socioemotional learning, i.e., skills are trained to recognize abusive relationships, assertive forms of communication or conflict resolution techniques, and information is provided on available resources to prevent DV (Temple et al., 2021; Van Lieshout et al., 2019). In general, high schools are chosen to implement these programs because they are an ideal setting to reach a large number of adolescents who are at the stage of beginning their first dating relationships (Petering et al., 2014; Wolfe et al., 2009).

The content of these programs focuses on attitudes toward DV, abusive behaviors, relationship skills development, and conflict resolution (Crooks et al., 2019; Lee & Wong, 2020). Among the prevention strategies included in these type of programs,

socioemotional learning should be highlighted, which focuses on promoting anger or stress management skills to identify and manage their own emotions and those of their partners. Communication and conflict management skills focus on teaching adolescents' skills that enable them to communicate effectively with their partners, expressing their feelings and needs in a clear and respectful manner. They also teach how to manage and resolve conflicts that may arise in a dating relationship in a healthy way, seeking solutions that promote open communication and mutual understanding. Another strategy is the promotion of gender equality, which consists of providing information on gender stereotypes and social norms that influence dating relationships. Critical reflection on how traditional gender roles contribute to DV is encouraged. Changing attitudes toward DV is a strategy that aims to dismantle ingrained beliefs about gender roles, traditionally dominant attitudes, and misconceptions of what constitutes a healthy dating relationship. Finally, healthy relationships are fostered by providing adolescents with tools on what constitutes a healthy couple relationship, which involves defining key relationship components such as assertive communication, respect, trust, and equal decision-making.

Regarding the effectiveness of these programs, research yields mixed results. In general, universal programs to prevent DV are effective in improving adolescents' knowledge of DV and increasing attitudes of rejection toward DV (De la Rue et al., 2014, 2017; Edwards & Hinsz, 2014; Fellmeth et al., 2015; Lee & Wong, 2020; Ting, 2009). However, with respect to behavioral outcomes, results vary considerably in both significance and direction of effect (Lee & Wong, 2020). Some more recent meta-analyses have shown optimistic results indicating that these programs can significantly reduce DV victimization and/or perpetration (De Koker et al., 2014; Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021; Russell et al., 2021). Examples of programs that have demonstrated effectiveness include *Safe Dates* (Foshee et al., 1998), *Fourth R: Skills for Youth Relationships* (Wolfe et al., 2009), and *Love U2* (Adler-Baeder et al., 2007). It is critical that future research continue to examine the effects of these programs given the variability in their characteristics, such as duration and content. This diversity among programs may influence their impact on different variables. In addition, it is important to evaluate these effects in both the short and long term (Lee & Wong, 2020).

3.2 Programs for at-risk adolescents

Specific programs with at-risk populations target adolescents who have a number of preexisting characteristics that place them at greater risk of experiencing or perpetrating DV due to their environmental, social, or family circumstances (Antle et al., 2011). Risk factors include exposure to violence in the home and/or community during childhood (Bell & Bailey, 2021), living in economically disadvantaged neighborhoods with high rates of poverty and crime (Gracia, Herrero et al., 2009; Niolon et al., 2015), belonging to ethnic minorities (Peskin et al., 2019), or youth in residential care who come from unstable family and social environments (Van Lieshout et al., 2019). These adolescents may have internalized behaviors based on control and dominance, which can result in perpetuating the intergenerational cycle of DV (Murphy & Blumenthal, 2000).

These secondary prevention programs provide specific interventions that focus on the needs and characteristics of these more vulnerable populations, as opposed to universal programs that have a more general focus on promoting healthy relationships. The objective of these programs is to prevent and reduce the incidence of DV through various strategies aimed at reducing specific risk factors. These strategies include providing adolescents with tools to recognize and identify early signs of abusive behaviors in dating relationships, as well as to increase awareness of the importance of consent in a dating relationship. Another strategy is to provide coping skills training through stress management techniques and the development of resilience skills. Finally, they promote assertive communication skills and peaceful, non-violent conflict resolution, and provide information in available community resources for help. To develop these strategies, a variety of interactive activities based on different methodologies are used to allow participants to practice the skills they have learned. For example, role-playing DV situations, group discussions on violence awareness, analysis of situations in which intimate partner violence occurs, and the use of video and pictures for storytelling are common. These programs typically take place in high schools, community centers, youth centers and medical centers. Examples of such programs include *Teen Choices* (Levesque et al., 2016), *Expect Respect Support Groups* (Reidy et al., 2017), and the *Youth Relationship Project* (Wolfe et al., 1996).

Programs for at-risk adolescents have received less research attention in terms of evaluating their effectiveness separately from universal programs. Although there are some systematic reviews that include secondary prevention programs for at-risk

populations (Fellmeth et al., 2015; Petering et al., 2014), most do not analyze outcomes separately for at-risk and non-at-risk adolescents (De Koker et al., 2014; De la Rue et al., 2014, 2017; Lee & Wong, 2020; Stanley et al., 2015; Ting, 2009; Whitaker et al., 2006). Piolanti and Foran's (2021) meta-analysis included a subanalysis focused on programs targeting at-risk adolescents, where they evaluated the effectiveness of these programs on physical and sexual violence variables. Their results indicated that the effect sizes for programs delivered to at-risk adolescents on these two variables were significantly larger than the effect sizes for universal interventions. Future research should persistently investigate the efficacy of interventions, considering the context, the specific characteristics of the at-risk population, and more DV's typologies of DV, to prevent unwarranted generalizations of findings (Reyes et al., 2020).

3.3 Bystander Intervention Programs

Bystander intervention programs focus on training bystanders to intervene the moment they witness abusive behaviors in intimate partner relationships in order to prevent potential harm from occurring. They assume that failure of community members to react to situations of violence contributes to the maintenance and reinforcement of these behaviors (Storer et al., 2016). Bystander education programs instruct students in identifying indicators of sexual assault and DV, as well as delineating the proper course of action when someone steps in, reports, or addresses instances of sexual assault and DV (Coker et al., 2016). To this end, the programs teach skills by following the five steps of bystander intervention (Latane & Darley, 1969). These programs teach how to identify potentially violent situations, recognize the problem, feel responsible for doing something about it, know what to do to interrupt it, and, finally, act to try to prevent or stop it.

The overall goals of these programs are to increase the likelihood of interrupting specific situations of violence or abuse and to foster an adolescent and community environment that rejects violent or disrespectful behavior toward women (Storer et al., 2016). Bystander programs have generally targeted the general population of adolescents in high school and young adults in college (Ahrens et al., 2011; Banyard et al., 2007; Coker et al., 2011). Programs have also been developed for specific groups of adolescents, such as athletes or members of fraternities and sororities (Moynihan & Banyard, 2008; Moynihan et al., 2011). In summary, bystander intervention programs address risk factors associated with adolescent sexual and DV, such as norms and attitudes that condone or justify violence against women (Heise, 1998; Prothrow-Stith & Davis, 2010). In addition,

they promote participants' skills to act safely in the face of inappropriate peer behavior (Storer et al., 2016).

Research on these types of programs has focused on evaluating the impact of these programs on sexual violence and DV (Casper et al., 2021). Evaluations focused on sexual violence have shown mixed results in terms of its reduction. Some results showed that these programs are effective in preventing sexual violence (Degue et al., 2014), while other studies indicated null or mixed effects on this variable (Kettrey & Marx, 2019; Mujal et al., 2019). When it comes to DV, these programs could be effective in reducing DV perpetration and victimization (Coker et al., 2017; Edwards et al., 2019). Two examples of programs developed in educational settings that obtained a significant reduction in DV perpetration and victimization are *Green Dot* and *Bringing in the Bystander* (Coker et al., 2017; Edwards et al., 2019).

In summary, bystander intervention programs have generally focused primarily on sexual violence prevention rather than DV prevention in general. In addition, few studies measure the long-term effects of these interventions. Future research should also focus on bystander behavior in the face of physical or psychological DV (Debnam & Mauer, 2021), as well as assessing the impact of these programs in both the short and long term (Brem et al., 2018).

In conclusion, this doctoral thesis attempts to respond to two specific problems in the context of DV. The first problem has to do with DV prevention programs aimed specifically at adolescents at risk of suffering and/or experiencing this type of violence. It is essential to know the characteristics of these types of programs and to evaluate their effectiveness independently of programs aimed at the general adolescent population. Studying these programs will be key to understanding what works with this specific population in order to develop future strategies for improvement. The second issue addressed in the thesis refers to the attitudes of adolescents towards DV. In general, attitudes are a central part of DV interventions, but they usually focus only on acceptance attitudes, leaving aside other public attitudes that can have a great impact on DV concurrence. In the absence of studies in the literature focusing on other public attitudes toward DV, this thesis will adapt and validate two measures to assess two types of attitudes toward DV in the adolescent population. In addition, a short version of one of

the scales is provided, which may be useful for conducting large population-based surveys.

CHAPTER 2

Objectives

The present thesis addresses two main objectives. The first objective is to learn about existing DV prevention programs for at-risk adolescents and to evaluate their effectiveness. The second objective is to analyze different types of public attitudes toward DV among adolescents by validating measures to the adolescent population that are psychometrically adequate, i.e. that are reliable and show evidence of validity.

Objective 1

The first objective is to learn about and evaluate the effectiveness of existing DV prevention programs aimed at adolescents at risk of suffering and/or experiencing this type of violence. To this end, a systematic review and meta-analysis of this type of program will be conducted, and the effectiveness of the programs on the variables of physical, psychological, and sexual DV, and attitudes toward DV, and on composite measures of perpetration and victimization of DV (physical, psychological, sexual and cyber DV) will be evaluated. This objective will be developed in Study 1:

- Study 1: Arrojo, S., Santirso, F. A., Lila, M., Gracia, E., & Conchell, R. (2024). Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 74, 101893. <https://doi.org/10.1016/j.avb.2023.101893>

Objective 2

The second objective focuses on providing new measures to assess two types of public attitudes of adolescents toward DV. To measure victim-blaming attitudes, the victim blaming scale for adult victims in IPVAW cases (VB-IPVAW; Martín-Fernández

et al., 2018) is going to be adapted and validated to adolescent population. To measure perceived severity toward DV, the objective is to adapt and validate the IPVAW Perceived Severity Adult Scale (PS-IPVAW; Martín-Fernández et al., 2022) to adolescent population.

Specifically, the studies to develop this second objective are as follows:

- Study 2: Arrojo, S., Martín-Fernández, M., Conchell, R., Lila, M., & Gracia, E. (2024). Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale. *Journal of Interpersonal Violence*, 08862605241245999. <https://doi.org/10.1177/08862605241245999>
- Study 3: Arrojo, S., Martín-Fernández, M., Lila, M., Conchell, R., & Gracia, E. (2024). The perceived severity of adolescent dating violence (PS-ADV) scale: A validation study. *The European Journal of Psychology Applied to Legal Context*, 16(1), 27-36. <https://doi.org/10.5093/ejpalc2024a3>

3

CHAPTER

Method

This chapter provides an overview of the methodology used in the three different studies that make up this doctoral thesis. Study 1 consisted of a systematic review synthesizing studies of DV programs for at-risk adolescents. Studies 2 and 3 consisted of methods for adapting and validating the *Adolescent Dating Violence Victim-Blaming Attitudes Scale* (ADV-VBA) and the *Perceived Severity of Adolescent Dating Violence* (PS-ADV).

1. Systematic review

The systematic literature review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations (Moher et al., 2009). It was duly registered in the International Prospective Register of Systematic Reviews (PROSPERO 022: CRD42022308245). A systematic search of the literature was carried out using databases such as the Web of Science, PsycINFO, and Scopus. An extensive search was conducted in September 2020, and the same search was repeated in December 2021. Consequently, the searches spanned from the earliest record to December 2021. The search strategy combined terms related to DV, at-risk adolescents, intervention programs, and their contexts of application.

Regarding inclusion criteria, we considered the following conditions: 1) studies published in peer-reviewed journals; 2) randomized controlled trials (RCTs) or quasi-experimental studies; 3) the target population consisted of adolescents (under 18 years of age) identified as being at high risk for DV victimization or perpetration (Antle et al., 2011); 4) the intervention explicitly aimed to prevent DV; and 5) the intervention had

follow-up periods exceeding one month. No restrictions were imposed based on language or date of publication. In the process of identifying studies that fulfilled the eligibility criteria, SA and FS conducted independent screenings of articles based on their titles and abstracts. Subsequently, the full texts of all potentially eligible articles underwent independent assessment by SA and FS. Any discrepancies in reviewer decisions were resolved through discussions and consensus involving additional reviewers (ML, EG, and RC).

For data extraction, studies selected for inclusion were extracted independently by two authors (FS and SA). Specifically, information on authors, country, publication year, participants, study design, follow-up, intervention (for both experimental and comparison groups), outcomes and results were extracted. In addition, with regard to the results, we identified the study variables that specifically assessed aspects related to DV. Additionally, we determined whether disparities existed between the control and experimental groups by focusing on the longest follow-up duration. A third reviewer (RC, EG or ML) verified these data, and discrepancies were resolved by discussion.

The risk of bias of the studies included in the systematic review was assessed by two independent authors (FS and SA). For RCTs, the Revised Cochrane risk-of-bias tool for randomized trials (RoB2; Sterne et al., 2019) was used. This tool includes an assessment of potential bias in five domains: the randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported results. In the context of quasi-experimental studies, we employed the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Quasi-Experimental Studies (Aromataris & Munn, 2020). The checklist comprises nine questions that pertain to various domains, including the comparison group, measurement reliability, and appropriateness of statistical analyses. In cases of disagreement, all co-authors (ML, EG, and RC) engaged in discussions to achieve consensus.

An inverse variance random-effects model (DerSimonian & Laird, 1986) was employed to conduct a meta-analysis using Review Manager Version 5.4. The outcomes were represented using odds ratios (ORs) or standardized mean differences (SMDs), along with 95% confidence intervals (CIs). In certain studies, the data were reported as continuous variables, while in other studies, they were categorized as dichotomous outcomes. In order to facilitate data aggregation for comparative analysis, the SMDs and

ORs were transformed into logarithmic ORs according to Chinn (2000). This conversion was carried out utilizing the Comprehensive Meta-Analysis software, specifically version 4.0.000 (Biostat). The Galbraith plot method was used to conduct the publication bias analysis (Galbraith, 1988). The presence of statistical heterogeneity among the studies was evaluated by employing the I-squared (I^2) statistic. Specifically, we categorized I^2 values as follows: 25% indicated low heterogeneity, 50% denoted moderate heterogeneity, and 75% signified substantial heterogeneity (Higgins et al., 2003). In order to examine the attributes of the studies related to the combined score of DV perpetration, the combined score of DV victimization, and attitudes toward DV, we conducted exploratory subgroup analyses and meta-regression analyses. We performed subgroup analyses based on the study type (RCTs vs. non RCTs) and intervention duration (less than 12 hours vs. 12 hours or more). Additionally, we conducted meta-regression analyses for continuous variables, specifically examining follow-up duration and the risk of bias.

2. Method for adapting and validating scales

2.1 Participants

The participants selected for Studies 2 and 3 were high school students between the ages of 12 and 18. At the time of the study, they were enrolled in Compulsory Secondary Education, Baccalaureate or Technical and Vocational Education. In both Study 2 and Study 3, data collection employed a two-stage stratified cluster sampling method. Initially, we selected both public and private secondary schools within the Valencia region of Spain. Three public and three private high schools were selected from among all the schools. Second, five groups were randomly selected from each school. This process was carried out in both Studies 2 and 3.

Two samples were used in both studies. Study 2 used a first sample to evaluate the psychometric properties of the ADV-VBA scale, and a second sample to adapt the short scale version. In Study 3, we initially assessed the psychometric properties of the PS-ADV using the first sample. Subsequently, we evaluated the measurement invariance of the scale across different genders using a second sample.

2.2 Measures

The following is a brief description of the various instruments used in the Studies 2 and 3. Each of these instruments will be the subject of a more detailed discussion in the Studies chapter.

Sociodemographic data. These data included age, gender, nationality, the name of their high school, their current course, socio-economic level, and whether they currently have a partner. [Study 2 and 3].

The Adolescent Dating Violence Victim-Blaming attitudes Scale (ADV-VBA). We adapted and validated the Victim-Blaming Attitudes in Cases of IPVAV (VB-IPVAV; Martín-Fernández et al., 2018) to adolescent population in the context of DV. This measure consists of 12 items that assess the extent to which participants blame the victim for the violence. Participants used a 4-point Likert-type scale to express their agreement level with the item statements (0 = *strongly disagree*, 3 = *strongly agree*). [Study 2].

Perceived Severity of Adolescent Dating Violence Scale (PS-ADV). We adapted and validated to the adolescent population the Perceived Severity of IPVAV (PS-IPVAV; Martín-Fernández et al., 2022). The instrument consists of seven items showing different DV scenarios. Participants are required to assess the severity of each scenario using a scale ranging from 0 to 10, where higher numbers indicate greater severity. [Study 3].

Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996). The Spanish adaptation for adolescents was used (Lemus et al., 2008). This instrument includes two subscales, hostile and benevolent sexism, each comprising 10 items with a 6-point Likert-type response format (1 = *strongly disagree*, 6 = *strongly agree*). [Study 2 and 3].

Interpersonal Reactivity Index, Brief Form (IRI; Davis, 1980; Ingoglia et al., 2016). The Spanish version of the instrument was used (Carrasco et al., 2011). The abbreviated version of the IRI consists of 10 items and the following subscales: a) empathic concern; b) perspective taking; c) personal distress; and d) fantasy. The response format is a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). [Study 3].

Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). The Spanish version of this instrument was used (Fernández-Fuertes et al., 2006). Two subscales of the instrument were used, the physical abuse (4 items) and the verbal-emotional abuse (9 items). The 4-choice Likert-type response format assesses the

frequency of conflicts experienced by the intimate partner within the past 12 months (0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*). [Study 2].

2.3 Procedure

A face-to-face survey was designed to collect data in the high schools that participated in Studies 2 and 3. Prior to the data collection, a meeting took place with the teachers from each high school. The purpose of this meeting was to communicate the study's objectives and the variables that would be assessed. Then, between November 2021 and May 2022, the questionnaires were distributed and the data were collected. Before distributing the survey, participants received information regarding the study's objectives and the confidentiality of their data. The studies were approved by the Experimental Research Ethics Committee of the University of Valencia.

2.4 Data analysis

The present thesis adapts and validates two different measures of public attitudes toward DV (victim-blaming and perceived severity). The validation analyses of the instruments conducted in Studies 2 and 3 are detailed below.

2.4.1 Evidence of validity based on test content

Evidence of test content validity includes analyses conducted to determine whether the content of the items in a test adequately represents the construct being measured. This involves assessing whether the items adequately cover all aspects of the construct and whether they are relevant to the construct.

To adapt the items of the ADV-VBA and PS-ADV scales, we started with the items selected by Martín-Fernández et al. (2018, 2022) in their VB-IPVAW and PS-IPVAW scales, which aim to measure public attitudes related to IPV in the adult population. To adapt the scales, in both Study 2 and Study 3, a group of four experts in IPV and DV reviewed the items to modify them for DV adaptation. First, two experts modified the wording of the items to use vocabulary more familiar to adolescents. The clarity and representativeness of the items were evaluated by the other two experts for assessing the construct. Second, all experts discussed the items in a focus group, which led to the final version of both scales.

The ADV-VBA scale, like the adult scale, consisted of 12 items with 4-point Likert-type item response format in which participants were requested to express their

agreement level with the statements in the items (0 = *strongly disagree*, 3 = *strongly agree*). The PS-ADV scale consisted of 7 items with a Likert-type response format where respondents rated the severity of each scenario on a scale from 0 to 10 (the higher the number, the more severe the scenario).

2.4.2 Validity evidence based on internal structure

Analyses aimed at examining the latent structure and internal consistency of a scale are considered a source of validity based on its internal structure. These analyses make it possible to determine the accuracy of the measures obtained in each scale, the number of dimensions they cover, and whether the constructs they assess have empirical evidence and theoretical coherence.

Descriptive analysis and internal consistency

In Study 2 and Study 3, a descriptive analysis was performed by calculating the mean of the item responses, the standard deviations, and the skewness and kurtosis statistics. This descriptive analysis provided important information about the characteristics of the sample and the distribution of responses to the items of the scales.

For the internal consistency of the scales, Cronbach's alpha and the corrected correlations between each item and the rest of the test were calculated. In Study 2, internal consistency was also assessed using McDonald's Omega. These analyses help to determine the extent to which each item contributes to the internal reliability of the scale and whether it is necessary to discard any of them.

Latent structure

The latent structure of the ADV-VBA and PS-ADV scales was assessed by confirmatory factor analysis (CFA). The one-factor model identified in the original scales with adult populations was replicated (Martín-Fernández et al., 2018, 2022). In Study 2, mean- and variance-adjusted weighted least squares estimation was used because this method provides accurate parameter estimates when dealing with categorical data (Li, 2016). In Study 3, robust maximum likelihood (MLR) was used as the estimation method, which ensures accurate parameter estimates even when dealing with non-normally distributed data (Bandalos, 2014; Yılmaz, 2019). To evaluate the goodness of fit of the model, a combination of fit indices was employed in both studies: comparative fit index (CFI) and Tucker-Lewis index (TLI) values equal to or greater than 0.95, and root mean

square error by approximation (RMSEA) values equal to or less than 0.06, 0.08, and 0.10 were considered excellent, good, and fair fit, respectively (Hu & Bentler, 1999).

Differential item functioning and the Item Response Theory

In the second study of the thesis, we conducted a differential item function (DIF) analysis to test whether the scale items were gender invariant. DIF examines whether the items measure the construct being assessed in the same way across groups or whether there are differences in how the groups respond to the items. For this purpose, we employed ordinal logistic regression method to analyze polytomous items (Crane et al., 2006; French & Miller, 1996). With this method, it is possible to determine the existence of non-variance items between groups and whether this source of non-variance is constant (uniform DIF) or whether it varies along the latent trait continuum (non-uniform DIF). Following that, we applied Samejima's (1969) graded response model and evaluated the model's goodness of fit using the C2 statistic (Monroe & Cai, 2015). This process allowed us to estimate the items response theory (IRT) scores for the scale.

Measurement Invariance

In the third study, we assessed scale measurement invariance as a function of gender using a second sample and conducted a multigroup CFA. In addition, we conducted tests of configurational, metric, and scale invariance (Putnick & Bornstein, 2016). Configurational invariance tests whether participants conceptualize the construct similarly, ensuring that the same factor structure can be applied to boys and girls. Metric invariance examines whether the factor loadings of items are equivalent across both boys and girls, as well as whether the items have comparable relevance for both genders. Scalar invariance tests whether the same response pattern produces the same factor scores for boys and girls by setting item loadings and intercepts to the same value in all groups. Robust maximum likelihood (MLR) was used as the estimation method, and all models were compared using the log likelihood ratio test (LRT) along with Cheung and Rensvold's (2002) guidelines for continuous data.

2.4.3 Validity evidence based on the relationship with other constructs

Evidence of validity based on relationship to other variables includes criterion validity and predictive validity. Criterion validity includes any analysis that seeks to determine whether the concept being assessed correlates with other theoretically relevant

constructs. Predictive validity, on the other hand, assesses the ability of a measure to reliably predict future behavior in a given situation or context.

In Study 2, criterion-related validity was examined by correlating ADV-VBA scores with scores on the hostile and benevolent sexism subscales. To assess predictive validity, two structural equation modeling (SEM) analyses were conducted. These analyses included victim-blaming, gender, nationality as predictors of DV perpetration and victimization. For these SEM analyses, only responses from participants who indicated that they were currently or previously in a dating relationship.

In Study 3, to assess validity evidence for the PS-ADV scale, factor scores were used to analyze the relationship of perceived severity to other attitudinal constructs to DV, such as victim-blaming attitudes, ambivalent sexism, and empathy.

2.4.4 Methods for the abbreviated form of the scales

Study 2 of this thesis presents a brief version of 5 items of the ADV-VBA scale. For the selection of these items, the most relevant ones were chosen according to their internal consistency, the estimated factor models, and the experts' rating of the items' content. We assessed the psychometric properties of the selected items by analyzing their internal consistency statistics. Additionally, we examined criterion-related validity by investigating the correlation between the scale scores and ambivalent sexism. Furthermore, we explored the relationship between the full ADV-VBA and a brief five-item version.

CHAPTER 4

Studies

This chapter presents the three studies that have been conducted and that constitute this doctoral thesis. Each of the studies includes an introduction, method, results, discussion, and conclusions. These three studies have been published in journals indexed in JCR and SJR, fulfilling the requirements for the thesis by compendium of publications. Below are the references for each of the studies:

- Study 1: Arrojo, S., Santirso, F. A., Lila, M., Gracia, E., & Conchell, R. (2024). Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 74, 101893. <https://doi.org/10.1016/j.avb.2023.101893>
- Study 2: Arrojo, S., Martín-Fernández, M., Conchell, R., Lila, M., & Gracia, E. (2024). Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale. *Journal of Interpersonal Violence*, 08862605241245999. <https://doi.org/10.1177/08862605241245999>
- Study 3: Arrojo, S., Martín-Fernández, M., Lila, M., Conchell, R., & Gracia, E. (2024). The perceived severity of adolescent dating violence (PS-ADV) scale: A validation study. *The European Journal of Psychology Applied to Legal Context*, 16(1), 27-36. <https://doi.org/10.5093/ejpalc2024a3>

STUDY 1

Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis¹

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Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis

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Abstract

Dating violence (DV) is a social problem that affects adolescents worldwide. Previous systematic reviews have mainly examined universal prevention programs with varying designs and outcomes. The lack of systematic reviews focusing on at-risk adolescents limits knowledge about which interventions are more effective. This systematic review synthesizes studies of DV programs for at-risk adolescents. The following databases were searched: PsycINFO, Scopus, and Web of Science. A total of 5663 studies were identified; 17 were included in the systematic review and 11 in the meta-analysis. Randomized control trials and quasi-experimental studies with a follow-up longer than a month were included. When types of DV were analyzed separately, the results showed decreases in physical and sexual violence perpetration and physical DV victimization, but not significant changes in psychological and sexual violence victimization, psychological violence perpetration and attitudes toward DV were found. When composite scores were used (including all types of DV), significant reductions in DV victimization and perpetration were found. This systematic review and meta-analysis are the first to focus on at-risk adolescents and assess physical, psychological, sexual and cyber DV and attitudes toward DV. Examining existing programs is key to understanding what works for at-risk adolescents and improving their effectiveness.

Keywords: dating violence, adolescent, risk factors, systematic review, meta-analysis

1. Introduction

Adolescent dating violence (DV) refers to any act of physical, psychological, sexual violence, and/or stalking carried out in person or online, within an affective and/or intimate relationship (Cascardi et al., 2018; Centers for Disease Control and Prevention, 2019; Niolon et al., 2017). DV is a social problem that affects adolescents worldwide (Fellmeth et al., 2013; FRA, 2014; Wincentak et al., 2017). The global prevalence of physical and sexual violence among adolescents aged 13 to 18 years, according to the meta-analysis carried out by Wincentak et al. (2017), is 20% and 9%, respectively. The World Health Organization (2021) highlights the high prevalence of intimate partner violence (IPV) in younger ages—24% of adolescents aged 15–19 have experienced physical and/or sexual violence by their partner at least once in their lifetime. In the United States, 26% of girls and 15% of boys who have been victims of DV experienced some type of violence before the age of 18 (CDC, 2019). In Europe, Vives-Cases et al. (2021) reported a prevalence of DV victimization of 43.1% in girls and 26.7% in boys aged 13-16 years. DV is associated with a range of negative consequences that affect adolescents' health and well-being (Hossain et al., 2020; Taquette & Monteiro, 2019; Wincentak et al., 2017) such as substance use, anxiety, depression, post-traumatic stress disorder, poorer academic results, physical problems, and psychological problems (Chiodo et al., 2012; Exner-Cortens et al., 2017; Greenman & Matsuda, 2016; Park et al., 2018; Ramiro-Sánchez et al., 2018; Sunday et al., 2011; Taquette & Monteiro, 2019). Other negative consequences are fear of starting a new relationship, difficulty in establishing good communication with the partner, and isolation (Park et al., 2018). Furthermore, DV increases the risk of victimization and perpetration of IPV in adult life (Chiodo et al., 2012; Exner-Cortens et al., 2017; Fernández-González et al., 2020; Ramiro-Sánchez et al., 2018; Sunday et al., 2011).

Universal prevention programs are a typical approach to prevent this type of violence (Petering et al., 2014; Reyes et al., 2020; Whitaker et al., 2006; Wong et al., 2023). These programs are mostly implemented in schools because the school environment allows access to a large number of adolescents who are at the stage where dating relationships begin (Foshee et al., 2005; Petering et al., 2014; Whitaker et al., 2006; Wolfe et al., 2009). These prevention programs usually target abusive attitudes and behaviors, and promote conflict resolution strategies and healthy behaviors (Lee & Wong,

2020; Petering et al., 2014). However, not all adolescents are at the same risk of DV victimization and perpetration.

Several factors increase the risk of DV victimization and/or perpetration among adolescents (Brem et al., 2018; Leadbeater et al., 2018). Exposure to violence during childhood at home and/or in their community has been linked to an increased risk of being involved in a violent relationship during adolescence (Bell & Bailey, 2021; Crooks et al., 2011; Exner-Cortens et al., 2013; Goncy, 2020; Goncy et al., 2021; Leviton et al., 2015; Wolfe et al., 2003). For example, in a longitudinal study of adolescents who had experienced violence in childhood, 14.5% reported having experienced DV and only 2.9% did not have a history of violence (Huefner et al., 2007). Living in economically-disadvantaged neighborhoods (e.g., high rates of poverty and crime, and concentration of ethnic minorities) has also been associated with exposure to DV (Henry & Zeytinoglu, 2012; Johnson et al., 2015; Niolon et al., 2015). Ethnic minority adolescents are considered at high risk (e.g., African American and Hispanic adolescents in the USA) because they are more likely to be affected by DV than adolescents who do not belong to these groups (Champion et al., 2008; Haynie et al., 2013; Peskin et al., 2014; Peskin et al., 2019; Simón et al., 2010). Furthermore, adolescents in residential care are at higher risk of DV perpetration and victimization, as these adolescents usually come from unstable familial and social backgrounds, have more emotional and behavioral problems, and have greater exposure to domestic violence and crime (Van Lieshout et al., 2019). According to Antle et al. (2011), these "at-risk youth" are defined as youths who have a number of prior characteristics that place them at higher risk of victimization or future DV perpetration due to their environmental, social or family circumstances. However, secondary prevention programs that target adolescents at risk of DV victimization and perpetration are scarce. For example, in the meta-analysis carried out by Fellmeth et al. (2015), only four of the 33 studies reviewed targeted high-risk adolescents.

Regarding the effectiveness of DV prevention programs, in general, meta-analyses suggest that they improve knowledge and attitudes toward DV (De la Rue et al., 2014, 2017; Edwards & Hinsz, 2014; Fellmeth et al., 2015; Lee & Wong, 2020; Ting, 2009). However, few meta-analyses have found significant reductions in adolescents' DV perpetration or victimization (De Koker et al., 2014; Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021; Russell et al., 2021). Although some systematic reviews include secondary prevention programs that target specific high-risk groups

(Fellmeth et al., 2015; Petering et al., 2014), the majority do not distinguish between at-risk and not-at-risk adolescents (De Koker et al., 2014; De la Rue et al., 2014, 2017; Lee & Wong, 2020; Stanley et al., 2015; Ting, 2009; Whitaker et al., 2006). Some systematic reviews even exclude programs that target at-risk populations (i.e., they only analyze universal programs; De Koker et al., 2014; Lee & Wong 2020; Whitaker et al., 2006). However, the recent meta-analysis by Piolanti and Foran (2021) showed the results of specific programs developed with adolescents at risk of DV by focusing on physical and sexual violence. Recently, Reyes et al.'s (2020) systematic review on DV prevention programs highlights the importance of analyzing intervention effectiveness according to the context and characteristics of the targeted population to avoid the generalization of results. In this regard, Reyes et al. (2020) have pointed out that programs that target specific adolescent populations are scarce even though research has shown that certain groups are at increased risk of DV victimization and/or perpetration.

To date, there has been no systematic review that collects only DV programs that focus specifically on adolescents at risk of DV. Although the meta-analysis by Piolanti and Foran (2021) provides independent results for the subgroup of at-risk adolescents, it focuses only on physical and sexual violence, without including other types of violence. Therefore, the present study aims to conduct a systematic review and meta-analysis of existing prevention programs that target adolescents at risk of DV by analyzing physical, psychological, sexual and cyber violence and attitudes toward DV. To this end, randomized controlled trials (RCTs) and quasi-experimental studies were considered because it is not always feasible to conduct RCTs in this context and with this population due to the difficulty of random assignment.

2. Method

A systematic review of the literature was undertaken in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations (Moher et al., 2009) and registered with the International Prospective Register of Systematic Reviews (PROSPERO 022: CRD42022308245).

2.1 Search strategy

A systematic search was conducted by searching the following databases: Web of Science, PsycINFO, and Scopus. Search terms were identified by conducting a thesaurus-based search in each database and through scoping searches identifying keywords on the topic of DV. There were no restrictions on language or date of publication. The search was carried out in September 2020 and the same search was done again in December 2021. Thus, searches were conducted from the first record to December 2021. The sensitive specific search strategy was developed through an iterative process and included the following terms: (aggress* OR violence OR “sexual harassment” OR rape) AND (dating OR partner* OR courtship OR date) AND (adolescen* OR youth* OR girl* OR boy* OR juvenile* OR “emerging adulthood” OR young OR teen*) AND (correctional OR residential OR “young offender institutions” OR “youth services” OR “youth care” OR school OR community OR at-risk OR high-risk) AND (program* OR intervention* OR prevent* OR evaluation). We complemented the electronic search by backward and forward searching of references from the included studies.

2.2 Search strategy

The inclusion criteria were as follows: 1) studies published in peer-reviewed journals; 2) RCTs or quasi-experimental studies; 3) the target population was adolescents (under 18 years of age) who had been identified as being at high risk of DV victimization or perpetration (Antle et al., 2011); 4) a stated aim of the intervention was to prevent DV; and 5) the intervention had follow-up periods of more than one month. To identify studies that met the eligibility criteria, SA and FS independently screened the articles by title and abstract. The full texts of all potentially eligible articles were independently assessed (SA and FS), and discrepancies in reviewer decisions were resolved by discussions and consensus with additional reviewers (ML, EG, and RC).

2.3 Data extraction

Two authors (FS and SA) independently extracted data from all studies selected for inclusion. Data extracted included authors, publication year, country, participants (risk factors, % boys, and age range), design, follow-up, intervention (experimental and comparison group), outcomes, and results (Table 1.1). For the intervention, the name was indicated and the program developed in the experimental group was briefly described. It

was also indicated whether or not there was an intervention in the control group. For those control groups with interventions, the name and a brief description of the intervention were provided. The type of study (RCT and quasi-experimental) and the follow-up of each study were extracted. Most studies reported on the follow-up that was conducted, and used the time at which the intervention was completed as the reference point. Other studies took the baseline and provided the follow-up time thereafter as a reference. Finally, only one study reported the follow-up period with information about the post-enrolment period. As for the results, we selected the study variables that measured aspects directly related to DV, and indicated whether there were differences between the control and experimental groups by selecting the longest follow-up period. A third reviewer (RC, EG or ML) verified these data, and discrepancies were resolved by discussion.

2.4 Risk of bias of studies

Two authors (FS and SA) independently assessed the risk of bias for each included study. Disagreements were discussed with the additional authors (ML, EG, and RC) to reach a consensus. For the RCTs, the Revised Cochrane risk-of-bias tool for randomized trials (RoB2; Sterne et al., 2019) was used. This tool involves the evaluation of potential bias across five domains: randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported results. An algorithm was used to answer a series of questions for each domain, which was then judged as having low risk, some concerns, or a high risk of bias. For quasi-experimental studies, the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Quasi-Experimental Studies (Aromataris & Munn, 2020) was used. This checklist comprises nine questions related to domains such as the comparison group, reliability of measures, or appropriateness of statistical analyses. Possible response options are unclear, yes, no, or not applicable.

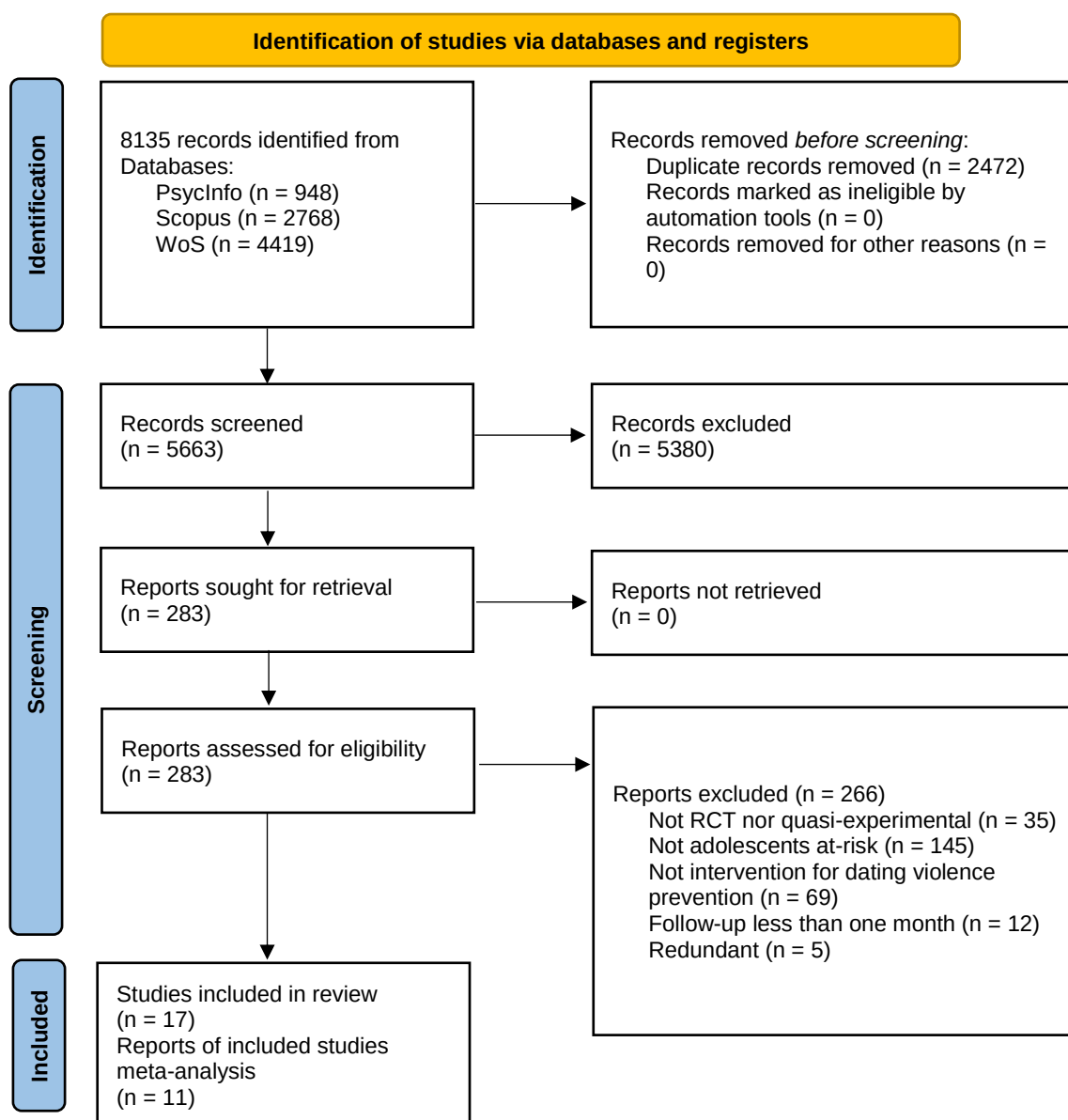
2.5 Statistical analyses

A meta-analysis using an inverse variance random-effects model (DerSimonian & Laird, 1986) was performed with the software Review Manager Version 5.4. The main analyzed outcomes were self-reported physical, psychological, sexual, and cyber DV perpetration and victimization, as well as attitudes toward DV. Perpetration and victimization outcomes were examined separately (i.e., depending on the type of violence) and were also combined into two scores: a composite score of DV perpetration

and a composite score of DV victimization. It should be noted that, although cyber DV perpetration and victimization were included in the composite scores, these scores could not be analyzed separately due to the few studies that examined these outcomes. Outcomes were expressed as odds ratios (ORs) or standardized mean differences (SMDs) with 95 % confidence intervals (CIs). Data were presented as continuous in some studies, and as dichotomous in other studies (e.g., the percentage of participants who experienced or perpetrated violence during the follow-up period). To pool the data for comparison purposes, the SMDs and ORs were re-expressed as logarithmic ORs (Chinn, 2000) using the Comprehensive MetaAnalysis software, version 4.0.000 (Biostat). One study included in the meta-analysis had two intervention groups: the first intervention group directly received the intervention; the second group was recruited by the members of the first group and received the intervention through knowledge transfer (Ritchwood et al., 2015). In this case, we made comparisons between the combined intervention group (including both the first and second intervention groups) and the control group. When studies independently assessed attitudes toward boy-against-girl and girl-against-boy DV, scores were combined to obtain a single effect size. To avoid differences in the baseline from biasing the analysis of the results from the intervention, and when studies reported baseline scores, data were entered as the mean difference from the baseline and the SD of this mean difference for the intervention and control groups (Borenstein et al., 2021) and were re-expressed as logarithmic ORs. If studies had more than one follow-up period, the data from the longest follow-up period were included to capture any long-term effects (Cuzick, 2023). The Galbraith plot method was utilized to perform the publication bias analysis (Galbraith, 1988). Statistical heterogeneity between the studies was assessed using the I-squared (I^2) statistic. I^2 of 25 %, 50 %, and 75 % were considered low, moderate and high, respectively (Higgins et al., 2003). To assess the characteristics of the studies associated with the composite score of DV perpetration, the composite score of DV victimization and attitudes toward DV, exploratory subgroup and meta-regression analyses were carried out. Subgroup analyses were conducted depending on the type of study (RCT vs. non RCT) and intervention length (< 12 h of intervention vs. 12 h or more). Meta-regression analyses were computed for the continuous variables, which included the follow-up length and the risk of any bias.

3. Results

Database searches yielded 8135 potentially relevant articles. Once duplicates were removed, a total of 5663 articles remained. These were screened against inclusion and exclusion criteria by title and abstract, of which 283 were selected for full-text reviews. Of these, 266 articles were excluded for the following reasons: they were not RCTs or quasi-experimental studies ($n = 35$); the interventions did not target adolescents identified as being at elevated risk of DV ($n = 145$); the interventions were not aimed at preventing DV ($n = 69$); they presented follow-up periods of less than one month ($n = 12$); and they were redundant (i.e., studies using the same dataset or erratum) ($n = 5$). The remaining seventeen articles met the full inclusion criteria and were included in the qualitative analysis. Of these, eleven studies had suitable data for inclusion in the meta-analysis (Studies 4, 5, and 7 to 15) (see Table 1.2). Fig. 1.1 shows the PRISMA flowchart of the study selection process.

Figure 1.1. Flow Diagram

3.1 Qualitative analysis

The majority of the recruited trials were implemented in the United States ($n = 15$; Studies 1 to 14 and 16), one in the Netherlands (Study 15), and one in Canada (Study 17). The articles were published from 2003 (Study 17) to 2021 (Study 14). The characteristics of the studies presented below are described in Table 1.3.

The risk characteristics of the population varied among the studies. There were adolescents who had previously experienced DV ($n = 3$, Studies 1, 7, 13), adolescents who had been exposed to DV in childhood ($n = 4$, Studies 3, 11, 15, 17), youths living in disadvantaged neighborhoods ($n = 4$, Studies 2, 8, 12, 16), adolescents belonging to ethnic

minorities ($n = 4$, Studies 5, 9, 10, 14), and adolescents in residences who had previously experienced violence and had an unstable family environment ($n = 2$, Studies 4, 6).

Most trials targeted both boys and girls ($n = 14$, Studies 1 to 5, 7 to 12, 14, 16 and 17). Only two trials were implemented with girls (Studies 6, 13) and one targeted only boys (Study 15). The total sample of participants ranged from 68 (Study 15) to 3301 (Study 16). The treatment group sample size ranged from 22 (Study 15) to 1662 participants (Study 16). The sample of the control group ranged from 23 (Study 4) to 1639 participants (Study 16). There was one trial that did not provide information on the numbers of participants in the control group (Study 3).

Of the 17 articles included (see Table 1.1) 12 were RCTs (70.59 %; Studies 1, 2, 3, 5, 7, 9, 10, 13, 14, 15, 16, 17) and five were quasi-experimental (29.41 %; Studies 4, 6, 8, 11, 12). Two of the trials used two treatment groups and one comparison group (Studies 1, 12). For the control groups, there were trials in which the participants in these control groups received no intervention ($n = 5$; Studies 1, 2, 3, 12, 15). Of those who received some type of intervention, some received interventions other than the treatment group ($n = 4$; Studies 7, 8, 13, 16), others received usual health education as part of the academic curriculum in the USA ($n = 5$; Studies 5, 9, 10, 11, 14), one received the usual treatment in the residence where the program was conducted (Study 4) and another received the usual treatment mandated by Child Protective Services (Study 17). There was one trial in which the same program was developed for the experimental and control groups, but with different methodologies (Study 6).

Follow-up length varied between trials. There were eight trials with follow-up from the baseline. There was one trial with follow-up at 6 months from the baseline (Study 15), another at 9 months (Study 8), several trials with follow-up at 12 months ($n = 4$; Studies 1, 7, 10, 11), another at 24 months (Study 9) and, finally, one trial at 30 months (Study 16). Furthermore, nine trials had follow-up after the intervention. The shortest follow-up was 5 months (Study 2), and the longest was 16 years after the intervention (Study 4). Three trials had follow-up at 6-month post-intervention (Studies 12, 13), two trials had follow-up at 9 months (Studies 12, 13), one at 12 months after the intervention (Study 14) and one at 18 months (Study 17).

Interventions took place in a variety of settings, with schools being the commonest ($n = 10$, Studies 2, 5, 7 to 10, 13, 14, and 16), followed by community settings ($n = 3$,

Studies 6, 12, 17), youth residences ($n = 2$, Studies 4, 15), homes ($n = 1$, Study 3) and medical centers ($n = 1$, Study 1). Most interventions were administered by people not involved in research (pre- and postdoctoral psychology students, social workers, mothers, computers, lawyers, peers, teachers, mental health counselors) ($n = 9$; Studies 1, 3 to 7, 13, 14, and 17), followed by interventions administered by trained personnel who were involved in research ($n = 6$, Studies 2, 8, 9, 10, 11, 15). Two studies did not report who delivered interventions (Studies 12, 16).

We found a wide variation in the duration of interventions. The shortest intervention had a mean duration of 37 min (Study 1), followed by an intervention that took 6 h (Study 6). The longest interventions lasted 18 months (Study 4) and 2 years (Study 9).

Regarding program content, education and training in skills for the promotion of healthy relationships were the commonest ($n = 9$; Studies 4, 7, 8, 9, 10, 11, 12, 14, 16). The second most frequent topic was sexual relationships, with participants receiving specific training on how to address risky behaviors and cultivate healthy sexual relationships ($n = 5$; Studies 2, 6, 9, 15, 16). The third commonest content was training in recognizing abusive relationships ($n = 5$; Studies 3, 9, 11, 14, 17). This was followed by content on relationship conflict resolution skills ($n = 4$; Studies 1, 10, 13, 16) and assertive communication with partners ($n = 4$; Studies 13, 14, 16, 17).

Regarding the main outcomes analyzed in the RCTs and quasi-experimental studies, twelve trials analyzed physical DV victimization and perpetration (Studies 1, 3, 6 to 11, 13, 14, 16, and 17). To assess this variable, different instruments were administered: the Conflict in Adolescent Dating Relationships Inventory ([CADRI]; Wolfe et al., 2001) ($n = 4$; Studies 1, 10, 14, 17), an adaptation of the CADRI ($n = 1$; Study 11), the Safe Dates Teen Dating Violence (TDV) Scales (Foshee et al., 1998) ($n = 1$; Study 11), the Safe Dates Physical Dating Abuse Scale (Foshee, 1996) ($n = 1$; Study 3), the Intimate Partner Scale (Dahlberg et al., 2005) ($n = 1$; Study 8), an adaptation of the Peer Rejection Questionnaire (Prinstein et al., 2000) ($n = 1$; Study 9), an ad hoc scale from Foshee et al. (1996) ($n = 1$; Study 6), a semi-structured interview based on the Timeline Follow-Back-Dating Violence (TLFB-DV) developed by Fals-Stewart et al. (2003) ($n = 1$; Study 13). Finally, two studies used an ad hoc scale (Studies 7, 16).

Psychological DV victimization and perpetration was assessed in six trials (Studies 3, 7, 9, 10, 11, 17). As for the instruments used to measure this variable we found: the CADRI (Wolfe et al., 2001) ($n = 2$; Studies 10, 17); an adaptation of the CADRI ($n = 1$; Study 11), the Safe Dates TDV Scales (Foshee et al., 1998; $n = 1$; Study 11), the Safe Dates Psychological Abuse in Dating Scale (Foshee, 1996; $n = 1$; Study 3), an adaptation of the Peer Rejection Questionnaire (Prinstein et al., 2000; $n = 1$; Study 9), and, finally, an ad hoc scale ($n = 1$; Study 7).

For sexual DV, four trials assessed this outcome (Studies 6, 10, 11, 13). Two trials (Studies 10, 13) used the CADRI (Wolfe et al., 2001). Another trial (Study 11) used an adaptation of CADRI and the Safe Dates TDV scales (Foshee et al., 1998). The other trial (Study 6) used an adaptation of the Youth Risk Behavior Survey (CDC, 1999).

Four trials assessed cyber DV (Studies 3, 10, 13, 16). Each study used a different scale: The Teach Abuse in Teen Relationships Scale (Picard, 2007; $n = 1$; Study 3), the CADRI (Wolfe et al., 2001; $n = 1$; Study 10), the AAUW Sexual Harassment Survey (American Association of University Women Educational Foundation, 2001; $n = 1$; Study 16), and one study used an ad hoc scale (Study 13).

Five trials assessed acceptability of DV (Studies 3, 5, 6, 10, 12). The scale developed by Foshee et al. (1998), Foshee and Bauman (1992), and an ad hoc scale were used to evaluate it.

Table 1.1. Qualitative data extracted from included studies

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[1]	Cunningham et al. (2013) USA	Adolescents who had experienced dating violence (DV) and consumed alcohol in the previous year N = 329; ages: 14–18 [EG1 = 113; EG2 = 103; CG: N = 113]; 36% boys Randomized controlled trial (RCT; 3, 6, and 12 months after baseline)	EG1: Therapist + Computer Brief Intervention SafeRteens (Cunningham et al., 2009): Role-playing about different DV situations. The intervention messages included the increased likelihood of violence when drinking, waiting to resolve conflicts until both partners are calm and sober, anger management strategies, if your partner has hit you before or you are afraid of him/her not talking to the partner alone, and ask someone for help. EG2: Computer Brief Intervention SafeRteens (Walton et al., 2010): Activities like role-playing. The therapist provided information, including weighing the pros and cons of talking to a partner when either the participant or his/her partner is drunk or angry. Safety plans were discussed if the participant felt afraid of a partner. CG: no intervention.	1. Dating victimization (3 and 6 months follow up: EG1 < CG; 12 months follow-up: ns; EG2 vs CG: ns) 2. Frequency of moderate dating victimization (3 and 6 months follow-up: EG1 < CG; 12-m follow up: ns; 6 and 9 months follow-up: EG2 < CG) 3. Frequency of severe dating victimization (3 months follow up: EG2 < CG; 6 and 12 months follow up: ns)

Table 1.1. (Cotinued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[2]	Fay and Medway (2006) USA	1st grade high school students living in a rural South Carolina community with high-risk factors (high rates of poverty and rapes above the national average) N = 154; ages: 15–16 [EG: N = 78; CG: N = 76]; 44 % boys RCT (1 week and 5 months post-intervention)	EG: Acquaintance Rape Education Program (Fay & Medway 2006): Activities (role-playing, discussion groups, questionnaires and videotapes about rape) to encourage self-exploration, increase communication, raise awareness of DV and provide practical strategies for prevention. Throughout the program, these points were emphasized: open and clear communication; acting assertively; understanding that people have varying expectations and perceptions; taking responsibility for one's own actions; the role of alcohol and drug use in acquaintance rape. CG: no intervention.	1. Acceptance of rape myths (EG < CG) 2. Attitudes toward DV (ns)

[3]	Foshee et al. (2016)	Adolescents exposed to domestic violence	EG: <i>Moms and Teens for Safe Dates</i> (Foshee et al., 2015): six mailed booklets of DV prevention information and interactive activities, such as role plays, puzzles, games, scenario analyses and guided discussions. Mothers delivered the program to their adolescents who had been exposed to violence.	1. Psychological DV victimization and perpetration (EG < CG)
	USA	N = 409 [N (mothers) = 305, N (teens) = 295; ages: 12–15 [EG: N = N.R.; CG: N = N.R.]; 36% boys		2. Physical DV victimization (ns)
		RCT (6 months post-intervention)	CG: no intervention	3. Cyber DV perpetration (EG < CG)
				4. Mother-perceived susceptibility of teen to DV (EG < CG)
				5. Mother-perceived severity of DV (EG > CG)
				6. Mother's response efficacy for preventing DV (ns)
				7. Mother's comfort in communicating with her teen (EG > CG)
				8. Mother's self-efficacy for enacting teen DV prevention (EG > CG)
				9. Mother's communication skills with teen (ns)
				10. Mother's knowledge of DV (ns)
				11. Teen conflict management skills (EG > CG)
				12. Teen feeling of family closeness and cohesion (EG > CG)
				13. Teen acceptance of DV (ns)

Table 1.1. (Continued)

Table 1.1. (Continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[4]	Huefner et al. (2007) USA	Youths from unstable environments (prior abuse, school failure, behavioral disorders, criminal activity). $N = 154$; ages at intervention: 10–18; ages at follow-up: 27–37 [EG: $N = 131$; CG: $N = 23$; 92% boys Quasi-experimental (16 years post-intervention)	EG: <i>Family Home Program</i> (Davis & Daly, 2003): A married couple lives in each home with six to eight girls or boys. The couple, with the help of a full-time assistant, focuses on each youth's physical, spiritual, emotional development, and treatment needs. CG: <i>Treatment-as-usual</i>	1. Study IPV rates vs National Survey of Families and Households (NSFH) Intimate Partner Violence (IPV) rates (EG: ns; CG > NSFH). * EG vs CG: N.R.
[5]	Jaycox et al. (2006) USA	9 th grade high school with 80% or more Latino students (Hispanic students reported a DV rate 2.3% higher than that by White students) $N = 2,540$; ages: 14–15 [EG: $N = 1,384$; CG: $N = 1,156$]; 48% boys RCT (6 months post-intervention)	EG: <i>Ending Violence</i> (Jaycox et al., 2006): The curriculum aims to reverse acceptance of violence by stressing that is illegal and to increase knowledge and help-seeking by providing information and resources. It includes psycho-educational materials, videos, role-playing and exercises. CG: <i>Regular health curriculum</i>	1. Knowledge about DV and the law (EG > CG) 2. Help-seeking in DV situations (ns) 3. Acceptance of female-on-male aggression and male-on-female aggression (ns) 4. Negative dating experiences (ns) 5. Victimization and perpetration in DV (ns)

[6]	Kelly et al. (2007) USA	Girls involved in the juvenile system with high rates of risk factors (sexual risk behaviors, substance abuse, school truancy, family violence, and a history of childhood sexual abuse) N = 480; ages: 11–18 [EG: N = 197; CG: N = 284]; 0% boys	EG: <i>The Girl Talk-2 Intervention</i> (Kelly & Bean, 2003): The goal was to decrease sexual and DV risk behaviors. The format was interactive and included opportunities for participants to write in journals, participate in role playing, and take part in hands-on demonstrations with condoms and with the materials used during pelvic examinations, and discussion about alternatives in relationships and future goals.	1. Knowledge about sexually transmitted infections (ns) 2. Attitudes about sexual health practices and condom use (ns) 3. Acceptance of couple violence (EG < CG) 4. Self-efficacy on protective behaviors, condom use, and DV (ns) 5. Sexual risk behaviors (used condom at their last sexual encounter 6 months post-intervention: EG > CG; used the communication strategies to defuse violence 6 months post-intervention: EG > CG; less than one sexual partner (ns); negative chlamydia test (ns)) 6. Self-reported physical violence within dating relationships (N.R.)
		CG: <i>Lecture and Video Comparison Group</i> (Kelly & Bean, 2003): Received the same amount of contact time (3-hour segments on 2 consecutive days), but in a standard lecture and video format. The group was shown “Dating and Sexual Responsibility: Beliefs, Attitudes, and Expectations,” “Refusal Skills and Responses,” and “Beyond Puberty,” 3 engaging videos with current and accurate information targeted for an adolescent audience. They received lectures on sexually transmitted infections and answered questions about the content of the lectures and videos. Participants were provided with a list of community resources for sexual and reproductive health services.		

Table 1.1. (Continued)

Table 1.1. (Continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[7]	Levesque et al. (2016) USA	9 th , 10 th , and 11 th grade students with a history of emotional or physical DV victimization or perpetration $N = 2,605$; ages: 14–17 [EG: $N = 1,389$; CG: $N = 1,216$]; 47% boys RCT (6 and 12 months after baseline)	EG: <i>Teen Choices: A Program for Healthy, Nonviolent Relationships</i> (Levesque et al., 2016); System intervention that integrates, in a stage-matched manner (text, images, audio, video), key content (e.g., warning signs, statistics on dating violence) and activities (e.g., expectations regarding the balance of power in dating relationships). CG: <i>Health in Motion</i> (Mauriello et al., 2010): An alternative evidence-based online that targets physical activity, screen time and healthy eating to prevent obesity.	1. Emotional DV victimization and perpetration (EG < CG) 2. Physical DV victimization and perpetration (EG < CG) 3. Consistent use of healthy relationship skills (EG > CG) 4. Rejection of DV attitudes (6 months follow up: EG > CG; 12 months follow up: ns)

[8]	Oscós-Sánchez et al. (2013) USA	High-risk secondary school students in an economically disadvantaged and predominantly Latino School district (high rates of being victims of homicide, substance use, disruptive conducts, and participation in gang activity) N = 223; ages: 12–19 [EG: N = 96; CG: N = 127]; 69% boys Quasi-experimental (3 and 9 months post-enrollment)	EG: <i>El Joven Noble</i> (Tello et al., 2010): Culturally tailored character development program that focuses on establishing and maintaining healthy relationships with self, family, intimate partners, the community and culture. It uses a variety of interactive educational strategies (storytelling, small group discussions, crafts, Native American talking circles). CG: <i>Teen Medical Academy</i> (Oscós-Sánchez et al., 2008): Health career promotion program that focuses on common medical conditions frequently managed by primary care physicians. Sessions focus on teaching human anatomy and pathology using hands-on diagnostic and therapeutic medical equipment.	1. Intimate partner violence perpetration (EG < CG)
[9]	Peskin et al. (2014) USA	9 th grade ethnic minority students (African American and Hispanic) with a history of dating or at a risk of physical DV perpetration N = 766; ages: 14–15 [EG: N = 303; CG: N = 463]; 42% boys RCT (24 months after baseline)	EG: <i>It's Your Game ... Keep It Real</i> (Tortolero et al., 2010): Classroom- and computer-based activities in a 24-lesson curriculum. Computer-based activities were set in a virtual world environment and include interactive skills-training exercises, peer role model videos, quizzes, animations, fact sheets and “real world” style adolescent serials. The curriculum includes six parent-child homework activities and individualized journaling activities at each grade level.	1. Physical DV victimization (EG < CG) 2. Physical DV perpetration (ns) 3. Emotional DV victimization and perpetration (EG < CG)

Table 1.1. (Continued)

Table 1.1. (Continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[10]	Peskin et al. (2019) USA	Ethnic-minority early adolescent youths (90% African American or Hispanic youths) who are most at risk of experiencing DV N = 709; ages: 11–15 [EG: N = 438; CG: N = 271]; 48% boys RCT (12 months after baseline)	EG: <i>Me & You</i> (Peskin et al., 2019): Multilevel technology-enhanced DV prevention program. It consists of: student component, parent component and school component. CG: <i>Regular health education</i>	1. Physical, psychological, and threatening DV perpetration (EG < CG) 2. Sexual and cyber DV perpetration (ns) 3. Threatening and sexual DV victimization (EG < CG) 4. Physical, psychological, and cyber DV victimization (ns) 5. Acceptability of dating aggression from male to female and female to male (EG < CG)
[11]	Reidy et al. (2017) USA	Youths who have been exposed to violence in their home, school, or community N = 1,330; ages: 11–17 [EG: N = 756; CG: N = 574]; 39.84% boys Quasi-experimental (12 months after baseline)	EG: <i>Expect Respect Support Groups</i> (Ball et al., 2009, 2012): Group support sessions focusing on developing healthy relationship skills and modifying maladaptive dating behavior norms. The curriculum includes: (1) developing group skills; (2) choosing equality and respect; (3) recognizing abusive relationships; (4) learning healthy relationship skills; (5) spreading the message. CG: <i>Treatment as usual</i>	1. DV perpetration and victimization: controlling behaviors, psychological DV, physical DV, sexual DV, fear/intimidation, injury, use of self-defense (ns) 2. Reactive aggression (EG < CG) 3. Proactive aggression (EG < CG)

[12]	Ritchwood et al. (2015) USA	High risk Rural African American youths (greater rates of marginalization, poverty, and exposure to community violence) N = 331; ages: 10–14 [EG1: N = 79; EG2: N = 135; CG: N = 117]; 45% boys Quasi-experimental (9 months post-intervention)	EG1: <i>Teach One Reach One</i> (Ritchwood et al., 2015): The curriculum focuses on abstinence, condom use and healthy dating relationships. The curriculum for caregivers focuses on parenting practices and communication about sexual health and healthy dating. Each session is structured to target specific behavioral determinants from our guiding theoretical framework, such as knowledge, attitudes, skills, self-efficacy, outcome expectations, social networks and perceived norms for youth and parents on abstinence, condom use, healthy dating and communication. EG2: receive information from participants who have attended the " <i>Teach One Reach One</i> " program CG: no intervention	1. Acceptance of DV (EG1: baseline < follow-up; EG2 and CG: ns) 2. Parent–teen communication (ns) 3. Family functioning (CG: baseline > follow-up; EG1 and EG2: ns) 4. Youth's knowledge of healthy dating behaviors (ns) 5. Self-efficacy for healthy dating behaviors (EG1 and EG2: baseline < follow-up; CG: ns)
[13]	Rizzo et al. (2018) USA	Adolescent girls with a history of victimization or perpetration of physical DV. N = 109; ages: 14–17 [EG: N = 59; CG: N = 50]; 0% boys RCT (3, 6, and 9 months post-intervention)	EG: <i>Date SMART</i> (Rizzo et al., 2018): It focuses on providing a toolkit of skills that arm teens with choices for how to handle situations involving risk, including mutual aggression and unprotected sex. Skills include self-assessment, cognitive restructuring, problem solving, assertive communication training, self-shooting and emotion regulation strategies that target anger, jealousy and sadness. CG: <i>Knowledge-only</i> (Rizzo et al., 2018): Classes based on interactive games and activities that cover common prevention topics in health class. Increase knowledge about DV and sexually transmitted infections, as well as shift attitudes.	1. Sexual DV (EG < CG) 2. Cyber DV perpetration and victimization (ns) 3. Number of dating relationships (ns) 4. Total sex acts (ns) 5. Condomless sex acts (ns) 6. Number of physical DV (hit, slapped, punched) (ns) 7. Intervention mechanisms (depression, emotion regulation, condom self-efficacy, attitudes about couple violence, and HIV knowledge: ns)

Table 1.1. (Continued)

Table 1.1. (Continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[14]	Temple et al. (2021) USA	7 th grade students who are ethnically diverse and economically disadvantaged <i>N</i> = 2,768; ages: 11–13 [EG: <i>N</i> = 1,237; CG: <i>N</i> = 1,531]; 50% boys RCT (12 months post)	EG: <i>Fourth R</i> (Temple et al., 2021): The intervention presents information in an engaging and interesting format, aims to increase adolescents' motivation and teaches skills that promote healthy relationships and reduce conflict, risky behavior and substance abuse. CG: <i>Control</i> (Temple et al., 2021): The intervention presents information in an engaging and interesting format, aims to increase adolescents' motivation and teaches skills that promote healthy relationships and reduce conflict, risky behavior and substance abuse.	1. Physical DV (EG < CG) 2. Substance use (ns) 3. Bullying perpetration (ns)
[15]	Van Lieshout et al. (2019) Netherlands	Youths in residential care who have grown up with emotional, sexual, and/or physical abuse or neglect; and have witnessed domestic violence or have substance abusing parents <i>N</i> = 68; ages: 12–18 [EG: <i>N</i> = 22; CG: <i>N</i> = 46]; 100% boys RCT (6 months after baseline)	EG: <i>Make a Move</i> (Rutgers – Centers for Sexual and Reproductive Health and Rights): Group intervention for boys about sexuality and relationships, designed to prevent sexual harassment and DV. The themes covered during meetings are: men, image, girls, sex, flirting, dating, pleasurable sex and the future. Each meeting includes several exercises, such as role play, discussion and watching short movie clips. CG: no intervention	1. Self-esteem (ns) 2. Empathy (ns) 3. Adverse sexual beliefs (ns) 4. Attitude toward DV (ns) 5. Rape attitude (ns) 6. Outcome expectancies (ns) 7. Attitudes toward communicating with a partner (ns) 8. Attitudes toward self-control (ns) 9. Attitudes toward stating boundaries with friends (ns) 10. Self-efficacy toward self-control (ns) 11. Self-efficacy toward communication (ns) 12. Social norms that support sexual harassment (EG > CG)

[16]	Vivolo-Kantor et al. (2019) USA	6 th , 7 th , and 8 th grade students living in high-risk urban communities (elevated levels of violent crime, homicide, aggravated assault, felony assault, sexual assault, and poverty) $N = 3,301$; ages: 10–15 [EG: $N = 1,662$; CG: $N = 1,639$]; 47% boys RCT (6, 12, 18, 24, and 30 months after baseline)	EG: <i>Dating Matters: Strategies to Promote Healthy Teen Relationship</i> (Niolon et al., 2016): Comprising preventive components at the individual, relationship, and community levels, including: (1) classroom-delivered programs for 6 th (6 sessions), 7 th (7 sessions), and 8 th (10 sessions) grade students; (2) training for parents; (3) training for educators; (4) a youth communications program; (5) activities in the local health department. CG: <i>Safe Dates</i> (Foshee et al., 2005): Classes about conflict management and prosocial skills, norms associated with partner violence and gender stereotypes, and beliefs in the need for help and in given action to provide help. Theater production performed by students.	1. Bullying victimization (ns) 2. Bullying perpetration (EG < CG) 3. Cyber bullying victimization (girls: EG < CG; boys: ns) 4. Cyber bullying perpetration (girls: EG < CG; boys: ns) 5. Physical violence perpetration (EG < CG) 6. Physical violence victimization (ns)
[17]	Wolfe et al. (2003) Canada	Teens from Child Protective Services agencies with histories of maltreatment. $N = 158$; ages: 14–16 [EG: $N = 96$; CG: $N = 62$]; 50% boys RCT (16 months post-intervention)	EG: <i>Youth Relationship Project</i> (Wolfe et al., 1996): A co-educational intervention group program that uses a health-promotion approach to prevent DV by focusing on positive alternatives to aggression. The curriculum involves: (a) education and awareness of abuse and power dynamics in close relationships; (b) skill development; (c) social action. CG: <i>Standard Child Protective Services</i>	1. Physical and emotional abuse perpetration (EG < CG) 2. Threatening behavior perpetration (EG < CG) 3. Emotional abuse (EG < CG) 4. Threatening behavior victimization (EG < CG) 5. Emotional distress (trauma symptoms: EG < CG; interpersonal hostility: ns) 6. Healthy relationship skills (ns)

Note. $\geq$ significantly higher than; $\leq$ significantly lower than; ns = non-significant differences; vs. = versus; N.R. = Not Reported. **Table 1.1. (Continued)**

N.R. = Not Reported.

Table 1.2. Studies included in the meta-analyses

Study number	Authors	Meta-analysis studies
[1]	Cunningham et al. (2013)	
[2]	Fay and Medway (2006)	
[3]	Foshee et al. (2016)	
[4]	Huefner et al. (2007)	X
[5]	Jaycox et al. (2006)	X
[6]	Kelly et al. (2007)	
[7]	Levesque et al. (2016)	X
[8]	Oscós-Sánchez et al. (2013)	X
[9]	Peskin et al. (2014)	X
[10]	Peskin et al. (2019)	X
[11]	Reidy et al. (2017)	X
[12]	Ritchwood et al. (2015)	X
[13]	Rizzo et al. (2018)	X
[14]	Temple et al. (2021)	X
[15]	Van Lieshout et al. (2019)	X
[16]	Vivolo-Kantor et al. (2019)	
[17]	Wolfe et al. (2003)	

Table 1.3. Characteristics of Included Studies

Characteristics of studies		N (%)
Publication year	2003-2014	7 (41.18%)
	2015-2021	10 (58.82%)
Intervention country	United States	15 (88.24%)
	Netherlands	1 (5.88%)
	Canada	1 (5.88%)
Adolescent risk characteristics	Previous DV experience	3 (17.65%)
	Previous exposure to violence in childhood	4 (23.53%)
	Living in disadvantaged neighborhoods	4 (23.53%)
	Belonging to ethnic minorities	4 (23.53%)
	Living in residences because of past violence and an unstable family environment.	2 (11.76%)
Gender of the target population	Boys and girls	14 (82.35%)
	Girls	2 (11.77%)
	Boys	1 (5.88%)
Research design	RCTs	12 (70.59%)
	Quasi-experimental	5 (29.41%)
Follow-up period	Follow-up from baseline	8 (47.06%)
	Follow-up after intervention	9 (52.94%)
Setting of intervention	School	10 (58.82%)
	Youth residences	2 (11.77%)
	Community	3 (17.65%)
	Home	1 (5.88%)
	Medical center	1 (5.88%)
Intervention facilitators	Trained staff involved in research	6 (35.29%)
	Nonintervention staff	9 (52.94%)
Duration of intervention (hours)	< 6	5 (29.41%)
	6-18	7 (41.17%)
	> 20	4 (23.53%)

Table 1.3. (Cotinued)

Characteristics of studies		N (%)
Program content	Healthy relationships	9 (52.94%)
	Sexual relationships	5 (29.41%)
	Recognize abusive relationships	5 (29.41%)
	Conflict-resolving skills	4 (23.53%)
	Assertive communication	4 (23.53%)
	Resources and support services	2 (11.77%)
	DV parent training	2 (11.77%)
	Preventing DV	2 (11.77%)
	Legal issues related to DV	1 (5.88%)
	Resources to leave unhealthy relationships	1 (5.88%)
Main outcomes analyzed	Physical DV	12 (70.59%)
	Psychological DV	6 (35.29%)
	Sexual DV	4 (23.53)
	Cyber DV	4 (23.53)
	DV acceptance	5 (29.41%)

3.2 Trial authors' findings and conclusion

3.2.1 *Physical violence*

Two trials found a significant reduction in physical DV perpetration and victimization, and targeted adolescents who had experimented DV (Study 7) and ethnic minority adolescents (Study 14). Four trials reported a significant reduction in DV perpetration; two targeted the youths living in disadvantaged neighborhoods (Studies 8 and 16), one targeted ethnic minority adolescents (Study 10), and one targeted adolescents who had been exposed to domestic violence in childhood (Study 17). One trial indicated significant changes in victimization, but not perpetration, among ethnic minority adolescents (Study 9). One trial found no significant reduction in either victimization or perpetration of physical DV in adolescents who had been exposed to domestic violence in childhood (Study 11). Four trials obtained no significant reduction in physical DV victimization—one involving adolescents who had experienced DV (Study 1), one involving adolescents who had been exposed to domestic violence in childhood (Study 3), one involving ethnic minority adolescents (Study 10), and one involving adolescents who lived in disadvantaged neighborhoods (Study 16).

3.2.2 *Psychological violence*

Three trials found a significant reduction in psychological DV victimization and perpetration: one targeted adolescents who lived in disadvantaged neighborhoods (Study 3), another one focused on adolescents who had experienced DV (Study 7), and the third addressed ethnic minority adolescents (Study 9). In contrast, there was one trial that showed no significant change in either perpetration or victimization (Study 11); this was conducted with adolescents who had been exposed to domestic violence in childhood. One trial found a significant reduction in psychological DV perpetration but not victimization, in ethnic minority adolescents (Study 10). Finally, Study 17 did not find significant changes in perpetration in adolescents who had been exposed to domestic violence in childhood.

3.2.3 *Sexual violence*

One trial reported a significant reduction in sexual perpetration and victimization (Study 13) in adolescents who had experienced DV. However, Study 11 did not find significant changes in the victimization and perpetration of sexual violence in adolescents

who had been exposed to domestic violence in childhood. Study 6 evaluated sexual risk behavior in adolescents who had experienced previous violence and had an unstable family environment, and found a significant increase in the use of condoms and communication strategies to defuse violence. Study 10 targeted ethnic minority adolescents, and found a significant reduction in sexual victimization but not in perpetration.

3.2.4 Cyber DV

Two trials did not find a significant reduction in cyber DV victimization and perpetration: one of them targeted ethnic minority adolescents (Study 10); the other addressed adolescents who had experienced DV (Study 13). Study 3 found a significant reduction in cyber DV perpetration in adolescents who had been exposed to domestic violence in childhood. Study 16 targeted the youths who lived in disadvantaged neighborhoods, and found a significant reduction in cyber DV victimization and perpetration only in girls.

3.2.5 Acceptation of DV

Two trials found a greater improvement in the acceptance of DV after the intervention; one addressed adolescents who had previously experienced violence and had an unstable family environment (Study 6); the other targeted adolescents who had experienced DV (Study 10). Study 12 targeted the youths living in disadvantaged neighborhoods, and found a significant improvement in only one of the treatment groups. Two trials did not find any significant changes; one targeted adolescents who had been exposed to domestic violence in childhood (Study 3); the other targeted ethnic minority adolescents (Study 5).

3.2.6 Other variables

A trial targeted the youths who lived in disadvantaged neighborhoods, and reported a significant reduction in the acceptance of rape myths; however, they did not find significant changes in the attitudes toward DV (Study 2). Study 3 targeted adolescents who had been exposed to domestic violence in childhood, and reported a significant increase in mothers' self-efficacy for enacting teen DV prevention, teen conflict management skills, and the feeling of family closeness and cohesion among teenagers. Study 5 targeted ethnic minority adolescents, and found a significant increase

in the knowledge about DV and the law. Study 7 found improvements in healthy relationship skills among adolescents who had experienced DV. Study 11 found a significant reduction in reactive and proactive aggression in adolescents who had been exposed to domestic violence in childhood. Study 15 targeted adolescents who had been exposed to domestic violence in childhood, and found no significant changes in the antecedent variables of sexual harassment; they further indicated an increase in social norms supporting this sexual harassment. Study 17 reported a significant reduction in both victimization and perpetration of threatening behaviors in adolescents who had been exposed to domestic violence in childhood.

3.3 Risk of bias results

We assessed bias within the RCTs examined using RoB2 (see Fig. 1.2). The bias arising from the randomization process could not be clearly assessed because the studies did not provide sufficient information ($k = 10$). Only two studies were assessed as low risk (Studies 1 and 14) since they included an explicit description of the randomization protocol. An analogous situation arose when we analyzed the bias due to deviations from intended interventions. None of the studies provided accurate information on whether the participants or people delivering the intervention were blind to the intervention condition. In terms of bias due to lack of outcome data, most studies were considered low risk ($k = 9$). Two studies (Studies 15 and 16) were assessed as high risk because the number of participants with missing values was considerable. One study (Study 2) was evaluated as some concerns because it indicated that part of the sample was lost due to problems in data collection during follow-up. Concerning measurement of the outcome bias, most of the studies ($k = 11$) did not adequately report on whether the outcome assessors or participants in the case of self-reports were blind to the intervention condition. Study 1 was assessed as low risk, as it reported and met all the criteria for this domain. Finally, in the selection of the reported outcome bias, most of the studies were assessed as low risk ($k = 9$). Three studies (Studies 7, 9 and 10) were evaluated as having some concerns due to multiple eligible analyses of the data.

Figure 1.2. Summary of risk of bias of the included RCTs

	Risk of bias domains				
	D1	D2	D3	D4	D5
Cunningham et al. (2013)	+	-	+	+	+
Fay and Medway (2006)	-	-	-	-	+
Foshee et al. (2016)	-	-	+	-	+
Jaycox et al. (2006)	-	-	+	-	+
Levesque et al. (2016)	-	-	+	-	-
Peskin et al. (2014)	-	-	+	-	-
Peskin et al. (2019)	-	-	+	-	-
Rizzo et al. (2018)	-	-	+	-	+
Temple et al. (2021)	+	-	+	-	+
Van Lieshout et al. (2019)	-	-	X	-	+
Vivolo-Kantor et al. (2019)	-	-	X	-	+
Wolfe et al. (2003)	-	-	+	-	+

Study

Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

Judgement
X High
- Some concerns
+ Low

Note. “Low risk of bias” indicates that a domain is well-designed, conducted and reported. “Some concerns” indicates that there are some potential issues or limitations in a domain, but they are not expected to significantly impact the overall assessment of the study’s risk of bias. “High risk of bias” indicates that the design, conduct or reporting of a domain may have introduced biases that could affect validity and reliability.

To evaluate quasi-experimental studies, we used the JBI Checklist (see Table 1.4). All studies ($k = 5$) fulfilled at least six of the nine items. In three studies (Studies 6, 11 and 12), there were significant differences between participants included in the groups compared at baseline, indicating a risk of selection bias. Three studies (Studies 4, 8 and 12) were assessed as unclear risk because they did not report effect sizes, despite the use of appropriate statistical analyses.

Table 1.4. Summary of risk of bias of the included quasi-experimental studies

Study reference	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9
Huefner et al. (2007)	√	√	√	√	--	√	√	√	U
Kelly et al. (2007)	√	--	√	√	√	√	√	√	√
Oscós-Sánchez et al. (2013)	√	√	√	√	√	√	√	√	U
Reidy et al. (2017)	√	--	√	√	√	√	√	√	√
Ritchwood et al. (2015)	√	--	√	√	√	--	√	√	U

Note. Q.1-Are the “cause” and “effect” clear in the study (i.e., there is no confusion about which variable comes first)? Q.2-Were the participants included in any similar comparisons? Q.3-Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest? Q.4-Was there a control group? Q.5-Were there multiple measurements of the outcome both pre and post the intervention/exposure? Q.6-Was follow-up complete and if not, were the differences between groups in terms of their follow-up adequately described and analyzed? Q.7-Were the outcomes of participants included in any comparisons measured in the same way? Q.8-Were outcomes measured in a reliable way? Q.9-Was appropriate statistical analysis used? √ = Yes; -- = no; U = unclear; NA= not applicable.

3.4 Meta-analysis

The outcomes analyzed in the meta-analysis were self-reported physical, psychological, and sexual DV perpetration and victimization, a composite score of DV perpetration (i.e., physical, psychological, sexual and cyber), a composite score of DV victimization (i.e., physical, psychological, sexual and cyber), and attitudes toward DV.

3.4.1 Physical perpetration of DV

We included nine studies (7368 participants) in the meta-analysis for physical DV perpetration. The pooled effect was significant (OR = 0.83, 95%CI [0.75, 0.92], $p < 0.0001$) and highly heterogeneous ($I^2 = 97\%$; $\chi^2 = 296.50$, $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 8; Fig. 1.3A). After excluding these outliers, seven studies were examined (4540 participants). Heterogeneity was moderate ($I^2 = 45\%$; $\chi^2 = 11.00$; $p = 0.09$) and a significant reduction in the occurrence of physical perpetration of DV was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.78, 95%CI [0.64, 0.95], $p = 0.02$; Fig. 1.4).

3.4.2 Physical DV victimization

We included seven studies (6186 participants) in the meta-analysis for physical DV victimization. A significant reduction in the occurrence of physical DV victimization was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.80, 95%CI [0.68, 0.94], $p = 0.007$; Fig. 1.5). Heterogeneity was moderate ($I^2 = 43\%$; $\chi^2 = 10.51$; $p = 0.10$). The Galbraith plot did not identify any outlier studies (Fig. 1.3B).

3.4.3 Psychological perpetration of DV

We included six studies (6038 participants) in the meta-analysis for the psychological perpetration of DV. The pooled effect was not significant (OR = 0.78, 95%CI [0.59, 1.02], $p = 0.07$) and highly heterogeneous ($I^2 = 83\%$; $\chi^2 = 28.69$; $p < 0.0001$). The Galbraith plot identified two outlier studies (Studies 7 and 11; Fig. 1.3C). After excluding these outliers, four studies were analyzed (2103 participants). Heterogeneity was moderate ($I^2 = 49\%$; $\chi^2 = 5.90$; $p = 0.12$). The pooled effect remained non significant (OR = 0.81, 95%CI [0.62, 1.06], $p = 0.12$; Fig. 1.6).

3.4.4 Psychological DV victimization

We included six studies (6032 participants) in the meta-analysis for psychological DV victimization. The pooled effect was not significant (OR = 0.84, 95%CI [0.58, 1.22], $p = 0.36$). Heterogeneity was high ($I^2 = 91\%$; $\chi^2 = 54.21$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 11; Fig. 1.3D). After excluding these outliers, four studies were examined (2097 participants) and heterogeneity was moderate ($I^2 = 65\%$; $\chi^2 = 8.67$; $p = 0.03$). The results showed a non significant reduction in the occurrence of psychological DV victimization in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.86, 95%CI [0.62, 1.18], $p = 0.35$; Fig. 1.7).

3.4.5 Sexual violence perpetration

We included four studies (2667 participants) in the meta-analysis for sexual DV perpetration. A significant reduction in the occurrence of sexual perpetration was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.83, 95%CI [0.70, 0.98], $p = 0.02$; see Fig.

1.8), and heterogeneity was low ($I^2 = 8\%$; $\chi^2 = 3.24$; $p = 0.36$). The Galbraith plot did not identify any outlier study (Fig. 1.3E).

3.4.6 Sexual violence victimization

We included four studies (2661 participants) in the meta-analysis for sexual DV victimization. The pooled effect was non significant (OR = 0.85, 95%CI [0.68, 1.06], $p = 0.16$; Fig. 1.9) and heterogeneity was moderate ($I^2 = 38\%$; $\chi^2 = 4.80$; $p = 0.19$). The Galbraith plot did not identify any outlier study (Fig. 1.3F).

3.4.7 Composite score of DV perpetration

We included nine studies (7368 participants) in the meta-analysis for this outcome. The pooled effect was non significant (OR = 1.27, 95%CI [0.77, 2.10], $p = 0.36$) and heterogeneity was high ($I^2 = 97\%$; $\chi^2 = 312.27$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 8; Fig. 1.3G). After excluding these outliers, seven studies were examined (4540 participants) and heterogeneity was moderate ($I^2 = 34\%$; $\chi^2 = 9.15$; $p = 0.17$). The results showed a significant reduction in the occurrence of perpetration in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.78, 95%CI [0.69, 0.88], $p < 0.0001$; see Fig. 1.10).

3.4.8 Composite score of DV victimization

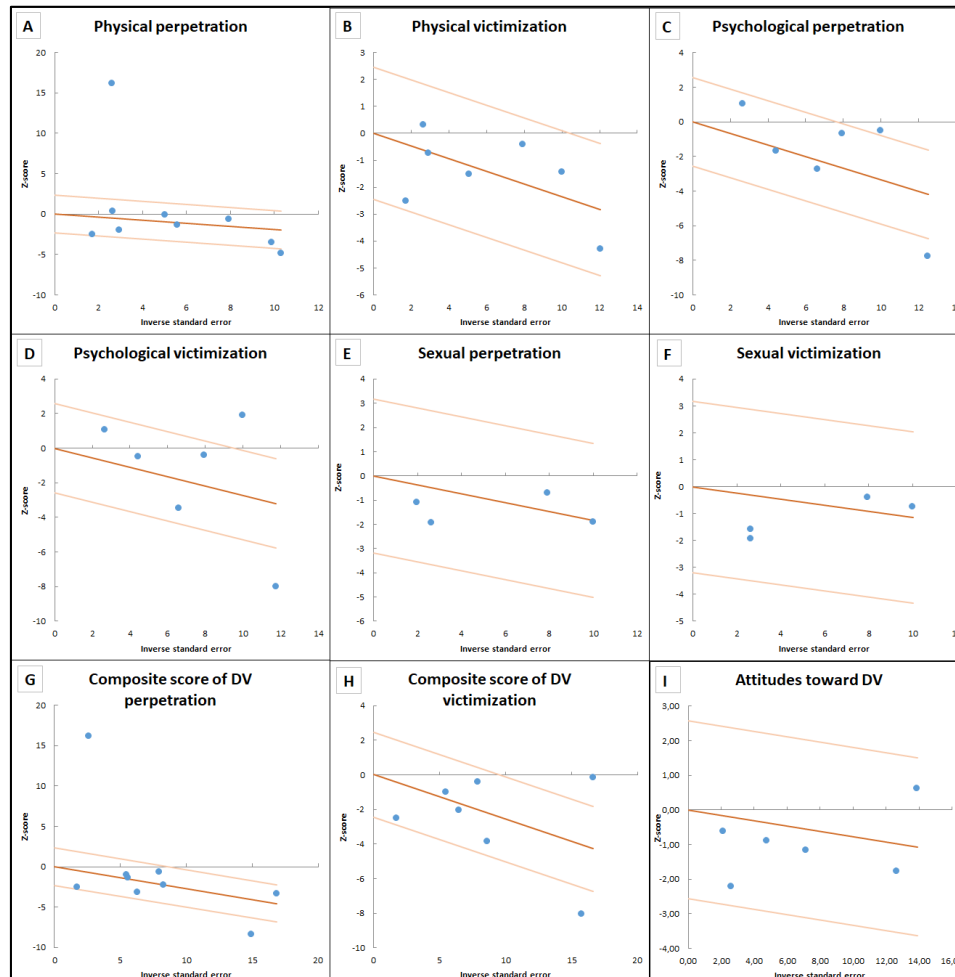
We included seven studies (6186 participants) in the meta-analysis for this outcome. The pooled effect was significant (OR = 0.74, 95%CI [0.59, 0.93], $p = 0.01$) and heterogeneity was high ($I^2 = 86\%$; $\chi^2 = 42.84$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 11; Fig. 1.3H). After excluding these outliers, five studies were examined (2251 participants) and heterogeneity was moderate ($I^2 = 59\%$; $\chi^2 = 9.76$; $p = 0.04$). A significant reduction in the occurrence of victimization was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups (OR = 0.74, 95%CI [0.59, 0.93], $p = 0.01$; see Fig. 1.11).

3.4.9 Attitudes toward DV

We included six studies (6348 participants) in the meta-analysis for attitudes toward DV. The pooled effect was non significant (OR = 0.89, 95%CI [0.77, 1.03], $p =$

0.12; Fig. 1.12) and heterogeneity was moderate ($I^2 = 40\%$; $\chi^2 = 8.39$; $p = 0.14$). The Galbraith plot did not identify any outlier studies (Fig. 1.3I).

Figure 1.3. Publication bias analysis (Galbraith plot)



Note. A) Physical perpetration; B) Physical victimization; C) Psychological perpetration; D) Psychological victimization; E) Sexual perpetration; F) Sexual victimization; G) Composite score of DV perpetration; H) Composite score of DV victimization; I) Attitudes toward DV.

3.4.10 Subgroup and meta-regression analyses

The subgroup analyses showed no significant differences in the pooled effects depending on the type of study (RCT vs. non RCT) for the composite score of DV perpetration ($\chi^2 = 0.17$; $p = 0.68$). For the composite score of DV victimization and attitudes toward DV, the comparison by type of study (RCT vs. non RCT) could not be carried out because only one of the studies examining this outcome was non RCT. The subgroup analyses showed no significant differences in the pooled effects depending on intervention length (or more) for the composite score of DV perpetration ($\chi^2 = 0.01$; $p = 0.92$), the composite score of DV victimization ($\chi^2 = 1.67$; $p = 0.20$) and attitudes toward

DV ($\chi^2 = 0.46$; $p = 0.11$). The meta-regression analyses are shown in Table 1.5. Follow-up length was negatively and significantly associated with effect sizes for the composite score of DV perpetration and the composite score of DV victimization, but not for attitudes toward DV. The meta-regression analyses did not show any significant associations between the pooled effect sizes and the risk of bias.

Figure 1.4. Physical perpetration of DV

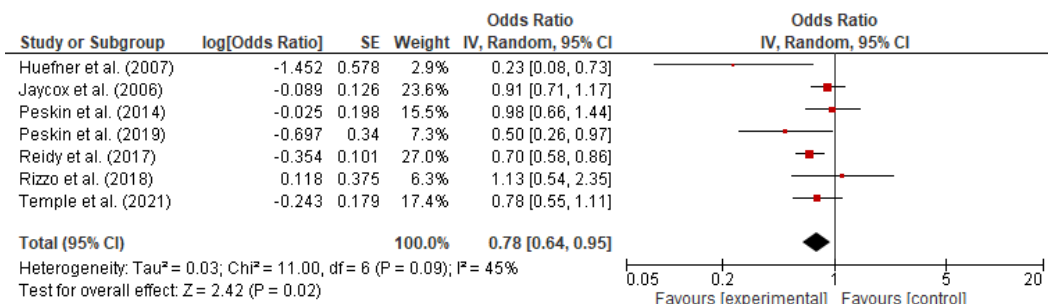


Figure 1.5. Physical DV victimization

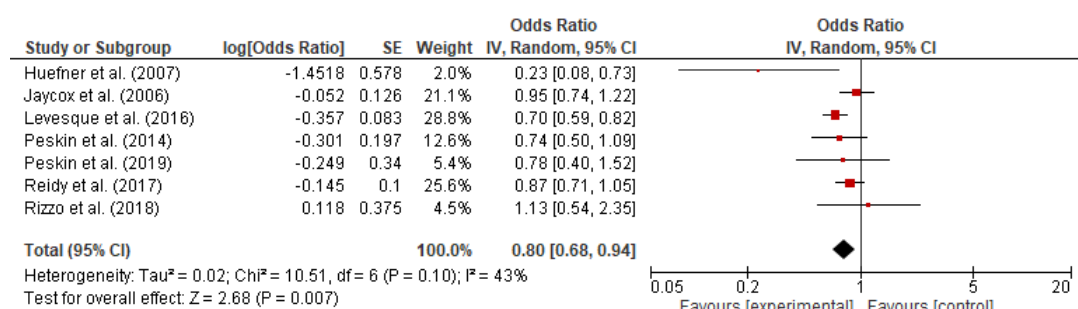


Figure 1.6. Psychological perpetration of DV

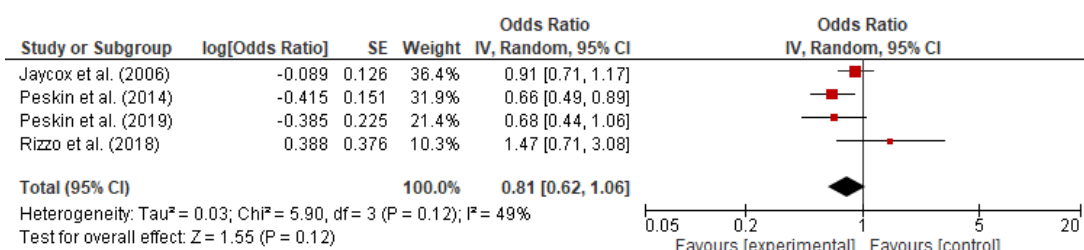


Figure 1.7. Psychological DV victimization

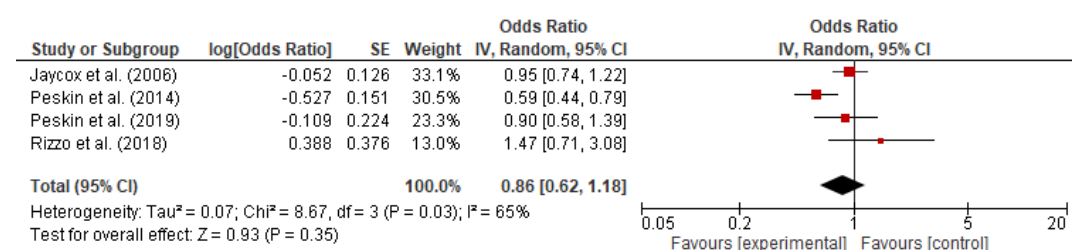


Figure 1.8. Sexual violence perpetration

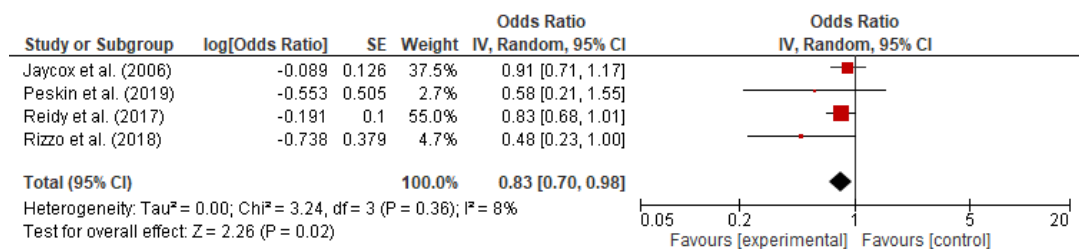


Figure 1.9. Sexual violence victimization

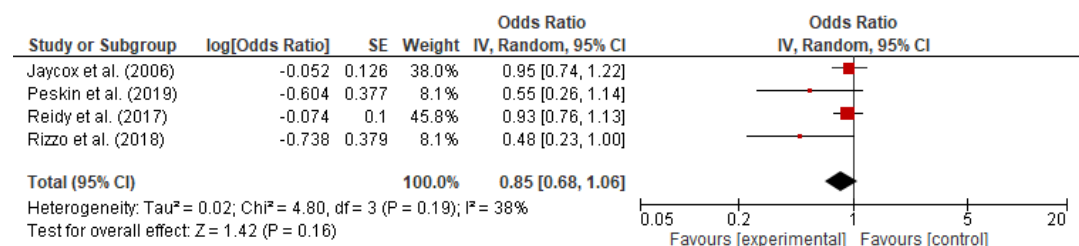


Figure 1.10. Composite score of DV perpetration

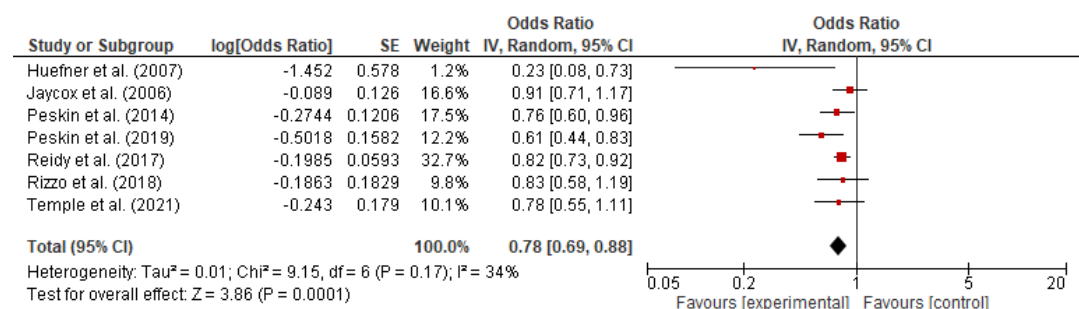


Figure 1.11. Composite score of DV victimization

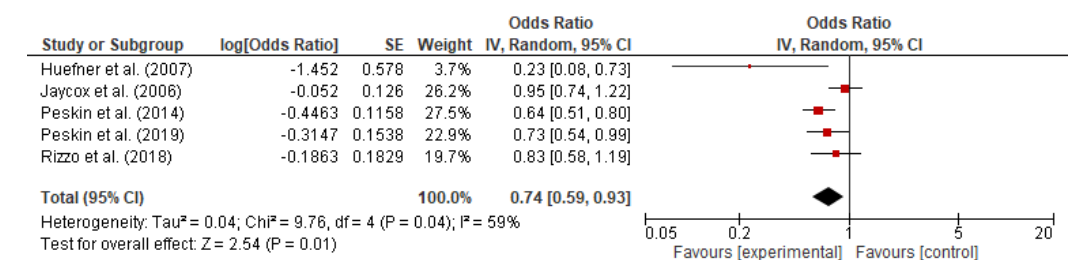
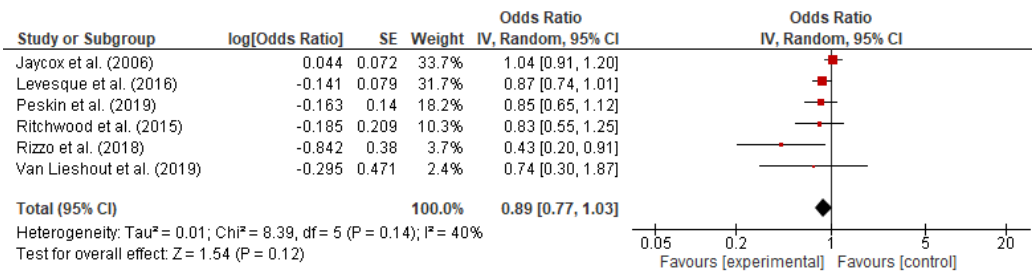


Figure 1.12. DV attitudes**Table 1.5.** Meta-regression analyses

Outcome	Moderator	Coefficient (95%CI) ^a	p value
Composite score of DV perpetration	Follow-up length	-0.01 (-0.01, 0.00)	0.02
	Risk of bias	-0.11 (-0.65, 0.44)	0.70
Composite score of DV victimization	Follow-up length	-0.01 (-0.01, 0.00)	0.03
	Risk of bias	0.63 (-1.24, 2.49)	0.51
Attitudes toward DV	Follow-up length	-0.03 (-0.09, 0.03)	0.34
	Risk of bias	-0.04 (-1.07, 0.10)	0.94

Note. ^aRandom-effects model.

4. Discussion

The present systematic review has focused specifically on secondary DV prevention programs for adolescents who present at-risk factors for DV (e.g., previous exposure to violence, living in disadvantaged neighborhoods, belonging to ethnic minorities, and living in residential care). This systematic review included interventions carried out in any setting irrespective of the context in which they were delivered. We collected RCTs and quasi-experimental studies with a follow-up longer than a month. In addition, a meta-analysis was carried out to assess the impact of DV prevention programs among at-risk adolescents. The main results of the composite measures analyzed in the meta-analysis indicated that the implementation of DV prevention programs that targeted at-risk adolescent populations was associated with an overall reduction in DV perpetration and victimization. The analyses that evaluated the different types of violence

separately indicated a reduction in physical and sexual DV perpetration and physical DV victimization. However, no reduction in sexual DV victimization or psychological DV perpetration and victimization was observed. Additionally, there were no significant changes in attitudes toward DV.

Our results on composite measures of DV are consistent with the previous literature because a decrease in perpetration is expected to produce a decrease in victimization (Lee & Wong, 2020). Regarding DV perpetration, previous studies that did not focus on at-risk populations showed mixed results. There were studies that indicated significant effects (Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021), and others that obtained no differences in overall DV perpetration between the intervention and control participants (De la Rue et al., 2017; Russell et al., 2021). Regarding DV victimization, except for the Piolanti and Foran (2021) meta-analysis that obtained significant differences in overall DV victimization between the intervention and control participants, the other meta-analyses did not obtain significant results on this variable (De la Rue et al., 2017; Lee & Wong, 2020; Russell et al., 2021).

Our results for the combined measures of DV victimization and perpetration are consistent with the meta-analysis of Piolanti and Foran (2021). Furthermore, in a sub-analysis, they showed that the effects of programs conducted on DV in at-risk adolescents had significantly stronger effects than those that target the general population. However, in their composite measures of victimization and perpetration, Piolanti and Foran (2021) included physical and sexual violence, unlike our meta-analysis, which included physical, psychological, sexual and cyber DV. For this reason, our meta-analysis represents an important advance in the literature by including more types of DV and obtaining a significant reduction in DV in its results.

According to the separate results of the different types of DV, as far as physical DV is concerned, our results are consistent with two previous meta-analyses that found a significant reduction in this variable after intervention (Piolanti & Foran, 2021; Russell et al., 2021). The studies included in the meta-analysis showed significant results for sexual DV perpetration. This result had only been found in two previous meta-analyses. However, those studies did not focus on a specific population of at-risk adolescents (Lee & Wong, 2020; Russell et al., 2021). These results are encouraging because programs that focus on at-risk populations could be effective in reducing the perpetration of sexual

DV. For sexual DV victimization, the results did not indicate a significant reduction and, thus, continued in the same direction as most previous meta-analyses, in which no changes in behavioral variables, specifically sexual DV, were obtained (De la Rue et al., 2014, 2017; Fellmeth et al., 2013, 2015; Piolanti & Foran, 2021). In the meta-analysis of Piolanti and Foran (2021), reductions in this variable were found, but without reaching significance. In particular, sexual DV is considered to be a sensitive topic to deal with in adolescence and, therefore, may provoke defensive reactions leading to minor effects of this variable (Lee & Wong, 2020). Contrary to expectations, no significant results were obtained in psychological DV. This may be due to the fact that, as this type of violence is more difficult for adolescents to identify, it is more complicated for them to recognize having suffered or perpetrated psychological DV. As this type of violence is more difficult to identify, future programs with at-risk populations should specifically address it to reduce its victimization and perpetration.

The results of the trials included in the meta-analysis did not indicate a significant increase in the rejection attitudes toward DV in the experimental group compared to the control group. It must be noted that previous studies have found significant increases in rejection attitudes toward DV (De la Rue et al., 2014, 2017; Fellmeth et al., 2013, 2015; Lee & Wong, 2020; Ting, 2009). In this sense, some authors assert that it is easier to modify attitudes than behaviors (Kelly & Barker, 2016). Our results are inconsistent with the previous literature, which may be related to the fact that our sample consisted of at-risk adolescents. These adolescents live in disadvantaged neighborhoods where there are high levels of conflict and acceptance toward violence (Gracia et al., 2021). Moreover, these adolescents have probably had DV experiences that would favor the acquisition of acceptance attitudes toward DV. For this reason, at-risk adolescents are likely to be resistant to changing their attitudes.

The subgroup analyses did not identify any significant effects on DV or attitude toward DV according to intervention length similarly to what was obtained in the meta-analysis by Piolanti and Foran (2021). This could be due to the fact that wide variability has been found in the duration of programs, which makes it difficult to assess their impact on the results. However, the meta-analysis by Lee and Wong (2020) found that shorter programs produced significantly stronger effects because they were more direct. Their subanalysis, unlike ours, was conducted with all types of populations, and not specifically with at-risk adolescents. So the results may differ when analyzing this variable and its

effects on intervention duration. More studies focused on at-risk populations are needed to further investigate the impact of the duration of interventions on this population.

Moreover, the fact that the effect size was larger after the intervention compared to a subsequent follow-up falls in line with some previous meta-analyses (De la Rue et al., 2017; Piolanti & Foran, 2021). This result is consistent because program effects tend to be stronger at the end of the program and decrease over time (De la Rue et al., 2017). It should be noted that the meta-regression analyses did not show significant associations between the pooled effect sizes and the risk of bias of studies. Future research should analyze which other mediating variables influence the effectiveness of a program that addresses adolescents at risk over time.

Most of the studies included in the review were conducted in school settings. On the one hand, it is possible that students at higher risk of DV have dropped out of the school setting and are, therefore, not susceptible to receiving these interventions. The scarcity of interventions outside the school setting makes it difficult to compare these interventions with others carried out in community-type settings. Among the components of effective interventions that we have identified are education and training in skills for the promotion of healthy relationships and conflict resolution skills in relationships. De la Rue et al. (2017), in a previous systematic review, also pointed out the importance of including skill development components to favor a change in participants' behavior. Therefore, a proposal to improve interventions would be to include this content in the curriculum of programs.

It is worth noting that among the programs included in the meta-analysis, the programs aimed at a single gender (Rizzo et al., 2018; Van Lieshout et al., 2019) showed no significant results on the attitudinal variable. However, programs with mixed samples (Levesque et al., 2016; Peskin et al., 2019) showed an increase in attitudes of rejection toward DV. It would be interesting to study why programs delivered to mixed samples obtained significant results whereas those for participants of the same gender had no positive effect on attitude change. These differences raise a question: to what extent does the program participants' gender influence attitudinal change?

In terms of measurement instruments, the CADRI (Wolfe et al., 2001) was the most widely used instrument to assess physical, psychological and sexual variables. This instrument is developed and validated specifically for DV in adolescents. It is

characterized by measuring both victimization and perpetration behaviors of physical, psychological, and sexual violence (Wolfe et al., 2001). It also incorporates subtle forms of sexual violence that are more in line with adolescents' experiences (Smith et al., 2015). In contrast to behavioral variables, where the CADRI is the most frequently used instrument, a variety of instruments are used to assess attitudes toward DV. It would be necessary to standardize the assessment of these attitudes to facilitate the comparison of the results between trials.

Finally, the following recommendations from the present systematic review are important for future studies. More precise information regarding the duration of the interventions is needed. For example, some studies indicated the time frame in which the interventions were performed; however, the amount of total intervention time as well as the number of sessions and hours, and the periodicity of these, should be further clarified. Moreover, it is important to establish a clear definition of follow-up, as there are studies that use different reference points (e.g., baseline, post-intervention, post-enrollment) when reporting the follow-up time. This information could improve the comparison between studies. In addition, further specification of the education and amount of training of the staff delivering interventions is needed. It is important that the staff of these programs are well-trained and sensitized to the specific characteristics of these at-risk adolescents (Ting, 2009).

This systematic review has some limitations. First, the included studies showed great heterogeneity in terms of their duration, sample size and the instruments used to assess the results. This makes a detailed evaluation and comparison of all components of the interventions difficult (Smith et al., 2015). Second, many studies did not present the results in a suitable form for incorporation into the meta-analysis. Only eleven of the seventeen studies included in the systematic review were incorporated into the meta-analysis. Third, since the heterogeneity statistics showed moderate levels in most contrasts, the results of the meta-analysis should be interpreted with caution. Fourth, this study includes peer-reviewed articles, which implies the exclusion of works not published in scientific journals, such as dissertations and gray literature. Finally, most of the studies were conducted in the United States, which may limit the generalizability of the results to other settings.

Despite these limitations, the present systematic review has several strengths. It is the first systematic review that has focused on DV prevention programs for at-risk adolescents. Moreover, RCTs and quasi-experimental studies with a follow-up longer than one month were selected, and the search strategy was not restricted in terms of language. Another aspect to highlight is that this systematic review has included prevention programs regardless of the setting (school setting, community, medical centers, etc.). As far as we know, this has only been included in one previous systematic review, which did not focus on at-risk adolescents (Russell et al., 2021). The priority of the systematic review was to select programs aimed at vulnerable adolescents across all settings. Another strength is that it is the first meta-analysis to assess physical, psychological, sexual and cyber violence and attitudes toward DV in an at-risk population.

5. Conclusions

This is the first systematic review to collect only prevention programs that target at-risk adolescents, and the first meta-analysis to measure physical, psychological, sexual, and cyber violence on combined measures. Moreover, the obtained results are very encouraging because they indicate that interventions with these at-risk groups are effective in reducing DV perpetration and victimization. Therefore, the results serve as a basis for future systematic reviews. Future research should focus on specific at-risk populations to provide more detail on what factors influence the effectiveness of such programs (Reyes et al., 2020). Knowing what works with this population will allow us to move forward in improving these interventions, with the goal of reducing the risk of committing and/or experiencing DV. Previous studies highlight the need for further research into the development and identification of effective interventions for the most vulnerable groups (Crooks et al., 2019; Reyes et al., 2020). It is important to focus on these interventions and highlight the need to evaluate the results independently of those of the universal population due to the different and particular characteristics presented by this population. Future research should target this population to analyze what factors are critical for these programs to work and to be effective in DV prevention (Shorey et al., 2012; Wilkins et al., 2014).

6. References

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STUDY 2

Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale¹

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Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale

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Abstract

Dating violence (DV) is a social problem that affects adolescents worldwide. Prevalence figures show that this type of violence is starting at an increasingly younger age, which is why it is important to study attitudes toward DV, as they are an important risk factor. Victim-blaming attitudes justify this type of violence by excusing perpetrators and blaming victims. The present study aimed to validate an instrument developed to assess victim-blaming attitudes in DV cases among the adolescent population: The Adolescent Dating Violence Victim-Blaming Attitudes Scale (ADV-VBA). Two samples of high school students were recruited using a two-stage stratified sampling by conglomerates, one consisting of 758 adolescents (48% females) and the other of 160 (50% females), whose aged ranged from 12 to 18 years. We found that this instrument presented good reliability and validity evidence, showing good internal consistency, a clear one-factor latent structure, and a close relation to other related constructs, such as ambivalent sexism and perpetration and victimization of DV. We also found that items did no present differential item functioning across gender and the instrument was especially informative for assessing moderate to high levels of victim-blaming attitudes. A short five-item version is also presented for use when time and space constraints exist. Our results indicate that the ADV-VBA scale is a psychometrically sound measure to assess victim-blaming attitudes in cases of adolescent DV.

Keywords: dating violence, adolescence, attitudes, victim-blaming, measurement

1. Introduction

Dating violence (DV) is an important social problem that affects adolescents worldwide (Collibee et al., 2021; European Union Agency for Fundamental Rights, 2014; Fellmeth et al., 2013; Vives-Cases et al., 2021; Wincentak et al., 2017) with serious consequences for their health and well-being (Hossain et al., 2020; Taquette & Monteiro, 2019; Wincentak et al., 2017). According to the systematic review by Wincentak et al. (2017), the global prevalence for adolescents aged 13 to 18 years is 20% for physical violence and 9% for sexual violence. In its latest study, the World Health Organization (WHO, 2021), indicated that 24% of adolescent girls aged 15-19 years have experienced physical and/or sexual violence by their partner at least once in their lifetime. The Centers for Disease Control and Prevention ([CDC], 2019), reported that 26% of girls and 15% of boys had been victims of some form of DV before age 18.

Adolescents' attitudes toward violence in intimate relationships are an important risk factor for DV (Bell & Bailey, 2020; Courtain & Glowacz, 2021; Leen et al., 2013; McCauley et al., 2013; Stith et al., 2004; Vagi et al., 2013). Although in prior intervention trials the change in attitudes toward DV has not always been related to a change in DV behaviors (Rue et al., 2017; Lee et al., 2020), several studies have found that adolescents who hold more tolerant attitudes toward DV are more likely to engage in subsequent DV perpetration (Brendgen et al., 2002; Courtain & Glowacz, 2021, Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). For instance, in their study Courtain and Glowacz (2021), found that positive attitudes toward DV were significantly associated with violent behavior. They suggest that these programs can help prevent and/or reduce DV including attitudes toward DV in their curricula (Brendgen et al., 2002; Courtain & Glowacz, 2021). Therefore, addressing attitudes toward DV could be considered a key aspect in interventions with the adolescent population (Leen et al., 2013).

Victim-blaming attitudes in the context of intimate partner violence (IPV) are a type of attitude that justifies the violence perpetrated by men against women and legitimize it in certain circumstances (Gracia, 2014). These attitudes excuse and partially absolve the male perpetrators of violence and attribute responsibility for it to the female victims (Gracia, 2014). The perception of who is responsible for violence is important because it will influence public responses to these incidents of violence (Gracia, García et al., 2009; Martín-Fernández et al., 2018, 2022; Taylor & Sorenson, 2005; Waltermaurer, 2012). If responsibility falls on the female victims, there will be fewer

complaints by acquaintances about this type of violence and they will, therefore, receive less support from their informal social network (Waltermaurer, 2012; Gracia et al., 2018). Specifically, these victim-blaming attitudes can make perpetrators publicly feel that their violence is justified and can reinforce their violent behaviors (Gracia, 2014; Taylor & Sorenson, 2005; Waltermaurer, 2012). Despite public awareness and educational policies in the past few years, victim-blaming attitudes are still persistent, and prevalence of IPVAW remains alarmingly high among younger generations (Gracia et al., 2020, 2023). Previous research highlights the importance of addressing victim-blaming attitudes, but this research focused on the adult population in the Intimate Partner Violence against Women (IPVAW) context (Martín-Fernández et al., 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). Research on such attitudes in adolescent populations is scarce, and these studies have limitations regarding the psychometric properties of the instruments (Morrison et al., 2023). Additionally, there is a need to expand the knowledge base on the social aspects that contribute to DV prevalence in the adolescent population.

Different instruments have been developed to analyze adolescents' attitudes toward DV. These instruments have focused on acceptability attitudes toward different types of violence, e.g., *Attitudes Towards Dating Violence Scales* (Price et al., 1999), *Attitudes about Aggression in Dating Situations* (Slep et al., 2001), *Adolescent Attitudes Regarding Dating Relationships* (Davidson, 2005). Foshee et al. (2001) assessed attitudes toward the social norms of dating violence through the *Prescribed Dating Violence Norm Scale*. Some of these instruments have been validated in the Spanish adolescent population (Fernández-González et al., 2017; Muñoz-Rivas et al., 2011). Yet to our knowledge, there are no validated instruments that focus exclusively on victim-blaming attitudes in the adolescent population.

Therefore, the present study focuses on adapting the *Victim-Blaming Attitudes in cases of IPVAW* scale (VB-IPVAW; Martín-Fernández et al., 2018) to the adolescent population. This instrument has been validated in adults to assess victim-blaming attitudes, provides strong evidence for reliability and validity and also has a 5-item abridged form. To this end, the VB-IPVAW items were adapted by a panel of experts to cases of DV. We examined the psychometric properties of both the complete and 5-item versions of the resulting scale in a Spanish adolescent population and tested for differential item functioning across gender. For validity purposes, we also evaluated the

relation of victim-blaming attitudes to ambivalent sexism, and perpetration and victimization of DV.

2. Method

2.1 Participants

Two-stage stratified sampling by conglomerates was used to collect the data pool. In the first stage, we drew up a list of all the public and private high school centers from the Spanish region of Valencia. Three public and three private centers were selected. In the second stage, five groups from each center were randomly selected to participate in the present study, and 921 responses were collected.

The data pool was divided into two samples. The first sample was used to assess the scale's psychometric properties scale and consisted in 758 high school students (48% females) aged 12-18 years ($M = 15.31$, $SD = 1.52$). Of them, 64.2% were studying Compulsory Secondary Education, 23.8% Baccalaureate and 12.0% Technical and Vocational Education. The nationality of 86.0% was Spanish, and the remaining 14.0% were immigrants. When this study was conducted, 50.1% of the participants declared to be ($n = 180$) or having been ($n = 200$) in a dating relationship. Three participants were non-binary, and were dropped from the sample.

The second sample was used to adapt the short scale version. It was composed of 160 students (50% females) aged 12-18 years ($M = 15.27$, $SD = 1.52$). Their level of education was as follows: 66.9% were studying Compulsory Secondary Education, 20.6% Baccalaureate, and 12.5% Technical and Vocational Education. Regarding their nationality, 83.1% were Spanish and 16.9% immigrant.

2.2 Instruments

The Adolescent Dating Violence Victim-Blaming attitudes (ADV-VBA) Scale. This scale is based on the Victim-Blaming Attitudes in the cases of the IPVAV scale (Martín-Fernández et al., 2018). It is designed to assess victim-blaming attitudes in adults, and is adapted to DV. To this end, a panel of four experts in the field reviewed the items that reflect DV into two stages. The experts were selected attending to their theoretical knowledge on DV (i.e., more than five years of experience researching this field) or they practical expertise (i.e., more than five years working with victims or perpetrators of DV). In the first stage, two experts adapted the language of the item statements individually (e.g., "Boys are violent with their girlfriends because their girlfriends make them

jealous”). The other two experts assessed the clarity and representativeness of each item to assess the construct. In the second stage, a focus group was formed with all the experts and the research team to discuss disagreements with two items and to formulate the final version of the scale, which can be found in Appendix. The response format of items was a 4-point Likert-type scale, on which respondents have to indicate their level of agreement with the item statements (0 = *strongly disagree*, 3 = *strongly agree*).

Ambivalent sexism inventory (ASI; Glick & Fiske, 1996). We used the Spanish adaptation for adolescents (Lemus et al., 2008). This instrument includes two subscales, hostile and benevolent sexism, each comprising 10 items with a 6-point Likert-type response format (1 = *strongly disagree*, 6 = *strongly agree*). Hostile sexism is related to prejudice and discrimination toward girls based on their supposed inferiority and subordination to boys (e.g., “Girls tend to exaggerate their problems”). Benevolent sexism is defined as an attitude that views girls in stereotyped ways and is limited to certain roles with a positive affective tone (e.g., “Girls should be cherished and protected by boys”). The ASI has been adapted and validated to assess sexism in different sociocultural contexts (Etchezahar, 2012; Glick et al., 2000; Glick et al., 2002; Rudman & Glick, 2012; Ibabe et al., 2016) and in adolescent population (Glick & Hilt, 2000; Lemus et al., 2008). The scale for adolescents has been related to the traditional sexist ideology (Lemus et al., 2008), and the perceived severity of adolescent DV (Arrojo, Martín-Fernández et al., 2024). The internal consistency of both subscales and the total scale was good in this study for the first sample ($\alpha_{\text{hostile}} = 0.89$, $\alpha_{\text{benevolent}} = 0.82$, $\omega_{\text{total}} = 0.94$, $\omega_{\text{hostile}} = 0.93$, $\omega_{\text{benevolent}} = 0.86$) and the second sample ($\alpha_{\text{hostile}} = 0.88$, $\alpha_{\text{benevolent}} = 0.83$, $\omega_{\text{total}} = 0.94$, $\omega_{\text{hostile}} = 0.93$, $\omega_{\text{benevolent}} = 0.87$).

Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). We used the two subscales of this instrument from the Spanish version (Fernández-Fuertes et al., 2006): physical abuse, which includes four items (e.g., “I threw something at him/her”); verbal-emotional abuse, comprising nine items (e.g., “I did something to try to make her/him jealous”). It includes two versions of items, one to measure perpetration and the other for victimization, with a total of 26 items. The response format is a 4-point Likert-type scale, which measures the frequency of conflicts experienced by the intimate partner in the last 12 months (0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*). This instrument has been one of the most widely used measures to assess DV (Cunningham et al., 2013; Peskin et al., 2019; Shorey et al., 2017; Rizzo et al., 2018; Temple et al., 2021;

Wolfe et al., 2003). The CADRI has shown adequate psychometric properties in adolescent populations (Wolfe et al., 2001) and in samples belonging to different sociocultural contexts (Fernández-Fuertes et al., 2006; Fernández-Fuertes et al., 2012). As the categories *sometimes* and *often* were chosen by less than 5% of the sample, we dichotomized the responses to this measure (0 = *never*, 1 = *at least once*). The internal consistency of this measure in the first sample was good for the perpetration ($\alpha_{\text{verbal-emotional}} = 0.80$, $\alpha_{\text{physical}} = 0.79$, $\omega_{\text{total}} = 0.93$, $\omega_{\text{verbal-emotional}} = 0.89$, $\omega_{\text{physical}} = 0.79$) and victimization measures ($\alpha_{\text{verbal-emotional}} = 0.84$, $\alpha_{\text{physical}} = 0.80$, $\omega_{\text{total}} = 0.96$, $\omega_{\text{verbal-emotional}} = 0.96$, $\omega_{\text{physical}} = 0.89$).

2.3 Procedure

The participants completed a survey that included the ADV-VBA, ASI and CADRI measures. In addition, a set of sociodemographic data were collected (i.e., age, gender, nationality, name of high school, current course, socio-economic level, if they currently have a partner). At the beginning of the survey, the participants were informed about the study objectives and their participation in it was anonymous. Before the survey was handed out, a face-to-face meeting was held with the teachers at each high school. From November 2021 to May 2022, questionnaires were passed in person and data were collected. This study was approved by the University of Valencia Ethics Committee.

2.4 Data Analysis

A descriptive analysis of the items was first conducted to obtain the mean, standard deviation, skew and kurtosis statistics. Corrected item-test correlations were also computed.

The latent structure and internal consistency of the ADV-VBA were later assessed. A confirmatory factor analysis (CFA) was carried out. It replicated the one-factor model found in the original scale (Martín-Fernández et al., 2018) using weighted least squared mean- and variance-adjusted (WLSMV) as the estimation method because this procedure yields accurate parameter estimates with categorical data (Li, 2016). A combination of fit indices was used to evaluate the model's goodness of fit. Any values of the comparative fit index (CFI) and Tucker-Lewis's index (TLI) above 0.95 were considered indicative of a good fit, and the values of the root mean squared error by approximation (RMSEA) below 0.06, 0.08, and 0.10 were considered an excellent, good or mediocre fit, respectively (Hu & Bentler, 1999; McCallum et al., 1996). The scale's internal consistency was evaluated using Cronbach's alpha and McDonald's omega.

After establishing the latent structure of the VB-IPVAW, further properties of items were inspected using the Item Response Theory (IRT). A differential item functioning (DIF) analysis was conducted to test whether the scale's items were invariant across gender. The ordinal logistic regression method was used for polytomous items (Crane et al., 2006; French & Miller 1996). This method is able to identify the presence of noninvariance items across groups and if this source of noninvariance is constant (i.e., uniform DIF) or varies across the latent trait continuum (i.e., nonuniform DIF). Samejima's (1969) graded response model was then fitted and the model's goodness of fit was evaluated with the $C2$ statistic (Monroe & Cai, 2015). This allowed the test information function for males and females to be obtained and the scale's IRT scores (i.e., the person parameter estimates) to be estimated, which were used in the subsequent analyses.

Next the scale's validity evidence was examined. In particular, criterion-related validity was evaluated to obtain the correlation between the participants' VB-IPVAW scores and their scores on the ASI hostile and benevolent sexism subscales. Predictive validity was also examined by conducting two structural equation modeling (SEM) analyses, in which victim blaming, gender and nationality were included as predictors of perpetration and victimization of DV. For the SEM analysis, only the responses of those participants who were or had been in a dating relationship were used.

The psychometric properties of the 5-item abridged form of the ADV-VBA were evaluated in the second sample. A one-factor model CFA was conducted using the same estimation method and cut-offs to assess the model's goodness of fit. The internal consistency of the abridged form was assessed with Cronbach's α , and criterion-related validity was evaluated by relating scale scores to ambivalent sexism. A correlation between the complete ADV-VBA and the 5-item version was also obtained.

All the analyses were carried out in R (R Core Team, 2022) using the *psych* and *lavaan* libraries for the descriptive and SEM analyses (Revelle, 2022; Rosseel, 2012), and the *mirt* and *lordif* libraries for the IRT and DIF analyses (Chalmers, 2012; Choi et al., 2011).

3. Results

3.1 Descriptive analysis

The descriptive statistics of the ADV-VBA items can be found in Table 2.1. The mean of all items was below with standard deviations around 0.75, which indicates that

most participants strongly disagreed with the statements made by the items. This was also reflected in the skew and kurtosis statistics, which depicted that most of the item distributions were positively skewed and leptokurtic. Item 8 (“*Girls file false complaints to obtain economic benefits and hurt their boyfriends*”) was the only exception for presenting the highest mean and variation values in the participants’ responses. The item-test corrected correlations were high for all the items, which indicates a close relation between each item and the rest of the scale.

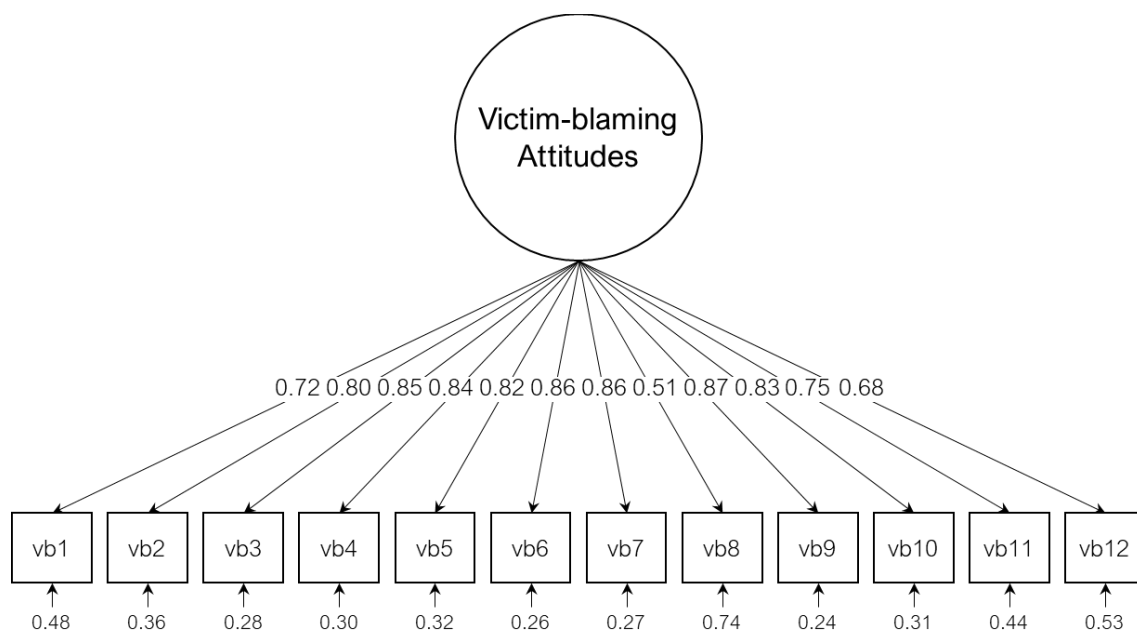
Table 2.1. Descriptive Statistics of the ADV-VBA Items

	<i>M</i>	<i>SD</i>	Skew	Kurtosis	$r_{\text{item-test}}$
vb1	0.62	0.78	1.06	0.38	0.58
vb2	0.53	0.76	1.39	1.39	0.68
vb3	0.25	0.63	2.79	7.64	0.68
vb4	0.40	0.69	1.83	3.13	0.69
vb5	0.44	0.69	1.59	2.17	0.69
vb6	0.30	0.62	2.35	5.61	0.69
vb7	0.34	0.67	2.20	4.68	0.70
vb8	0.93	1.00	0.69	-0.73	0.42
vb9	0.40	0.70	1.85	3.02	0.72
vb10	0.42	0.74	1.81	2.68	0.67
vb11	0.43	0.76	1.84	2.74	0.62
vb12	0.32	0.71	2.43	5.43	0.54

Note: ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; vb = ADV-VBA item; *M* = mean; *SD* = standard deviation; $r_{\text{item-test}}$ = corrected item-test correlation.

3.2 Latent structure and internal consistency

The scale’s latent structure was assessed by replicating the one-factor CFA model found in the original scale (Martín-Fernández et al., 2018). The fitted model showed an adequate goodness of fit (CFI = 0.96, TLI = 0.95, RMSEA [95% CI] = 0.092 [0.084, 0.101]). Although the RMSEA was mediocre, the comparative fit indices (i.e, CFI and TLI) were excellent, and taken together we deemed that the one-factor model as a parsimonious and adequate solution for the latent structure. When this same model was applied to the second sample, the fit indices resulted also adequate (CFI = 0.95, TLI = 0.95, RMSEA [95% CI] = 0.059 [0.039, 0.083]). The standardized factor loadings were above 0.70 for all the items, except for items 8 and 12, which implies a close relation between the items and the latent construct (Figure 2.1). The scale’s internal consistency was excellent ($\alpha = 0.90$, $\omega = 0.95$).

Figure 2.1. Confirmatory factor analysis of the ADV-VBA

Note: ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; vb = ADV-VBA item.

3.3 Differential item functioning and the Item Response Theory

The scale's DIF was tested by conducting a series of ordinal regression models with the first sample (Choi et al., 2011; Crane et al., 2006). Whether belonging to a group (i.e., males or females) had any effect on the participants' responses was particularly compared, and if this effect was constant (uniform DIF) or varied for the different levels of victim blaming attitudes (nonuniform DIF). Models were compared using a log-likelihood test (LRT), and size effect was assessed by the change in the regression coefficient, and McFadden and Nagelkerker's pseudo- R^2 .

Table 2.2. Differential Item Functioning (DIF)

Item	$\Delta\beta$	Uniform DIF			Non-uniform DIF		
		p	R^2_{McFadden}	$R^2_{\text{Nagelkerke}}$	p	R^2_{McFadden}	$R^2_{\text{Nagelkerke}}$
vb1	0.00	0.944	0.000	0.000	0.159	0.001	0.002
vb2	0.00	0.726	0.000	0.000	0.321	0.001	0.001
vb3	0.00	0.938	0.000	0.000	0.528	0.000	0.000
vb4	0.01	0.479	0.000	0.000	0.915	0.000	0.000
vb5	0.03	0.049	0.003	0.003	0.569	0.000	0.000
vb6	0.07	0.001	0.012	0.012	0.397	0.001	0.001
vb7	0.01	0.591	0.000	0.000	0.808	0.000	0.000
vb8	0.08	<0.001	0.015	0.029	0.185	0.001	0.002
vb9	0.01	0.332	0.001	0.001	0.398	0.001	0.001
vb10	0.01	0.290	0.001	0.001	0.868	0.000	0.000
vb11	0.00	0.843	0.000	0.000	0.440	0.001	0.001
vb12	0.00	0.970	0.000	0.000	0.619	0.000	0.000

Note: vb = ADV-VBA item; $\Delta\beta$ = change in the beta coefficient from the uniform to non-uniform model; p = log-likelihood test p -value; R^2_{McFadden} = McFadden's pseudo R^2 ; $R^2_{\text{Nagelkerke}}$ = Nagelkerke's pseudo R^2 .

Item 6 (“Boys are violent toward their girlfriends because it makes them attractive to girls”) and item 8 (“Girls file false complaints to obtain economic benefits and hurt their boyfriends”) were flagged as uniform DIF by the LRT (Table 2.2). However, as Choi et al. (2011) suggest, for polytomous indicators it is important to bear other statistics in mind, such as a change in β above 0.10 or pseudo- R^2 values over 0.02. In this case, effect size attributable to the group was considered negligible for item 6. For item 8 however, as the change in β comes close to 0.10 and presented a Nagelkerke's R^2 above 0.02, we took effect size to be small. Instead of removing item 8 from the scale, the IRT graded response model was fitted by allowing the thresholds of item 8 to vary across males and females to, hence, reflect the uniform DIF in this item (Crane et al. 2006). The C2 statistic, which is a similar measure to χ^2 for IRT models using polytomous items, yielded an excellent fit for this model (CFI = 0.97, TLI = 0.97, RMSEA [95% CI] = 0.052 [0.046, 0.057]).

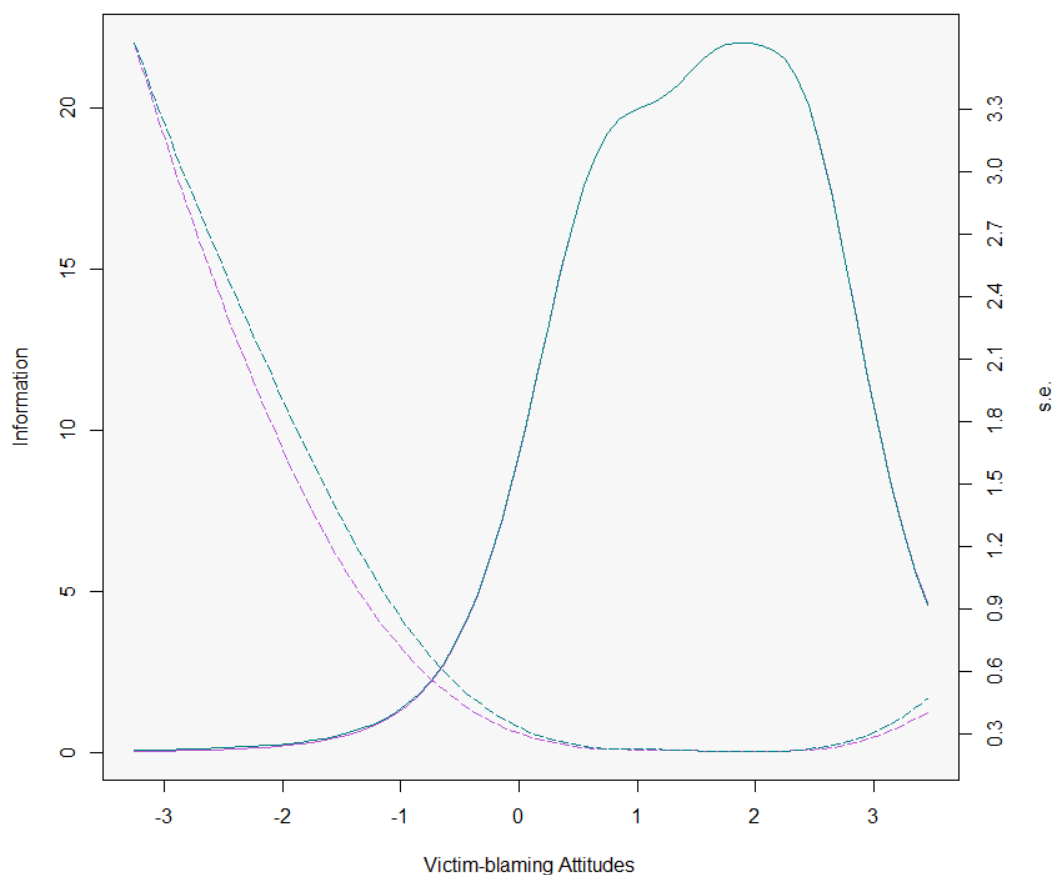
Table 2.3. IRT Item Parameter Estimates

	a	b_1	b_2	b_3
vb1	1.93	0.16	1.44	2.75
vb2	2.58	0.35	1.47	2.33
vb3	3.25	1.06	1.75	2.29
vb4	2.84	0.62	1.68	2.38
vb5	2.78	0.50	1.61	2.50
vb6	2.70	0.89	1.85	2.57
vb7	2.74	0.81	1.76	2.38
	0.90	0.10/	1.89/	3.69/
vb8		-0.70*	0.74*	2.44*
vb9	3.07	0.64	1.60	2.36
vb10	2.60	0.66	1.55	2.28
vb11	2.12	0.71	1.68	2.45
vb12	1.79	1.10	2.01	2.59

Note: IRT = item response theory; vb = ADV-VBA; item. * = item thresholds for male.

The item parameter estimates are displayed in Table 2.3. The discrimination a -parameters of all the items were high with values above 1.90, except for item 8. The threshold parameters ranged between 0.10 and 3.69 for females and between -0.70 and 2.75 for males when mapping moderate to high levels of the latent trait continuum (i.e., victim-blaming attitudes). In conjunction, both parameters indicated that the scale was able to discriminate between respondents with moderate to high levels of victim-blaming attitudes. This was also reflected in the test information function, which showed that scale accuracy increases as the levels of victim-blaming attitudes grow (Figure 2.2), and peaked for the high and very high levels of the latent trait ($1 < \theta < 2$).

Figure 2.2. ADV-VBA information function.



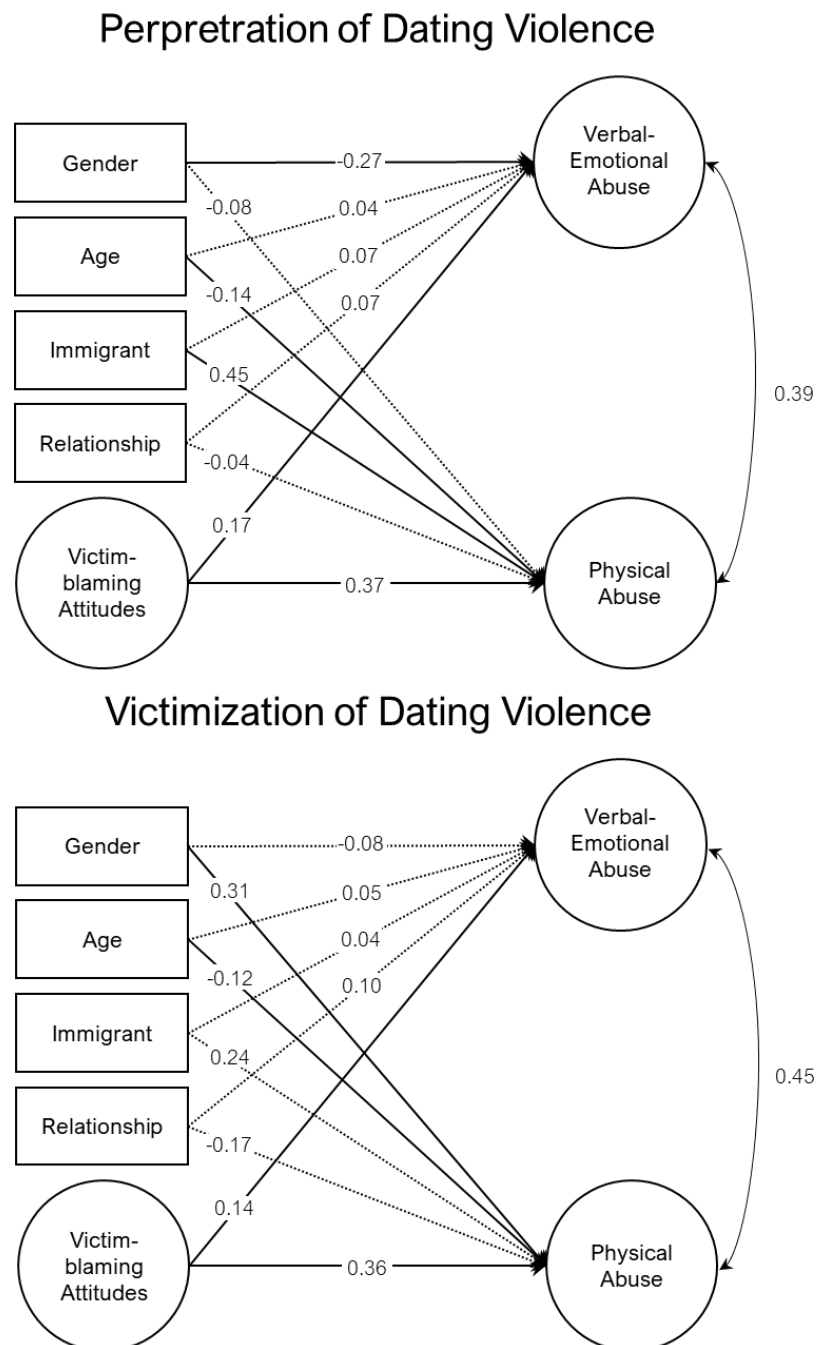
Note: The purple and blue solid lines represent the scale information function for female and male, respectively. The broken lines represent the s.e., purple for female and blue for male. ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; s.e. = standard error.

3.4 Validity evidence

Criterion-related validity was assessed by obtaining the correlation between the scale's IRT scores and hostile and benevolent sexism. A close positive relation to hostile sexism ($r = 0.55$, $p < 0.001$) and benevolent sexism ($r = 0.46$, $p < 0.001$) appeared, and showed that the participants with high levels of victim-blaming attitudes tended to also show high levels of both sexism types. To test predictive validity, a SEM analysis was conducted using victim blaming, gender, age, immigrant status, and currently being in an intimate relationship as predictors of perpetration and victimization of DV (Figure 2.3). For the model using the CADRI perpetration scales, item 12 (*"I kicked, hit or punched*

him/her” “He/she kicked, hit or punched me”) had to be dropped from the analysis because the model did not converge when this indicator was included.

Figure 2.3. Structural equation modeling analysis of predictive validity



Note: Dotted lines: not significant paths.

Goodness of fit was good for the perpetration model (CFI = 0.95, TLI = 0.96, RMSEA [95% CI] = 0.046 [0.042, 0.051]). A significant effect of victim blaming attitudes and gender on perpetration of verbal-emotional abuse, and a significant effect of

these attitudes, age and immigrant status on physical abuse, were found. Specifically, our findings indicated that, on average, females reported committing more verbal-emotional abuse than males, and as the victim-blaming attitudes increased, so did the reported perpetration of this violence type. For physical abuse, victim-blaming attitudes predicted the reported perpetration of physical abuse, younger participants reported higher risk of perpetration, and immigrant participants showed greater perpetration of this violence than Spanish participants.

For the victimization analysis, the SEM analysis showed an adequate fit (CFI = 0.96, TLI = 0.96, RMSEA [95% CI] = 0.046 [0.040, 0.051]). Our results revealed a similar trend, showing that victim-blaming attitudes predicted victimization of verbal-emotional and physical abuse, and that female and immigrant participants reported more physical abuse victimization than males and Spanish respondents, respectively.

3.5 Abridged form

To validate the 5-item abridged form of the scale, the second sample was used. The abridged form presented a clear one-factor latent structure, showing an excellent goodness of fit (CFI = 0.99, TLI = 0.99, RMSEA [95% CI] = 0.057 [0.001, 0.134]), and good internal consistency ($\alpha = 0.82$). The abridged form also showed a strong relation to hostile sexism ($r = 0.61, p < 0.001$) and benevolent sexism ($r = 0.46, p < 0.001$). Finally, we found that the correlation between the complete, 12-item version of the scale and its abridged form was high ($r = 0.95, p < 0.001$), indicating that both versions ordered participants in a similar manner.

4. Discussion

Victim-blaming attitudes are an important risk factor of IPV (Gracia et al., 2020; Gracia, 2014; Waltermaurer, 2012; Taylor & Sorenson, 2005). However, there are no validated instruments that measure victim-blaming attitudes in cases of DV among the adolescent populations. This study aimed to adapt the Victim-Blaming Attitudes in cases of IPVAW scale (Martín-Fernández et al., 2018) and validate it in the adolescent population. The results showed that ADV-VBA can fill this gap in the literature, as it provided strong evidence of the reliability and validity of the ADV-VBA long and short versions. In addition, these scales were related to other constructs such as ambivalent sexism, perpetration and victimization of physical and verbal-emotional abuse, as well as gender and age differences. According to the latent structure, the one-factor model was

replicated as the original scale (Martín-Fernández et al., 2018), where a single dimension was sufficient to explain the variability of victim-blaming attitudes in cases of DV.

Our findings also showed that the scale can discriminate well between respondents with moderate to high levels of victim-blaming attitudes. The information function from the item response theory (IRT) analysis showed that as respondents' victim-blaming levels increased, so did the accuracy of the ADV-VBA. Therefore, the use of ADV-VBA scale would be appropriate for use in at-risk adolescent populations. These more vulnerable populations are characterized by presenting factors that increase the risk of victimization and perpetration of DV (Brem et al., 2018; Leadbeater et al., 2018). Among the DV risk factors associated with this population are adolescents who have been exposed to violence during their childhood (Bell & Bailey, 2020; Crooks et al., 2011; Exner-Cortens et al., 2013; Leviton et al., 2015; Wolfe et al., 2003), who currently live in economically disadvantaged neighborhoods (high rates of poverty and delinquency, majority presence of ethnic minorities) (Gracia et al., 2021; Gracia, Herrero et al., 2009; Henry & Zeytinoglu, 2012; Johnson et al., 2015; Niolon et al., 2015), and adolescents belonging to residential care coming from an unstable family and social backgrounds (Van Lieshout et al., 2019). Applying ADV-VBA scale with this population will be especially useful in detecting high levels of victim-blaming attitudes. In the context of DV prevention and intervention programs aimed at-risk adolescents, knowing these attitudes will allow us to improve these interventions. Knowing victim-blaming attitudes before and after the intervention will provide us with useful information for tailoring interventions to the needs of the adolescents. In addition, it will allow us to monitor and evaluate the effectiveness of interventions aimed at at-risk populations. This scale can be applied to all interventions aimed at the at-risk population, regardless of the setting in which they are developed (prisons, community interventions, etc.). Another context of application is that of research, where previous studies have highlighted the need to continue investigating which factors are key for DV interventions with at-risk populations to be effective (Arrojo, Santirso et al., 2024; Crooks et al., 2019; Reyes et al., 2020; Shorey et al., 2012; Wilkins et al., 2014). Therefore, having this instrument will allow researchers to advance knowledge about its conceptualization, measurement, prevalence, social factors that may influence these attitudes, as well as relationships with other variables.

While the scale is particularly valuable for at-risk adolescents, it can also be used as a measuring tool in schools to identify the prevalence of victim-blaming attitudes in the wider population and to establish effective interventions in this educational environment. The school setting provides access to a significant number of adolescents who are at the stage where they start to engage in dating relationships (Foshee et al., 2005; Petering et al., 2014; Whitaker et al., 2006; Wolfe et al., 2009). In addition, this measure may be useful in guiding DV awareness campaigns for the general population.

Regarding the potential effect of gender in the interpretation of the items, the differential item functioning (DIF) analysis showed that there were no major differences between boys and girls. We found small differences in the item thresholds for item 8 across genders (*“Girls file false complaint to obtain economic benefits and hurt their boyfriends”*), which in turn indicated that boys needed lower levels of victim-blaming attitudes than girls to show agreement with this particular item (i.e., uniform DIF). These differences, however, had almost no impact in the information function of the scale and could be easily addressed allowing these thresholds to vary between genders.

Concerning validity evidence based on the relationship of the ADV-VBA scale with other variables, victim-blaming attitudes were found to be strongly and positively related to hostile and benevolent sexism. This means that adolescents who indicated higher levels of victim-blaming showed higher levels of both types of sexism. This is in line with previous research with adults in the framework of IPVAW, where respondents who display sexist attitudes are more likely to blame victims (Capezza & Arriaga, 2008; De Judicibus & McCabe, 2001; Gracia et al., 2014; Scott & Strauss 2007; Valor-Segura et al., 2011; Vidal-Fernández & Megías, 2014). Our preliminary results extend previous results obtained but in adolescent population.

In terms of predictive validity, our results suggest that victim-blaming attitudes predict DV perpetration and victimization. This finding is consistent with previous research focused on the relationship of DV with another type of attitude, that of DV acceptability. Results showed that the higher DV acceptability attitudes predicted subsequent DV perpetration (Brendgen et al., 2002; Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). More studies focusing on the impact of victim-blaming attitudes on DV are needed. Regarding verbal-emotional abuse, our results are in line with previous research (Fernández-Fuertes et al., 2006; Gómez et al., 2014; Sears et al., 2007) where women showed greater use of verbal-emotional abuse than men in dating

relationships. In terms of age, the literature presents inconsistent findings. Some studies reported significant associations between age and prevalence of DV, indicating higher rates among older adolescents (Borges et al., 2020; Dosil et al., 2020; Mumford et al., 2019; Vives-Cases et al., 2021; Wincentak et al., 2017). However, other studies have found that younger adolescents report higher rates of DV than older adolescents (Foshee et al., 2013; Rubio-Garay et al., 2017). Our findings are consistent with those of the Foshee et al. (2013) study, in which younger adolescents reported a higher prevalence of physical DV. With regard to relationship status, most studies either lack this information to exclude non-dating adolescents from the analysis, making comparison difficult (Mumford et al., 2019; Rubio-Garay et al., 2017). However, Mumford et al. (2019) analyzed different developmental trajectories of dating relationships and DV, indicating that adolescents who had ever dated were more likely to experience DV. In their study, Gabster et al. (2023) showed that having a greater number of partners correlated with experiencing DV. In contrast, our results showed no significant differences between adolescents with and without partners. Including all adolescents (with or without partners) allows us to gain a broader understanding of DV among adolescents (Mumford et al., 2019), so it is necessary to continue research along these lines.

In this study, an abridged 5-item version of ADV-VBA was developed in the same way as the short version of the original scale (Martín-Fernández et al., 2018). The abbreviated scale can be beneficial in circumstances where there is a shortage of either time or space, making it impossible to utilize the extensive version of the scale. The short versions of validated scales may have limitations in terms of reliability and validity, so it is important to ensure they meet appropriate psychometric properties (Smith et al., 2000; Stanton et al., 2002). Our results showed that the short version of ADV-VBA has good internal consistency and adequate validity with a strong relationship to hostile and benevolent sexism. However, we recommend using the long version of the ADV-VBA scale whenever possible.

This study has certain limitations and diversity issues. First, the scale was validated among Spanish adolescents, and therefore further investigation is required to expand the generalizability of our findings to other and more diverse cultural contexts. Second, no information was collected on sexual orientation, ethnicity, and no data were collected on the gender with which they identified, so it was not available for data analysis. Third, the cross-sectional nature of the design impeded the assessment of victim-

blaming attitudes over time, and do not allowed us to establish any form of causality for the relationships found in our validity analyses. Fourth, the measurement invariance of the scale across age could not be properly tested since the sample size for most of the age groups was small ($n < 150$), and hence more research is needed to examine this issue. And fifth, in this study we presented the preliminary results of the abridged version of the ADV-VBA, and it would be convenient to re-test its psychometric properties in other samples and settings (Goetz et al., 2013).

The validation of the ADV-VBA scale represents a significant advancement in understanding adolescent victim-blaming attitudes towards DV. It is essential to have a psychometrically sound instrument in the adolescent context to help us understand victim-blaming attitudes towards DV. Knowing these attitudes will have implications for improving the development of DV prevention and intervention strategies. This study provides a tool that is particularly valuable for at-risk adolescents, as it is better at distinguishing among populations with high levels of victim-blaming attitudes. Applying this scale will enhance the effectiveness of interventions by facilitating a more precise targeting of the issue at hand. This study has important implications for practice, as it provides a comprehensive view of attitudes towards DV in the adolescent population that can shed light into how to improve interventions targeting sexism, victim blaming attitudes and behaviors and, more generally, DV and future IPV.

5. References

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6. Appendix

The Adolescent Dating Violence Victim-Blaming Attitudes scale

A series of statements appears below. Read each one and indicate the degree to which you agree or disagree. Bear in mind that 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree. Circle the number that corresponds to your choice. Remember there are no right or wrong options.

[A continuación, encontrarás una serie de afirmaciones. Lee cada una de ellas e indica en qué grado estás de acuerdo o en desacuerdo. Teniendo en cuenta que 0 = muy en desacuerdo, 1 = en desacuerdo, 2 = de acuerdo, 3 = muy de acuerdo. Marca con un círculo el número correspondiente a la opción elegida. Recuerda que no hay opciones correctas o incorrectas]¹.

-
- | | |
|-----------|--|
| avb-dv 1* | Boys are violent toward their girlfriends because they make them jealous
[Los chicos son violentos con sus novias porque estas les ponen celosos] |
| avb-dv 2* | Boys are violent toward their girlfriends because girls provoke them
[Los chicos son violentos con sus novias porque estas les provocan] |
| avb-dv 3 | Boys are violent toward their girlfriends because girls need to be controlled
[Los chicos son violentos con sus novias porque es necesario controlarlas] |
| avb-dv 4 | Boys are violent toward their girlfriends because girls are difficult to understand
[Los chicos son violentos con sus novias porque las chicas son difíciles de comprender] |
| avb-dv 5 | Boys are violent toward their girlfriends because girls are not patient enough with them
[Los chicos son violentos con sus novias porque las chicas no tienen suficiente paciencia con ellos] |
| avb-dv 6* | Boys are violent toward their girlfriends because it makes them attractive to girls
[Los chicos son violentos con sus novias porque ser así es atractivo para las chicas] |
| avb-dv 7 | Boys are violent toward their girlfriends because girls like it
[Los chicos son violentos con sus novias porque a las chicas les gusta] |
| avb-dv 8 | Girls file false complaints to obtain economic benefits and hurt their boyfriends |

- [Las chicas realizan denuncias falsas para conseguir beneficios o herir a su novio]
- avb-dv 9* Boys would change their violent behavior toward their girlfriends if they were more obedient
[Los chicos cambiarían la conducta violenta hacia sus novias si ellas fueran más obedientes]
- avb-dv 10 Girls could avoid violence from their boyfriends if they knew when to stop talking
[Las chicas podrían evitar la violencia de sus novios si ellas supieran cuando callarse]
- avb-dv 11* If a girl is mistreated by her boyfriend and does not leave him, it means she is not unhappy with the situation
[Si una chica es maltratada por su novio y no le deja, significa que no le desagrada la situación]
- avb-dv 12 A boy is justified by beating his girlfriend if she decides to leave him
[Está justificado que un chico pegue a su novia si esta decide dejarle]
-

*The short AVB-DV form

*Note*¹. The original instructions and items in Spanish appear in brackets.

STUDY 3

The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale: A Validation Study¹

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The Perceived Severity of Adolescent Dating Violence

(PS-ADV) Scale: A Validation Study

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Abstract

Objectives: Dating violence is a widespread social problem with increasing prevalence among adolescents. The perceived severity of dating violence is an important factor related to key aspects of this type of violence, such as acceptability, justification, attitudes toward intervention, and victims' willingness to seek help. The aim of this study was to validate an instrument to assess the perceived severity of dating violence in a sample of adolescents: the Perceived Severity of Adolescent Dating Violence (PS-ADV) scale. *Method:* Two groups of high school students, one with 621 adolescents (47.2% females) and another with 300 (50% females), aged 13-18 years were selected by a two-stage stratified sampling procedure. *Results:* The results indicated that the PS-ADV scale has excellent internal consistency ($\alpha = .89$) and a clear one-factor latent structure (CFI = .96, TLI = .94, RMSEA [90% CI] = .074 [.062, .087]). For validity, the PS-ADV scores were related negatively to victim-blaming attitudes and ambivalent sexism (hostile and benevolent sexism), and positively to empathy (empathic concern, perspective taking, fantasy). *Conclusions:* This study provides evidence that the PS-ADV scale is a psychometrically sound measure for assessing the perceived severity of dating violence among adolescents.

Keywords: dating violence, adolescents, attitudes, perceived severity, measurement, item response theory

1. Introduction

Dating Violence (DV) is a serious issue that affects adolescents worldwide (Collibee et al., 2021; European Union Agency for Fundamental Rights, 2014; Leen et al., 2013; Vives-Cases et al., 2021; Wincentak et al., 2017), with a global prevalence for adolescents aged 13-18 years of 20% for physical violence and 9% for sexual violence (Wincentak et al., 2017). DV is associated with several negative consequences for adolescents' health and well-being, such as depression, anxiety, post-traumatic stress disorder or substance abuse (Molero et al., 2022; Molero et al., 2023; Park et al., 2018; Ramiro-Sánchez et al., 2018; Taquette & Monteiro, 2019; Wincentak et al., 2017). Victims of DV may also experience fear of starting new relationships, difficulties in communicating with their partners or isolation (Park et al., 2018).

The literature on adolescent DV has highlighted the important role of attitudes toward this type of violence (Duval et al., 2020; Reyes et al., 2016; Rubio-Garay et al., 2015; Vagi et al., 2013). Attitudes are understood as beliefs, social norms related to perceived severity, acceptability, and tolerance of DV (Edwards et al., 2022). Research has shown that tolerant attitudes toward DV are related to greater subsequent DV perpetration among adolescents (Brendgen et al., 2002; Courtain & Glowacz, 2021; Foshee et al., 2001; Josephson & Proulx, 2008; McCauley et al., 2013; Vagi et al., 2013). Others' attitudes of tolerance toward DV may also lead to adolescent victims to feel personal guilt and shame. As a result, they may receive less support and help that may, in turn, reinforce the perpetrator's violent behavior (Niolon et al., 2017).

Research has generally focused on four sets of public perceptions and attitudes toward intimate partner violence: acceptability, legitimacy, attitudes toward intervention, and perceived severity (Gracia et al., 2020; Villagrán, Santirso et al., 2023). However, the perceived severity of this violence has received the least scholarly attention even though it is an important factor associated with important issues related to this type of violence, including the public's acceptance or tolerance of it, individuals' sense of personal responsibility, attitudes toward intervention, and reactions to incidents of this kind of violence among victims, professionals and bystanders (Gracia et al., 2020).

Perceived DV severity has also been considered a risk factor for this type of violence. For example, qualitative research has shown that lower perceived DV severity is linked with greater DV acceptability, more justification of violence, lesser likelihood

of victims seeking help and lower bystander intervention (Bowen et al., 2013; Casey et al., 2017; Cho et al., 2023; Edwards et al., 2022; Rojas-Solís & Romero-Méndez, 2022; Smith et al., 2005). Adolescents who perceive low levels of DV severity are also less likely to intervene to prevent DV recurrence (Casey et al., 2017; García-Díaz et al., 2018). Although previous qualitative studies have addressed perceived DV severity in adolescents, it is rarely their main focus. Hence more research assessing the perceived severity of this type of violence is still needed (Black & Weisz, 2004; Bowen et al., 2013; Storer et al., 2020). Psychometrically sound instruments are key for accurately assessing perceived DV severity in adolescents. However, to the best of our knowledge, there are no validated quantitative instruments that specifically address the perceived severity of DV among adolescents. The appropriate assessment of perceived DV severity can contribute to better inform and assess the effectiveness of interventions to prevent DV among adolescents (Leen et al., 2013; Robles et al., 2015; Rojas-Solís & Romero-Méndez, 2022).

2. The Present Study

The purpose of this study is to adapt and validate the Perceived Severity of Intimate Partner Violence Against Women scale (PS-IPVAW; Martín-Fernández et al., 2022) to the adolescent population. The PS-IPVAW has appropriate psychometric properties and has been widely used in a variety of contexts for several purposes and with different adult samples (general population, IPVAW offenders and law enforcement professionals) (Catalá-Miñana et al., 2013; El Sayed et al., 2020; Expósito-Álvarez et al., 2021; Gracia et al., 2011, 2014; Lila et al., 2013; Lila et al., 2019; Martín-Fernández, Gracia, & Lila, 2018; Martín-Fernández, Gracia, Marco, et al., 2018; Martín-Fernández et al., 2021, 2022; Sani et al., 2018; Vargas et al., 2017; Villagrán et al., 2020, 2022; Villagrán, Martín-Fernández, et al. 2023; Vitoria-Estruch et al., 2017). In the intimate partner violence against women (IPVAW) context, the perceived severity of this type of violence has been related to other relevant constructs, such as empathy, ambivalent sexism and victim-blaming attitudes (Gracia et al., 2011; Lila et al., 2013; Martín-Fernández, Gracia, & Lila, 2018; Martín-Fernández et al., 2022).

For validation purposes, the adaptation of the PS-IPVAW to the adolescent population is also conducted by exploring its relations with the same set of theoretically relevant variables (i.e., with victim-blaming attitudes, sexist attitudes and empathy).

Victim-blaming attitudes justify and legitimize violence against women in certain circumstances (Gracia, 2014). These attitudes are important because perceptions of who is responsible for violence influence public responses (Gracia et al., 2009; Martín-Fernández, Gracia, & Lila, 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). These attitudes may influence other key factors of DV, such as acceptability of violence, less support for the victims from their informal social network, or aggressors fostering violent behaviors (Gracia, 2014; Gracia et al., 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). For sexist attitudes, previous studies have documented a close relation between these attitudes and perceived IPVAW severity (Martín-Fernández et al., 2022; Martín-Fernández, Gracia, Marco, et al., 2018; Villagrán et al., 2022). Ambivalent sexism has also been identified as a key factor related to DV (Dosil et al., 2020; Erdem & Sahin, 2017; Fernández-Antelo et al., 2020; Guerra-Marmolejo et al., 2021; Juarros-Basterretxea et al., 2022; Morelli et al., 2016; Olcay & Yeşiltepe, 2023). In this regard, research has linked adolescent DV with higher hostile and benevolent sexism levels (Guerra-Marmolejo, 2021). Finally, empathy is a multidimensional construct that includes cognitive and emotional aspects and has been linked with social competence and violent behavior (Endresen & Olweus, 2001; Halberstadt et al., 2001; Martos Martínez et al., 2021). Several studies conducted with adolescents have found that empathy is negatively associated with violent behavior (Euler et al., 2017; Hartmann et al., 2010; Martos Martínez et al., 2021; Vachon et al., 2014). Other studies have linked empathy with other types of violence, such as bullying (Carmona-Rojas et al., 2023; Espelage et al., 2018; Euler et al., 2017; Hartmann et al., 2010; Zych et al., 2018).

Given the importance of the availability of reliable and valid instruments for research and prevention in the DV field, the present study, first, examines the latent structure and internal consistency of the Perceived Severity of Adolescent Dating Violence (PS-ADV) scale; second, evidence for the validity of this instrument is assessed. Finally, a gender invariance analysis is conducted to ensure the comparability of the PS-ADV scores between boys and girls.

3. Method

3.1 Participants

The sampling method used to collect the dataset was a two-stage stratified cluster sampling. First, all the public and private secondary schools in a region of Spain

(Valencia) were selected. Of them, three public and three private schools were then selected. Second, five groups from each school were randomly selected to participate in the present study. The initial sample consisted of 1,048 adolescents. After removing the responses from the participants who did not respond to questionnaires or who had missing socio-demographic data, the final sample consisted of 921 adolescents.

We used two samples for the present study. The first sample was used to assess the psychometric properties of the PS-ADV scale. It comprised 621 participants (47.2% girls) aged 13-18 years ($M = 15.34$, $SD = 1.49$). The second sample was used to assess the measurement invariance of the scale across genders. This sample included 300 additional high school students (50% girls) aged 13-18 years ($M = 15.33$, $SD = 1.55$). The socio-demographic characteristics of both samples are displayed in Table 3.1.

Table 3.1. Sociodemographic characteristics of Sample 1 and Sample 2

	Sample 1	Sample 2
	<i>n</i> (%)	<i>n</i> (%)
<i>Gender</i>		
Female	293 (47.2)	150 (50.0)
Male	328 (52.8)	150 (50.0)
<i>Age</i>		
13	81 (13.0)	40 (13.3)
14	128 (20.6)	38 (12.7)
15	112 (18.0)	66 (22.0)
16	134 (21.6)	61 (20.3)
17	127 (20.5)	44 (14.7)
18	39 (6.3)	65 (21.7)
<i>Educational level</i>		
Compulsory Secondary Education	382 (61.5)	185 (61.7)
Baccalaureate	152 (24.5)	75 (25.0)
Technical and Vocational Training	87 (14.0)	40 (13.3)
<i>Nationality</i>		
Spanish	533 (85.8)	252 (84.0)
Immigrant	88 (14.2)	48 (16.0)

Note: The level of education reflects the students attending each level. In the Spanish educational system, Compulsory Secondary Education comprises 10 years of formal education, Baccalaureate 12 years of formal education, and Technical and Vocational Training 11 or 12 years of formal education. In sample 1, Immigrant includes 55.7% students of Latin American nationalities, 19.3% European, 14.8% African, and 10.2% Asian; in sample 2, immigrant nationality is as follows: 60.4% Latin American, 22.9% European, 14.8% African, and 12.5% Asian.

3.2 Measures

- **Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale.** We adapted and subsequently validated the Perceived Severity of Intimate Partner Violence against Women scale (PSIPVAW; Martín-Fernández et al., 2022) to an adolescent population. To adapt the PS-IPVAW, a panel of four experts reviewed the items to adapt them to dating violence. First, two experts adjusted the language of items (e.g., “In an argument, a boy hits his girlfriend and later apologizes to her”). The other two experts evaluated their clarity and representativeness for assessing the construct. Second, items were discussed in a focus group with all the experts and the final version of the scale was determined (Appendix). This instrument consists of seven items in which an item presents a DV scenario (e.g., “A girl has reported her boyfriend for assaulting her, but the boy continues to threaten her”). Respondents were asked to rate the severity of each scenario on a scale from 0 to 10 (the higher the number, the more severe the scenario is rated).

- **Victim-blaming Attitudes in Cases of Intimate Partner Violence against Women Scale** (VB-IPVAW; Martín-Fernández, Gracia, & Lila, 2018). The VB-IPVAW scale comprises 12 items with which respondents have to indicate their level of agreement with each one (e.g., “Boys are violent toward their girlfriends because girls need to be controlled”) on a 4-point Likert-type scale (0 = *strongly disagree*, 3 = *strongly agree*). This scale has been validated in a Spanish population and is closely linked to other related constructs such as ambivalent sexism, and attitudes toward intervention (Gracia et al., 2018; Martín-Fernández, Gracia, & Lila, 2018). This instrument showed good internal consistency ($\alpha = .88$).

- **Ambivalent Sexism Inventory** (ASI; Glick & Fiske, 1996). In this study, we used the adolescent Spanish version (Lemus-Martín et al., 2008). This inventory has two 10-item subscales. The hostile sexism subscale refers to attitudes of prejudice and discrimination against girls based on their perceived inferiority to boys (e.g., “Girls are too easily offended”). Benevolent sexism is defined as an attitude that stereotypes girls and limits them to certain roles (e.g., “A boy can feel incomplete if he doesn’t date a girl”). This measure consists of a 6-point Likert-type response format (1 = *strongly disagree*, 6 = *strongly agree*). This inventory has been adapted and validated in different countries and populations (Etchezahar, 2012; Glick et al., 2000; Glick & Hilt, 2000; Glick et al., 2002; Ibabe et al., 2016; Lemus-Martín et al., 2008; Rudman & Glick, 2012). The

internal consistency of both subscales and the total scale was good for the first sample and the second sample ($\alpha_{\text{hostile}} = .88$, $\alpha_{\text{benevolent}} = .84$, $\omega_{\text{total}} = .94$, $\omega_{\text{hostile}} = .91$, $\omega_{\text{benevolent}} = .83$).

- **Interpersonal Reactivity Index, Brief Form** (IRI; Davis, 1980; Ingoglia et al., 2016). The Spanish version of items was used (Carrasco et al., 2011). The brief form of the IRI includes four subscales: a) empathic concern evaluates emotional reactions to others' negative experiences (e.g., "I often have tender feelings and concern for people less fortunate than myself"); b) perspective taking, that assesses respondents' ability to understand the other person's point of view (e.g., "Before I criticize someone, I try to imagine how I would feel if I were in their place"); c) personal distress, that addresses emotional reactions of discomfort when observing others' negative experiences (e.g., "I tend to lose control during emergencies"); and d) fantasy, that focuses on the ability to identify oneself with fictional characters in novels or movies (e.g., "I truly identify with the feelings of the characters in a novel"). The brief version includes 16 items with a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). One item from the empathic concern subscale (item 9) was removed because its item-total corrected correlation was almost zero ($r = -.01$). This scale has been validated in a Spanish population (Carrasco et al., 2011; Pérez-Albeniz et al., 2003) and has been linked to partner violence (Lila et al., 2013; Romero-Martínez et al., 2019). The overall internal consistency of this measure and its subscales was adequate ($\alpha_{\text{empathic concern}} = .66$, $\alpha_{\text{perspective taking}} = .70$, $\alpha_{\text{personal distress}} = .78$, $\alpha_{\text{fantasy scale}} = .82$, $\omega_{\text{total}} = .91$, $\omega_{\text{empathic concern}} = .65$, $\omega_{\text{perspective taking}} = .78$, $\omega_{\text{personal distress}} = .78$, $\omega_{\text{fantasy scale}} = .87$).

3.3 Procedure

A survey was designed to collect data in a face-to-face setting. It included the PS-ADV scale, the VB-IPVAW scale, the ASI, and the IRI. In addition, questions were asked about some socio-demographic data (e.g., age, gender, nationality, school, current grade at high school, socio-economic level, whether they had a partner). Participants were informed of the purpose of the study and the anonymity of the data, which were collected before completing the survey. The high schools in the study were informed of the study prior to data collection, which took place from November 2021 to May 2022. This study was approved by the University of Valencia Ethics Committee.

3.4 Data Analysis

The following analyses were conducted in the first sample to assess the psychometric properties of the PS-ADV. First, a descriptive analysis was carried out by computing the mean, standard deviation, skew and kurtosis statistics, and the item-total corrected correlation for each item.

We then tested the factorial structure of the scale by conducting a confirmatory factor analysis (CFA) and replicating the one-factor model found in previous studies with adult populations (Martín-Fernández et al., 2022; Villagrán et al., 2023). We used robust maximum likelihood (MLR) as the estimation method because this procedure yields accurate parameter estimates for non normally distributed data (Bandalos, 2014; Yılmaz, 2019). The model's goodness of fit was evaluated by using a combination of fit indices: values of the comparative fit index (CFI) and Tucker-Lewis's index (TLI) equaling or above .95, and values of the root mean squared error by approximation (RMSEA) equaling or lower than .06 or .08 were considered to be an excellent or good fit, respectively (Hu & Bentler, 1999). Once the factor structure was established, we examined the scale's internal consistency using Cronbach's α . The validity evidence of the PS-ADV was inspected later by relating participants' factor scores to other relevant attitudinal constructs, such as ambivalent sexism, victim-blaming attitudes and empathy.

We finally assessed the scale's measurement invariance across gender using a second sample and conducting a multigroup CFA because carrying out this analysis with the same sample can yield overestimated fit indices for the factorial model. To this end, we tested configural, metric, and scalar invariance (Putnick & Bornstein, 2016). Configural invariance evaluates whether participants conceptualize the construct (i.e., perceived severity) in a similar way by ensuring that the same factorial structure can be applied for boys and girls. Metric invariance tests if items have the same factor loadings in both groups, and if items present similar relevance for boys and girls. Scalar invariance assesses whether the same response pattern yields the same factor scores for boys and girls by fixing item loadings and intercepts to the same value across groups. We used MLR as an estimation method and compared all the models by means of the log-likelihood ratio test (LRT) and Cheung and Rensvold's (2002) guidelines for continuous data. In particular, we deemed the instrument to be invariant across gender if the following criteria were met: a) there were no significant differences among the configural,

metric, and scalar invariance models in the LRT; b) the difference in the comparative fit index (ΔCFI) was lower than .001 between the configural and metric models, and between the metric and scalar models. If scalar invariance was achieved, then the latent means of the measured construct could be compared across gender.

All the analyses were carried out in the statistical package R (R Core Team, 2023) using the psych library (Revelle, 2023), and Mplus 8.4 for the CFA and the multigroup CFA (Muthén & Muthén, 2017).

4. Results

4.1 Descriptive Analysis

The descriptive statistics of the PS-ADV items obtained mean values above 8.00, with standard deviation around 1.70 for most items, which indicates that most participants rated the scenarios depicted by items as severe. The skew and kurtosis statistics depicted how participants' responses were concentrated mainly on the upper extreme of the response scale, which showed a leptokurtic and negatively skewed distribution for most items (Table 3.2). We also found that the item-test corrected correlations were high for all the items, which indicates a close relation between each item and the direct scores of the scale.

Table 3.2. Descriptive Statistics of the PS-ADV Items

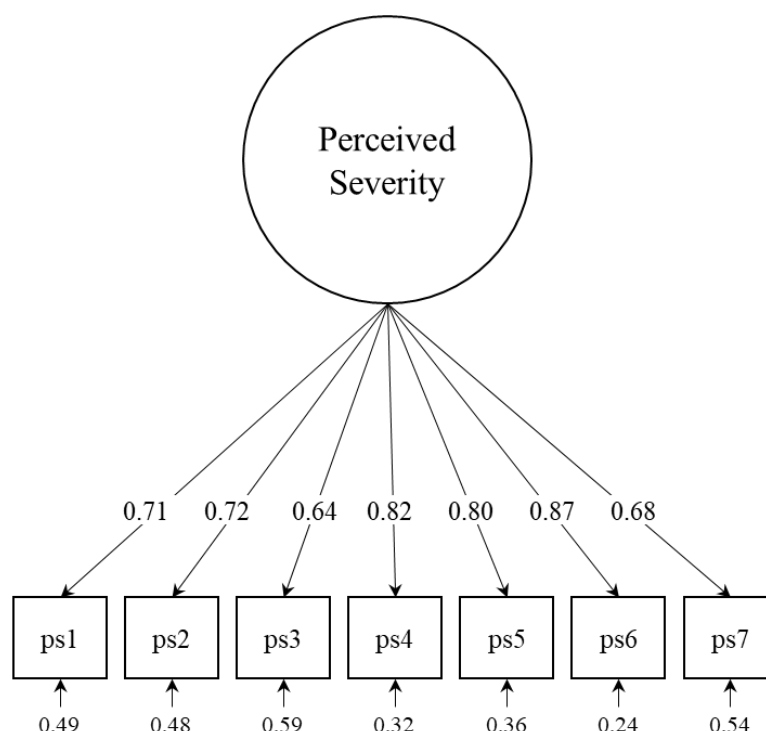
	M	SD	Skew	Kurtosis	$r_{\text{item-test}}$
PS1	9.19	1.41	-3.00	12.81	0.68
PS2	8.01	2.19	-1.21	1.03	0.68
PS3	9.45	1.29	-4.00	10.15	0.60
PS4	7.88	2.06	-1.18	1.28	0.79
PS5	8.67	1.77	-1.82	3.82	0.74
PS6	8.98	1.57	-2.16	5.67	0.81
PS7	8.71	1.82	-2.01	4.97	0.63

Note: PS = PS-ADV item; *M* = mean; *SD* = standard deviation; $r_{\text{item-test}}$ = corrected item-test correlation

4.2 Confirmatory Factor Analysis and Internal Consistency

We conducted a CFA by replicating the one-factor model found in the adults version of the scale (Martín-Fernández et al., 2022). The one-factor model's goodness of fit was adequate (CFI = .96, TLI = .94, RMSEA [90% CI] = .074 [.062, .087]), which

Figure 3.1. One-factor CFA Model



indicates that one factor was enough to account for the variability of the PS-ADV. The standardized factor loadings were above .60 for all the items, which supports the notion that all the items were closely related to the measured construct (Figure 3.1). We found that the scale's internal consistency was good ($\alpha = .89$).

4.3 Validity Evidence

Using the factorial scores, we explored thereafter the relation of perceived severity to other IPVAV-related constructs, such as victim-blaming attitudes, ambivalent sexism, and empathy (Table 3.3). We found a close significant and negative relation between the PS-ADV scores and victim blaming, hostile sexism, and benevolent sexism. In particular, our data showed that the participants with higher perceived severity levels had, on average, lower levels of victim-blaming attitudes. A similar trend was found for

ambivalent sexism, where the participants presenting higher levels of perceived severity tended to also show lower levels of both hostile and benevolent sexism. For empathy, we found a significant and positive relation between participants' PS-ADV scores and the subscales of the IRI perspective taking, fantasy, and empathic concern. This indicates that the participants with higher perceived severity levels tended to present higher levels on these dimensions. No relation was found between the PS-ADV scale and the personal distress subscale.

Table 3.3. Correlations between the PS-ADV and other constructs

	1	2	3	4	5	6	7
1. PS-ADV							
2. Victim-blaming	-0.42***						
3. Hostile sexism	-0.47***	0.51***					
4. Benevolent sexism	-0.31***	0.35***	0.62***				
5. Empathic Concern	0.22***	-0.12**	-0.01	0.10**			
6. Perspective Taking	0.23***	-0.11**	-0.09**	0.04	0.60***		
7. Personal Distress	0.07	0.01	-0.02	0.10**	0.26***	0.29***	
8. Fantasy Scale	0.22**	-0.14***	-0.13**	-0.04	0.36***	0.41***	0.42***

Note: ** $p < 0.01$; *** $p < 0.001$.

4.4 Measurement Invariance

The measurement invariance of the PS-ADV across gender was evaluated by means of a multigroup CFA in the second sample (Table 3.4). We first examined configural invariance as a base-line model and found that it showed excellent goodness of fit to data. This result implies that the same factorial model could be applied for girls and boys. We then tested metric invariance by fixing item loadings to the same value for girls and boys. We also found an excellent goodness of fit and no significant differences between configural and metric invariance in the LRT, $\Delta\chi^2_{SB}(6) = 10.43$, $p = .107$; $|\Delta CFI| = .007$. This, in turn, supports the notion that metric invariance could be held.

After establishing metric invariance, scalar invariance was assessed by constraining the item intercepts for girls and boys to the same value. The well model fitted the data. Once again, we did not find any significant differences between metric and scalar invariance, $\Delta\chi^2_{SB}(6) = 11.77$, $p = .067$; $|\Delta CFI| = .006$.

Table 3.4. Measurement invariance fit indices

	χ^2 (df)	CFI	$ \Delta\text{CFI} $	TLI	RMSEA (90% CI)
Configural	40.24 (42)	0.983		0.975	0.054 (0.00; 0.089)
Metric	51.16 (36)	0.976	0.007	0.971	0.0581 (0.019; 0.089)
Scalar	61.76 (30)	0.97	0.006	0.968	0.060 (0.027; 0.089)

Note: CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean-squared error by approximation.

Once scalar invariance was supported, we conducted a latent mean analysis to compare girls and boys' latent means. The model yielded an excellent goodness of fit (CFI = .97, TLI = .97, RMSEA [90%CI] = .065 [.035, .093]), and showed that girls had higher perceived severity levels than boys (Z [SE] = 0.733 [0.156], $p < .001$). In particular, a standardized mean difference of 0.733 indicated that 76.8% of the girls presented higher perceived severity levels than the average for boys.

5. Discussion

In this study, we set out to adapt and validate a widely used instrument for assessing the perceived severity of IPVAV in adults (PS-IPVAV; Martín-Fernández et al., 2022) to the adolescent population. The results obtained in latent structure and reliability terms showed that the instrument replicates the one-factor model of the original scale (Martín-Fernández et al., 2022) and has good internal consistency, which means that it accurately assesses the measured construct, i.e., the perceived severity of DV, in the adolescent population.

For the analysis of invariance across gender, the results of this study indicated that both girls and boys shared the same conceptualization of the perceived severity of DV. There were no differences in the structural parameters of items (i.e., loadings and thresholds) between boys and girls. This finding means that the interpretation of items was similar and, therefore, both groups were comparable because the same response pattern yielded identical results for boys and girls. Our results also revealed that boys tended to perceive DV scenarios as less severe than girls, which is consistent with previous research in the IPVAV context (Dardis et al., 2017; Martín-Fernández et al., 2022; Villagrán et al., 2022).

For validity evidence, we analyzed the relationship between adolescents' perceived severity of DV, victim-blaming attitudes, ambivalent sexism, and empathy. Our

findings showed that perceived severity was related to these three constructs. For victim-blaming attitudes, we found a significant negative relation between perceived severity and victim-blaming attitudes, which indicates that the adolescents who perceived DV scenarios as less severe were more likely to show higher levels of victim-blaming attitudes. Our results are consistent with previous research that has linked perceived severity with attitudes of victim-blaming in the IPVAV context (Gracia et al., 2018; Lelaurain et al., 2021; Martín-Fernández, Gracia, & Lila, 2018; Martín-Fernández et al., 2022; Villagrán et al., 2020, 2023).

On sexist attitudes, our results also showed a significant negative relation between perceived severity and ambivalent sexism. The adolescents who perceived lower DV severity in scenarios presented higher hostile and benevolent sexism levels. These results coincide with previous research, which has indicated that perceived severity is related to both hostile and benevolent sexism in adult populations (Lelaurain et al., 2021; Martín-Fernández et al., 2022; Villagrán et al., 2023). Guerra-Marmolejo et al. (2021) found a similar trend among adolescents, where sexist attitudes were related to the perception and acceptance of violence against women. This is also consistent with previous research that has linked ambivalent sexism and DV perpetration (Dosil et al., 2020; Erdem & Sahin, 2017; Fernández-Antelo et al., 2020; Guerra-Marmolejo et al., 2021; Morelli et al., 2016; Olcay & Yeşiltepe, 2023).

Concerning empathy, our results showed that the adolescents with higher levels of perceived DV severity tended to also present higher empathy levels, especially for its cognitive aspects. Our results specifically indicated a positive relation between perceived severity of DV and the perspective taking and fantasy subscales of the IRI. The adolescents with high perceived severity of DV tended to empathize more with fictional characters, and also showed a greater ability to put themselves in the other person's place. We also found a significant positive relation between perceived severity and empathic concern that, in turn, indicated that the adolescents who perceived more severity in scenarios were better able to identify when others experience negative events. This result is congruent with previous findings showing a positive relation between empathy and perceived severity in adults (Lila et al., 2013), and between empathy and attitudes toward aggression in adolescents (Martos Martínez et al., 2021). This is also consistent with previous studies with adolescents, and indicates that the lower the empathy level, the higher the likelihood of engaging in violent behaviors (Euler et al., 2017; Hartmann et al.,

2010; Martos Martínez et al., 2021; Vachon et al., 2014). Although this relation between perceived severity and empathy seems promising for developing intervention strategies, further research is needed to explore the direct effect of empathy on perpetrating DV (Dodaj et al., 2020; Romero-Martínez et al., 2016).

This study is not without some limitations. First, as the PS-ADV was developed with a sample of adolescents in the Spanish cultural setting, and we cannot generalize our findings to other cultural contexts. Further research is needed to examine the psychometric properties of the PS-ADV in other socio-cultural contexts and to examine how it relates to other relevant constructs (Villagrán, Santirso, et al., 2023). Second, the cross-sectional design of our study prevented us from controlling possible changes in participants' perceived severity over time. Third, DV does not occur in isolation and is often associated with other issues during adolescence that are not addressed in the present study. Adolescence has been identified as a period of greater psychosocial vulnerability or difficulty compared to childhood and adulthood (Reyes et al., 2023; Steinberg & Morris, 2001). At a time of decreased parental influence and increased peer influence, adolescents interact with each other without adult supervision (Alcaide et al., 2023; Baumrind, 1991). Psychosocial vulnerability in adolescence is reflected not only in increased risk for violent behavior (e.g., dating violence), but also in greater difficulties in school (Steinberg & Morris, 2001; Veiga et al., 2023) and other maladaptive behaviors (e.g., early substance use) (Martinez-Escudero et al., 2023; Villarejo et al., 2023). Previous research has confirmed that DV is associated with other serious psychosocial adjustment problems (Campo-Tena, 2023; Exner-Cortens, 2013).

Our findings have important implications for policy and practice. To our knowledge, this is the first study that aims to validate a self-reported scale assessing the perceived severity of DV among adolescents. Previously, qualitative assessment measures have been used to assess perceived DV severity with adolescent samples (Black & Weisz, 2004; Bowen et al., 2013; Storer et al., 2020). Moreover, our findings extend knowledge on the association between perceived DV severity and victim-blaming attitudes, ambivalent sexism, and empathy. Changing adolescents' attitudes and beliefs about DV is an important intervention goal in DV prevention programs (Crooks et al., 2019). To this end, such programs often use intervention strategies to address the perceived severity of DV, such as discussion of romantic love myths and role-playing to promote healthy violence-free dating relationships. In line with this, previous systematic

reviews and meta-analyses have included adolescents' attitudes toward DV among their measures to assess the effectiveness of interventions (De la Rue et al., 2014, 2017; Edwards & Hinsz, 2014; Fellmeth et al., 2015; Lee & Wong, 2020; Ting, 2009). However, the assessment of attitudes makes it difficult to compare different studies due to the diversity of the instruments used to measure attitudes toward DV. In addition, when measured, attitudes toward DV are usually assessed as a broad concept and specific measures are not contemplated, such as perceived severity and victim-blaming attitudes in adolescents. Further studies should be conducted to evaluate how these attitudes are related to other risk factors that may contribute to the complex multifaceted event of DV. Assessments of these attitudes may further help to identify adolescents at risk for DV, which could help to tailor interventions to the specific needs of these more vulnerable populations (Arrojo et al., 2023; Crooks et al., 2019; Ferreira et al., 2022; Piolanti & Foran, 2021; Reyes et al., 2020).

The development of the PS-ADV is an important step in the study of attitudes toward DV. This instrument may be useful in research to better understand the DV phenomenon, its impact on other relevant constructs, and to identify factors that increase or decrease the risk of DV. The PS-ADV is a short measure that is easy to implement and may be valuable for assessing perceived severity in the general population of adolescents in large-scale studies in which time of application and space are limited, such as demographic surveys (Gracia et al., 2018; Martín-Fernández et al., 2021, 2022). This instrument could also be used to test the effectiveness of programs and interventions that aim to prevent DV in both educational and community settings. The PS-ADV scale could also be used to monitor whether there has been an impact on adolescent attitudes following awareness campaigns and prevention policies (Gracia et al., 2023; Gracia et al., 2020), and could be useful for identifying adolescents at risk of DV and evaluating the effectiveness of interventions and prevention strategies that address this vulnerable population.

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7. Appendix

The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale

Below are seven scenarios that can occur between a boy-girl couple. On a scale from 0 to 10, please indicate how serious these scenarios seem to you (the higher the number, the more severe the scenario).

[A continuación, se describen siete situaciones que pueden ocurrir entre una pareja de chico y chica. Indica en una escala de 0 a 10 hasta qué punto esas situaciones te parecen graves (a mayor puntuación, mayor gravedad)]¹.

ps-dv 1	A girl has reported her boyfriend for assaulting her, but the boy continues to threaten her. [Una chica ha denunciado a su novio por haberle agredido, pero el chico continúa amenazándola]
ps-dv 2	In an argument, a boy hits his girlfriend and later apologizes to her. [En una discusión, un chico pega a su novia y después le pide perdón]
ps-dv 3	A girl is frequently beaten by her boyfriend, sometimes causing small injuries and bruises, although she does not want to report these acts. [Una chica es golpeada frecuentemente por su novio, causándole a veces pequeñas lesiones y moratones, aunque no quiere denunciar los hechos]
ps-dv 4	A couple argues, the boy insults the girl and threatens to hit her. [Una pareja discute, el chico insulta a la chica y amenaza con pegarle]
ps-dv 5	A girl is constantly belittled and humiliated by her boyfriend. [Una chica es despreciada y humillada continuamente por su novio]
ps-dv 6	A girl is repeatedly threatened and insulted by her boyfriend, who sometimes pushes her or hits her. [Una chica es amenazada e insultada continuamente por su novio, quien a veces le llega a empujar o golpear]
ps-dv 7	A couple argues constantly, insulting and threatening each other, often coming to blows. [Una pareja discute continuamente, insultándose y amenazándose mutuamente, llegando a las manos con frecuencia]

*Note*¹. In brackets, the original instructions and items in Spanish.

General discussion and conclusions

1. General discussion

In this doctoral thesis, three studies have been carried out to respond to the problem of DV. The first study was a review of the literature to find out what DV programs are currently being developed with a population of at-risk adolescents. A meta-analysis was also conducted, including RCTs and quasi-experimental studies with more than one month of follow-up. The effectiveness of the programs was evaluated using DV composite scores and separately analyzing different types of DV (physical, sexual, psychological, and attitudes toward DV). The second and third studies address the lack of assessment tools that adequately measure different types of attitudes, particularly victim-blaming and perceived severity of DV. The psychometric properties of both scales were analyzed, considering their relationships with other variables (i.e., hostile and benevolent sexism, victimization and perpetration of DV, empathy).

This chapter presents a general discussion of the main findings from the three studies that make up the doctoral thesis. In addition, practical implications, identified limitations, and directions for future research are presented. Finally, a general conclusion is offered.

1.1 Dating violence prevention programs for at-risk adolescents: A Systematic Review

In the first study of the thesis, a systematic review with meta-analysis if effectiveness of DV prevention programs for adolescents with risk factors for DV was conducted. A total of 17 studies were included in the qualitative analysis and 11 RCTs

were included in the meta-analysis. The results of the composite measures of the meta-analysis showed that the implementation of DV prevention programs for at-risk adolescents generally reduced DV perpetration and victimization. When the different types of violence were analyzed separately, the results indicated reductions in physical and sexual DV perpetration and physical DV victimization. However, there were no significant reductions in sexual DV victimization or psychological DV perpetration and victimization. In addition, no significant changes in attitudes toward DV were obtained.

Our results regarding composite measures of DV are in line with previous literature, as a decrease in DV perpetration is expected to lead to a decrease in victimization (Lee & Wong, 2020). With regard to DV perpetration, previous studies that did not specifically target at-risk populations yielded mixed results. Some studies reported significant effects (Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021), while others did not identify significant differences in overall DV perpetration. In terms of DV victimization, significant differences were identified only by Piolanti and Foran (2021).

Regarding the combined measures of victimization and perpetration related to DV, our results are consistent with those of the Piolanti and Foran (2021) meta-analysis. However, in the study conducted by Piolanti and Foran (2021), they incorporated instances of both physical and sexual violence, whereas our meta-analysis included physical, psychological, sexual, and cyber DV. Due to this factor, our meta-analysis represents a notable advancement in the literature, encompassing a broader range of dependent variables and achieving a significant reduction in them within our findings.

Regarding the separate results for the different types of DV, for physical DV our results showed a significant reduction in this variable after the intervention, in line with the results of previous meta-analyses (Piolanti & Foran, 2021; Russell et al., 2021). In terms of sexual DV perpetration, our results showed significant reductions. This result had only been found in two previous meta-analyses. However, these studies did not specifically target a particular group of adolescents at risk (Lee & Wong, 2020; Russell et al., 2021). These results are promising because programs aimed at vulnerable populations have the potential to effectively decrease sexual DV perpetration.

Regarding sexual DV victimization, the results did not show a significant reduction, similar to most previous meta-analyses (De la Rue et al., 2014, 2017; Fellmeth

et al., 2013, 2015; Piolanti & Foran, 2021). This may be because sexual DV is a sensitive topic to discuss in adolescence and, therefore, may provoke defensive reactions that reduce the impact of this variable (Lee & Wong, 2020). In the context of psychological DV, no statistically significant findings were observed. This could be attributed to the challenge adolescents face in identifying this form of violence, making it more complex for them to acknowledge whether they have experienced or perpetrated such DV. Therefore, it is essential for future programs targeting at-risk populations to specifically focus on addressing psychological DV in order to mitigate both victimization and perpetration.

The findings from the meta-analysis concerning attitudes of rejection toward DV did not indicate a significant increase in the experimental group compared to the control group. Our results are inconsistent with previous literature, as previous studies have found significant increases in this variable (De la Rue et al., 2014, 2017; Fellmeth et al., 2013, 2015; Lee & Wong, 2020; Ting, 2009). This discrepancy may be attributed to our sample composition, consisting of at-risk adolescents residing in disadvantaged neighborhoods characterized by elevated conflict levels and acceptance of violence (Gracia et al., 2021). In addition, these at-risk adolescents are likely to have experienced DV, which may contribute to the development of accepting attitudes toward DV. As a result, these adolescents may be more resistant to attitude change.

In line with the findings from the meta-analysis conducted by Piolanti and Foran (2021), the subgroup analyses did not reveal any significant effects on DV or attitudes toward DV based on intervention length. This may be due to the fact that there was wide variation in the duration of the programs, making it difficult to assess their impact on outcomes. However, according to Lee and Wong's (2020) meta-analysis, shorter programs demonstrated significantly stronger effects due to their more direct approach. Unlike our study, their subanalysis included diverse populations rather than specifically focusing on at-risk adolescents. Therefore, different results may be obtained by varying the analysis of this variable and its influence on intervention duration. Further research specifically targeting at-risk populations is needed to explore the impact of intervention duration on this demographic.

Regarding qualitative analysis, it should be noted that the majority of studies included in the review were conducted within school settings. Therefore, it is possible

that students at higher risk of DV have dropped out of the school setting, and may not be eligible for these interventions. Comparing interventions conducted outside the school setting with those implemented in community-type settings is challenging due to the limited availability of non-school interventions. In terms of intervention components, addressing education and skills training to promote healthy relationships and relationship conflict resolution skills has been identified as a characteristic of effective interventions. A previous systematic review emphasized the importance of incorporating skill development elements to encourage behavioral change among participants (De la Rue et al., 2017). As a result, a recommendation for enhancing interventions would be to integrate this material into the programs' curriculum.

Among the programs analyzed in the meta-analysis, those delivered to mixed samples demonstrated significant improvements in attitudes of rejection toward DV. However, programs targeting same-gender participants did not show a positive impact on attitude change. The observed differences prompt consideration of the extent to which participants' gender influences attitudinal change within the program.

In terms of measurement instruments, the CADRI is commonly employed to assess physical, psychological, and sexual variables in research studies (Wolfe et al., 2001). This instrument was developed and validated in an adolescent population and measures both victimization and perpetration of DV. Different instruments are used to measure attitudes toward DV, so standardizing the assessment of attitudes toward DV is essential to enable meaningful comparisons of results across studies.

In conclusion, this is the first systematic review of only DV prevention programs specifically aimed at at-risk adolescents. Furthermore, this meta-analysis represents the first attempt to evaluate physical, psychological, sexual, and cyber violence, along with attitudes toward DV, within at-risk populations. Another aspect to highlight is that this systematic review has included prevention programs regardless of the setting (school, community, medical centers, etc.), as the priority was to select programs aimed at vulnerable adolescents in all settings. In terms of the results obtained, they are highly promising, as they suggest that interventions targeting these at-risk groups reduce both DV perpetration and victimization. It is crucial to emphasize these interventions and recognize the necessity of independently evaluating the results specific to this population, distinct from those of the general population. Future research should delve into the critical

factors that contribute to the effectiveness of these programs in preventing DV (Shorey et al., 2012; Wilkins et al., 2014).

1.2 Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale

Victim-blaming attitudes are an important risk factor of IPV (Gracia et al., 2020; Gracia, 2014; Taylor & Sorenson, 2005; Waltermaurer, 2012). However, there were no validated instruments that measured these victim-blaming attitudes in DV cases among the adolescent population. Therefore, the second study of the thesis focused on adapting the Victim-Blaming Attitudes in cases of IPVAW scale (Martín-Fernández et al., 2018) and validating it in adolescent population. The results of this study showed that the ADV-VBA scale provided strong evidence of reliability and validity for both the long and short versions. Furthermore, these measures exhibited associations with other relevant constructs including ambivalent sexism, perpetration and victimization of physical and verbal-emotional abuse, alongside disparities in gender and age. Based on the latent structure, the ADV-VBA successfully replicated the one-factor model proposed by Martín-Fernández et al. (2018). This one-dimensional model effectively explains the variability in victim-blaming attitudes related to DV among adolescents.

Based on the results of IRT analysis, we observed that as respondent's victim-blaming attitudes increased, the ADV-VBA scale became more accurate. Thus, the use of the ADV-VBA scale would be appropriate in adolescent populations at risk for DV, as it can discriminate well between respondents with moderate and high levels of victim-blaming attitudes. The use of this scale will be particularly useful in the context of DV prevention and intervention programs that specifically target at-risk adolescents, as knowledge of these attitudes will allow for improved interventions. Knowing the victim-blaming attitudes prior to and following the intervention will yield valuable insights for tailoring interventions to meet the specific needs of adolescents. In addition, it will also allow the effectiveness of these interventions to be evaluated in different settings, including prisons and community-based interventions. Another context in which this scale may be useful is in research, responding to the needs of previous studies that highlight the importance of continuing to explore the factors that influence the effectiveness of DV interventions with at-risk populations (Arrojo, Santirso et al., 2024; Crooks et al., 2019; Reyes et al., 2020; Shorey et al., 2012; Wilkins et al., 2014). Although the scale is especially valuable in adolescents at risk of DV, it could also be used in schools to identify the prevalence of victim-blaming attitudes in the general population.

This could be useful for establishing effective interventions in the educational setting, as well as for targeting DV awareness campaigns aimed at the general population.

In terms of how gender might influence the interpretation of the items, the DIF analysis revealed no significant disparities between boys and girls. However, we did observe minor variations in the item thresholds for item 8 across genders. Specifically, the item “Girls file false complaints to obtain economic benefits and hurt their boyfriends” showed that boys required lower levels of victim-blaming attitudes than girls to agree with this statement (i.e., uniform DIF). Despite these differences, their impact on the overall information function of the scale was minimal and could be easily addressed by allowing these thresholds to vary between genders.

Regarding validity evidence derived from examining the ADV-VBA scale’s relationship with other variables, it was found that victim-blaming attitudes were strongly and positively related to hostile and benevolent sexism. This is consistent with previous IPVAW research, where respondents with sexist attitudes were more likely to blame the victim (Capezza & Arriaga, 2008; De Judicibus & McCabe, 2001; Gracia et al., 2014; Scott & Straus 2007; Valor-Segura et al., 2011; Vidal-Fernández & Megías, 2014).

According to our results, victim-blaming attitudes are predictive of both DV victimization and perpetration. This finding is in line with previous research relating acceptability attitudes to DV (Brendgen et al., 2002; Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). Future research should continue to study the impact of victim-blaming attitudes on DV. With regard to verbal-emotional abuse, we observed a significant effect of victim-blaming attitudes and gender on the perpetration of verbal-emotional abuse. These are consistent with previous research in which women showed greater use of verbal-emotional abuse than men in dating relationships (Fernandez-Fuertes et al., 2006; Gómez et al., 2014; Sears et al., 2007). In terms of age, our results indicated that physical DV was more prevalent among younger adolescents. The literature to date in this regard has produce inconsistent results. Several studies found significant correlations between age and DV prevalence, indicating higher rates of DV among older adolescents (Borges et al., 2020; Dosil et al., 2020; Mumford et al., 2019; Vives-Cases et al., 2021; Wincentak et al., 2017). Other studies, however, have found that younger adolescents reported higher rates of DV than older adolescents (Foshee et al., 2013; Rubio-Garay et al., 2017). In terms of relationship status, our results indicated that there

were no significant distinctions between adolescents who had a partner and those who did not. In general, studies do not include this information, making comparisons difficult (Mumford et al., 2019; Rubio-Garay et al., 2017). However, Mumford et al. (2019) examined different developmental paths of dating relationships and DV, revealing that adolescents who had previously dated were at a higher risk of experiencing DV. Thus, having had a greater number of partners was correlated with experiencing DV (Gabster et al., 2023). Further research in this area is needed, as including all adolescents (whether they have a partner or not) would provide a more comprehensive understanding of DV (Mumford et al., 2019).

In this study, a short version of the ADV-VBA was developed, as was the short version of the original scale (Martín-Fernández et al., 2018). Our results showed that the short version of the scale has strong internal consistency and satisfactory validity, particularly in relation to both hostile and benevolent sexism. Such abbreviated scales may be useful in situations where time or space is limited. Nevertheless, it is crucial to verify that these measures exhibit satisfactory psychometric properties, including reliability and validity (Smith et al., 2000; Stanton et al., 2002). For this reason, the long version of the ADV-VBA scale is recommended whenever possible.

In conclusion, the validation of the ADV-VBA scale represents a significant advance in understanding adolescents' attitudes toward victim-blaming in DV. An instrument with robust psychometric properties is crucial for enhancing our understanding of victim-blaming attitudes related to DV.

1.3 The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale: A Validation Study

The third study of this thesis was based on the adaptation and validation of an instrument used in adults to assess the Perceived Severity of IPVAW (PS-IPVAW; Martín-Fernández et al., 2022) for the adolescent population. The results of this study showed that the instrument replicates the unifactorial model of the original scale (Martín-Fernández et al., 2022) and demonstrates excellent internal consistency. This means that it effectively assesses the perceived severity of DV among adolescents.

In examining gender invariance, the study's findings revealed that both girls and boys held a similar conceptualization of the perceived severity of DV. This similarity in item interpretation suggests that the response patterns were comparable between the two

groups, yielding identical results for boys and girls. Additionally, our results indicated that boys tended to perceive DV scenarios as less severe than girls, consistent with prior research in the context of IPVAW (Dardis et al., 2017; Martín-Fernández et al., 2022; Villagrán et al., 2022).

In terms of validity evidence, our results showed that perceived severity was related to victim-blaming attitudes, ambivalent sexism and empathy. For victim-blaming attitudes, our results indicated a significant negative relationship between perceived severity and victim-blaming attitudes. These are consistent with previous research linking perceived severity and victim-blaming attitudes in the IPVAW context (Gracia et al., 2018; Lelaurain et al., 2021; Martín-Fernández et al., 2018; Martín-Fernández et al., 2022; Villagrán et al., 2020, 2023).

Regarding sexist attitudes, we observed a significant negative relationship between perceived severity and ambivalent sexism. Specifically, adolescents who perceived lower severity in DV scenarios showed higher levels of both hostile and benevolent sexism. These findings align with prior research, which has consistently shown that perceived severity is associated with both forms of sexism in adult populations (Lelaurain et al., 2021; Martín-Fernández et al., 2022; Villagrán et al., 2023). Additionally, Guerra-Marmolejo et al. (2021) identified a similar trend among adolescents, where sexist attitudes were linked to perceptions and acceptance of violence against women. This pattern is also in line with previous studies that have connected ambivalent sexism to DV perpetration (Dosil et al., 2020; Erdem & Sahin, 2017; Fernández-Antelo et al., 2020; Guerra-Marmolejo et al., 2021; Morelli et al., 2016; Olcay & Yeşiltepe, 2023).

Regarding empathy, our results showed a positive relationship between perceived severity of DV and the perspective taking and fantasy subscales of the IRI instrument. Adolescents who perceived DV as highly severe tended to demonstrate increased empathy toward fictional characters and displayed enhanced perspective-taking abilities. We also found a strong positive correlation between how adolescents perceived the severity of situations and their empathic concern. This, in turn, suggests that those who perceived greater severity in scenarios were more adept at recognizing when others were going through negative events. This finding aligns with prior research, which has demonstrated a positive association between empathy and the perceived severity in adults

(Lila et al., 2013), as well as a link between empathy and attitudes toward aggression among adolescents (Martos Martínez et al., 2021). Our findings are also in line with previous studies conducted with adolescents, where lower levels of empathy are associated with a higher likelihood of violent behaviors (Euler et al., 2017; Hartmann et al., 2010; Martos Martínez et al., 2021; Vachon et al., 2014). Additional research is required to investigate the direct impact of empathy on DV perpetration (Dodaj et al., 2020; Romero-Martínez et al., 2016).

2. Practical implications

This doctoral thesis represents a significant advance in the understanding of DV. On the one hand, it provides knowledge about intervention programs for adolescents at risk of DV. On the other hand, it contributes to the understanding of attitudes toward DV through the validation of instruments that allow for reliable and valid assessment of key elements such as victim-blaming and perceived severity of DV. The practical implications derived from the results obtained in the thesis are presented below.

Study 1 on the systematic review and meta-analysis of existing programs targeting adolescents at risk for DV provides information on what interventions are being implemented with this specific population and what impact these programs have on variables such as physical, psychological, sexual violence, attitudes toward DV, as well as on composite measures of DV victimization and perpetration (physical, psychological, sexual and cyber DV). This has several practical implications. On the one hand, this information allows us to identify which programs are most effective in preventing or reducing DV among at-risk adolescents. This provides practitioners with important information for selecting and implementing interventions based on scientific evidence, which will guide the development and implementation of new programs. On the other hand, it has several implications at the research level. First, it fills the gap present in the literature regarding the lack of systematic reviews focusing on adolescents at risk of DV and analyzing different typologies of DV. Secondly, the results obtained suggest new lines of research that DV professionals should address in order to advance in the understanding of this complex phenomenon that is DV and specifically with this population of the most vulnerable adolescents.

The two scales validated in the adolescent population presented in Studies 2 and 3 (ADV-VBA; PS-ADV) represent an important advance in the study of attitudes related

to DV. These instruments allow a reliable and valid assessment of victim-blaming and perceived severity of DV in the specific context of adolescents in Spain. These two new measures can be used both to deepen aspects of research on DV and in practical contexts of intervention with adolescents. These instruments make it possible to assess changes in the attitudes of adolescents participating in intervention programs, as well as to identify those adolescents with higher levels of attitudes. In addition, because of the possible relationship between attitudes toward DV and its perpetration, these scales can be used to evaluate the effectiveness of intervention programs with adolescents. In the field of prevention, these instruments are useful for identifying victim-blaming attitudes and the perceived severity of DV. Their use would facilitate the design and evaluation of public policies and awareness campaigns aimed at reducing these attitudes. Similarly, given the importance that public attitudes can have on DV, the use of these instruments in population-based surveys can be very useful in advancing research and understanding of this phenomenon. In terms of research, these instruments will allow researchers to advance knowledge about their conceptualization, measurement, prevalence, and social factors that may influence these attitudes, as well as their relationships with other key variables of DV.

The results obtained in Study 2 showed that the ADV-VBA scale discriminates well between respondents with moderate and high levels of victim-blaming attitudes. Therefore, this scale will be particularly useful for use with at-risk adolescent populations (adolescents exposed to childhood violence, adolescents with a history of DV, adolescents living in economically disadvantaged neighborhoods with high rates of poverty, violence, or ethnic minority presence, and adolescents in residential care with unstable family and social environments). Knowledge of pre- and post-intervention victim-blaming attitudes will provide useful information for tailoring interventions to the specific needs of youth in the context of DV prevention and intervention targeting at-risk adolescents. It will also allow us to evaluate the effectiveness of interventions targeting at-risk populations in order to improve them. Furthermore, although the scale is particularly valuable for at-risk adolescents, it can also be used in school settings to assess the prevalence of victim-blaming attitudes in the general population and to establish interventions in this setting. In addition, this study provides an overview of attitudes toward DV in the adolescent population that may shed light on how to improve interventions targeting sexism, victim-blaming attitudes and behaviors, and, more

generally, DV and future IPV. Finally, the abridged form of the ADV-VBA scale makes it possible to include this scale in circumstances where time is limited.

The validation of the PS-ADV scale (Study 3) presents an important step in the understanding of DV, both in identifying this type attitude, its impact on other relevant constructs, and identifying factors that influence the risk of DV. It is a short measure that can be applied quickly and easily, and is particularly useful in large-scale studies such as demographic surveys where time and space are limited (Gracia et al., 2018; Martín-Fernández et al., 2021, 2022). This scale could serve as a means to assess whether attitudes have changed following awareness campaigns and prevention policies (Gracia et al., 2020; Gracia et al., 2023). In addition, this instrument can be useful to identify adolescents at risk of DV and to assess the impact of interventions and prevention strategies on both this vulnerable population and the general adolescent population.

3. Limitations

This section presents the general limitations of the studies included in this thesis, which could have influenced the results of these studies and therefore should be considered in order to properly interpret and generalize the results.

Regarding the Study 1, it should be noted that the results of the meta-analysis should be interpreted with caution because the heterogeneity statistics showed moderate levels in most of the contrasts. In addition, many studies could not be included in the meta-analysis because they did not adequately present their results. On the other hand, the studies included in the systematic review showed great heterogeneity in terms of program duration, sample size, and the instruments used to assess outcomes. This makes it difficult to evaluate and compare interventions (Smith et al., 2015). Another limitation is that the majority of the studies were carried out in the United States, which limits the applicability of the findings to different context and cultural settings. The final limitation of the systematic review is that only peer-reviewed articles were included. Although these types of studies represent a standard of quality because they are scientific studies that undergo a rigorous peer-review process, this study may have excluded works not published in scientific journals, such as theses, reports, and grey literature.

With regard to Studies 2 and 3 of this thesis, which focused on the adaptation and validation of the ADV-VBA and PS-ADV scales for use with the adolescent population in the context of DV, it is important to highlight some of the limitations identified in these

studies. First, the process of adapting the scales was primarily conducted through theoretical analysis and expert review in DV. Therefore, direct participation of adolescents in determining the language was not included. In future research, it would be beneficial to involve adolescents in the scale adaptation process to ensure that the scales are more representative and suitable for the adolescent population. Second, the scales were validated with a sample of Spanish adolescents, so our findings may not be generalizable to more diverse cultural contexts. Additional research is necessary to assess the psychometric properties of these scales in other sociocultural contexts (Villagrán et al., 2023). Third, data were not collected on the sexual orientation, ethnicity, or gender identity of the youth, so these factors were not included in the data analysis. Fourth, the scales were self-administered, which may have introduced possible social desirability biases. This may have influenced adolescents' responses, leading them to present a socially desirable self-image. To address this limitation future research could include a scale to assess socially desirable responding. Fifth, the cross-sectional design of these two studies precluded the assessment of victim-blaming attitudes and perceived severity over time. This did not preclude us from establishing some level of causality for the relationships identified in the validity analyses. Sixth, Studies 2 and 3 did not address other psychosocial problems that may occur during adolescence that may be related to DV.

Other limitations related to Study 2 on the validation of the ADV-VBA scale are that the measurement invariance of the scale across ages could not be adequately tested due to the small sample size. Finally, this study presented preliminary results of an abbreviated version of the ADV-VBA, so it would be desirable to retest its psychometric properties of the scale using different samples and in various settings (Goetz et al., 2013).

4. Future research directions

The findings of the thesis suggest future research directions, in addition to the need to continue exploring the proposed lines of research by addressing the limitations found in the studies presented.

The results of the systematic review indicated the need for more precise information on key aspects of DV programs with at-risk adolescents. For example, regarding the duration of the interventions, the number of sessions and periodicity, a clear definition of follow-up, and a more precise specification of the personnel delivering the

programs. Given this limitation, it is suggested as a future line of research to further investigate the effectiveness of the programs considering these aspects and their relationship with the outcomes obtained in the programs. In addition, it will be analyzed how these variables may modulate the impact of the results of the programs. On the other hand, the results of the meta-analysis provide a starting point for future systematic reviews. Future research should examine the factors crucial for the effectiveness of DV prevention programs in this vulnerable population (Crooks et al., 2019; Reyes et al., 2020; Shorey et al., 2012; Wilkins et al., 2014).

The adaptation and validation of the ADV-VBA and PS-ADV scales in the Spanish context raises as a future line of research the validation in other cultural contexts with samples of the adolescent population. In addition, cross-cultural studies should be conducted to compare victim-blaming attitudes and perceived severity of DV. In addition, future studies could use these scales to examine the relationship between these attitudes and other relevant variables in the context of DV. Furthermore, the use of these scales allows us to continue to examine the causal relationship between victim-blaming attitudes and perceived severity of DV and DV-related behaviors in the short, medium, and long term. Another line of research would be to analyze these types of attitudes considering other sexual orientations, ethnicity, and gender identity. Finally, the psychometric properties of the brief version of the ADV-VBA should be retested in other samples and settings.

5. General conclusions

The present doctoral thesis addressed the social problem of DV by analyzing adolescents' attitudes toward DV and by conducting a literature review of existing DV prevention programs for at-risk adolescents. This systematic review responded to the paucity of previous studies that focused on evaluating the effectiveness of DV programs with at-risk adolescents and, in turn, responded to research that highlights the importance of targeting this specific population independently. Our findings are encouraging because they indicate that these interventions targeting at-risk adolescents effectively reduce both DV perpetration and victimization. It therefore highlights the importance of knowing what works with at-risk adolescents so that existing interventions can be improved to reduce and prevent DV.

With regard to the analysis of attitudes, the adaptation and validation of the ADV-VBA and PS-ADV scales to the context of DV among the adolescent population represents an important advance in understanding attitudes toward DV. These two new scales have been shown to be reliable and valid and therefore allow us to assess victim-blaming attitudes and the perceived severity of DV with sufficient guarantees. This type of tool makes it possible to better understand the phenomenon by exploring its conceptualization, assessment, prevalence, and social factors that may influence these attitudes, with the goal of improving DV prevention and intervention strategies. In addition, these scales are useful both for administration to the general adolescent population and for the identification of adolescents at increased risk for DV.

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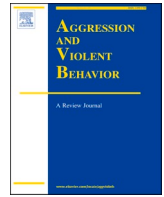
Appendices

In this section the publications that conform this doctoral thesis are attached.

Publication 1

Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis¹

¹Published in: Arrojo, S., Santirso, F. A., Lila, M., Gracia, E., & Conchell, R. (2024). Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 74, 101893. <https://doi.org/10.1016/j.avb.2023.101893>



Dating violence prevention programs for at-risk adolescents: A systematic review and meta-analysis

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ABSTRACT

Dating violence (DV) is a social problem that affects adolescents worldwide. Previous systematic reviews have mainly examined universal prevention programs with varying designs and outcomes. The lack of systematic reviews focusing on at-risk adolescents limits knowledge about which interventions are more effective. This systematic review synthesizes studies of DV programs for at-risk adolescents. The following databases were searched: PsycINFO, Scopus, and Web of Science. A total of 5663 studies were identified; 17 were included in the systematic review and 11 in the meta-analysis. Randomized control trials and quasi-experimental studies with a follow-up longer than a month were included. When types of DV were analyzed separately, the results showed decreases in physical and sexual violence perpetration and physical DV victimization, but not significant changes in psychological and sexual violence victimization, psychological violence perpetration and attitudes toward DV were found. When composite scores were used (including all types of DV), significant reductions in DV victimization and perpetration were found. This systematic review and meta-analysis are the first to focus on at-risk adolescents and assess physical, psychological, sexual and cyber violence and attitudes toward DV. Examining existing programs is key to understanding what works for at-risk adolescents and improving their effectiveness.

1. Introduction

Adolescent dating violence (DV) refers to any act of physical, psychological, sexual violence, and/or stalking carried out in person or online, within an affective and/or intimate relationship (Cascardi et al., 2018; Centers for Disease Control and Prevention, 2019; Niolon et al., 2017). DV is a social problem that affects adolescents worldwide (Fellmeth et al., 2013; FRA, 2014; Wincentak et al., 2017). The global prevalence of physical and sexual violence among adolescents aged 13 to 18 years, according to the meta-analysis carried out by Wincentak et al. (2017), is 20 % and 9 %, respectively. The World Health Organization (2021) highlights the high prevalence of intimate partner violence (IPV) in younger ages—24 % of adolescents aged 15–19 have experienced physical and/or sexual violence by their partner at least once in their lifetime. In the United States, 26 % of girls and 15 % of boys who have been victims of DV experienced some type of violence before the age of 18 (CDC, 2019). In Europe, Vives-Cases et al. (2021) reported a prevalence of DV victimization of 43.1 % in girls and 26.7 % in boys

aged 13–16 years. DV is associated with a range of negative consequences that affect adolescents' health and well-being (Hossain et al., 2020; Taquette & Monteiro, 2019; Wincentak et al., 2017) such as substance use, anxiety, depression, post-traumatic stress disorder, poorer academic results, physical problems, and psychological problems (Chiodo et al., 2012; Exner-Cortens et al., 2017; Greenman & Matsuda, 2016; Park et al., 2018; Ramiro-Sánchez et al., 2018; Sunday et al., 2011; Taquette & Monteiro, 2019). Other negative consequences are fear of starting a new relationship, difficulty in establishing good communication with the partner, and isolation (Park et al., 2018). Furthermore, DV increases the risk of victimization and perpetration of IPV in adult life (Chiodo et al., 2012; Exner-Cortens et al., 2017; Fernández-González et al., 2020; Ramiro-Sánchez et al., 2018; Sunday et al., 2011).

Universal prevention programs are a typical approach to prevent this type of violence (Petering et al., 2014; Reyes et al., 2020; Whitaker et al., 2006; Wong et al., 2023). These programs are mostly implemented in schools because the school environment allows access to a large number

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of adolescents who are at the stage where dating relationships begin (Foshee et al., 2005; Petering et al., 2014; Whitaker et al., 2006; Wolfe et al., 2009). These prevention programs usually target abusive attitudes and behaviors, and promote conflict resolution strategies and healthy behaviors (Lee & Wong, 2020; Petering et al., 2014). However, not all adolescents are at the same risk of DV victimization and perpetration.

Several factors increase the risk of DV victimization and/or perpetration among adolescents (Brem et al., 2018; Leadbeater et al., 2018). Exposure to violence during childhood at home and/or in their community has been linked to an increased risk of being involved in a violent relationship during adolescence (Bell & Bailey, 2021; Crooks et al., 2011; Exner-Cortens et al., 2013; Goncy, 2020; Goncy et al., 2021; Leviton et al., 2015; Wolfe et al., 2003). For example, in a longitudinal study of adolescents who had experienced violence in childhood, 14.5 % reported having experienced DV and only 2.9 % did not have a history of violence (Huefner et al., 2007). Living in economically-disadvantaged neighborhoods (e.g., high rates of poverty and crime, and concentration of ethnic minorities) has also been associated with exposure to DV (Henry & Zeytinoglu, 2012; Johnson et al., 2015; Niolon et al., 2015). Ethnic minority adolescents are considered at high risk (e.g., African American and Hispanic adolescents in the USA) because they are more likely to be affected by DV than adolescents who do not belong to these groups (Champion et al., 2008; Haynie et al., 2013; Peskin et al., 2014; Peskin et al., 2019; Simon et al., 2010). Furthermore adolescents in residential care are at higher risk of DV perpetration and victimization, as these adolescents usually come from unstable familial and social backgrounds, have more emotional and behavioral problems, and have greater exposure to domestic violence and crime (Van Lieshout et al., 2019). According to Antle et al. (2011), these “at-risk youth” are defined as youths who have a number of prior characteristics that place them at higher risk of victimization or future DV perpetration due to their environmental, social or family circumstances. However, secondary prevention programs that target adolescents at risk of DV victimization and perpetration are scarce. For example, in the meta-analysis carried out by Fellmeth et al. (2015), only four of the 33 studies reviewed targeted high-risk adolescents.

Regarding the effectiveness of DV prevention programs, in general, meta-analyses suggest that they improve knowledge and attitudes toward DV (De la Rue et al., 2014, 2017; Edwards & Hinsz, 2014; Fellmeth et al., 2015; Lee & Wong, 2020; Ting, 2009). However, few meta-analyses have found significant reductions in adolescents' DV perpetration or victimization (De Koker et al., 2014; Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021; Russell et al., 2021). Although some systematic reviews include secondary prevention programs that target specific high-risk groups (Fellmeth et al., 2015; Petering et al., 2014), the majority do not distinguish between at-risk and not-at-risk adolescents (De Koker et al., 2014; De la Rue et al., 2014, 2017; Lee & Wong, 2020; Stanley et al., 2015; Ting, 2009; Whitaker et al., 2006). Some systematic reviews even exclude programs that target at-risk populations (i.e., they only analyze universal programs; De Koker et al., 2014; Lee & Wong, 2020; Whitaker et al., 2006). However, the recent meta-analysis by Piolanti and Foran (2021) showed the results of specific programs developed with adolescents at risk of DV by focusing on physical and sexual violence. Recently, Reyes et al.'s (2020) systematic review on DV prevention programs highlights the importance of analyzing intervention effectiveness according to the context and characteristics of the targeted population to avoid the generalization of results. In this regard, Reyes et al. (2020) have pointed out that programs that target specific adolescent populations are scarce even though research has shown that certain groups are at increased risk of DV victimization and/or perpetration.

To date, there has been no systematic review that collects only DV programs that focus specifically on adolescents at risk of DV. Although the meta-analysis by Piolanti and Foran (2021) provides independent results for the subgroup of at-risk adolescents, it focuses only on physical and sexual violence, without including other types of violence.

Therefore, the present study aims to conduct a systematic review and meta-analysis of existing prevention programs that target adolescents at risk of DV by analyzing physical, psychological, sexual and cyber violence and attitudes toward DV. To this end, randomized controlled trials (RCTs) and quasi-experimental studies were considered because it is not always feasible to conduct RCTs in this context and with this population due to the difficulty of random assignment.

2. Method

A systematic review of the literature was undertaken in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations (Moher et al., 2009) and registered with the International Prospective Register of Systematic Reviews (PROSPERO 022: CRD42022308245).

2.1. Search strategy

A systematic search was conducted by searching the following databases: Web of Science, PsycINFO, and Scopus. Search terms were identified by conducting a thesaurus-based search in each database and through scoping searches identifying keywords on the topic of DV. There were no restrictions on language or date of publication. The search was carried out in September 2020 and the same search was done again in December 2021. Thus, searches were conducted from the first record to December 2021. The sensitive specific search strategy was developed through an iterative process and included the following terms: (aggress* OR violence OR “sexual harassment” OR rape) AND (dating OR partner* OR courtship OR date) AND (adolescen* OR youth* OR girl* OR boy* OR juvenile* OR “emerging adulthood” OR young OR teen*) AND (correctional OR residential OR “young offender institutions” OR “youth services” OR “youth care” OR school OR community OR at-risk OR high-risk) AND (program* OR intervention* OR prevent* OR evaluation). We complemented the electronic search by backward and forward searching of references from the included studies.

2.2. Eligibility

The inclusion criteria were as follows: 1) studies published in peer-reviewed journals; 2) RCTs or quasi-experimental studies; 3) the target population was adolescents (under 18 years of age) who had been identified as being at high risk of DV victimization or perpetration (Antle et al., 2011); 4) a stated aim of the intervention was to prevent DV; and 5) the intervention had follow-up periods of more than one month. To identify studies that met the eligibility criteria, SA and FS independently screened the articles by title and abstract. The full texts of all potentially eligible articles were independently assessed (SA and FS), and discrepancies in reviewer decisions were resolved by discussions and consensus with additional reviewers (ML, EG, and RC).

2.3. Data extraction

Two authors (FS and SA) independently extracted data from all studies selected for inclusion. Data extracted included authors, publication year, country, participants (risk factors, % boys, and age range), design, follow-up, intervention (experimental and comparison group), outcomes, and results (Table 1). For the intervention, the name was indicated and the program developed in the experimental group was briefly described. It was also indicated whether or not there was an intervention in the control group. For those control groups with interventions, the name and a brief description of the intervention were provided. The type of study (RCT and quasi-experimental) and the follow-up of each study were extracted. Most studies reported on the follow-up that was conducted, and used the time at which the intervention was completed as the reference point. Other studies took the baseline and provided the follow-up time thereafter as a reference.

Finally, only one study reported the follow-up period with information about the post-enrolment period. As for the results, we selected the study variables that measured aspects directly related to DV, and indicated whether there were differences between the control and experimental groups by selecting the longest follow-up period. A third reviewer (RC, EG or ML) verified these data, and discrepancies were resolved by discussion.

2.4. Risk of bias of studies

Two authors (FS and SA) independently assessed the risk of bias for each included study. Disagreements were discussed with the additional authors (ML, EG, and RC) to reach a consensus. For the RCTs, the Revised Cochrane risk-of-bias tool for randomized trials (RoB2; Sterne et al., 2019) was used. This tool involves the evaluation of potential bias across five domains: randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported results. An algorithm was used to answer a series of questions for each domain, which was then judged as having low risk, some concerns, or a high risk of bias. For quasi-experimental studies, the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Quasi-Experimental Studies (Aromataris & Munn, 2020) was used. This checklist comprises nine questions related to domains such as the comparison group, reliability of measures, or appropriateness of statistical analyses. Possible response options are unclear, yes, no, or not applicable.

2.5. Statistical analyses

A meta-analysis using an inverse variance random-effects model (DerSimonian & Laird, 1986) was performed with the software Review Manager Version 5.4. The main analyzed outcomes were self-reported physical, psychological, sexual, and cyber DV perpetration and victimization, as well as attitudes toward DV. Perpetration and victimization outcomes were examined separately (i.e., depending on the type of violence) and were also combined into two scores: a composite score of DV perpetration and a composite score of DV victimization. It should be noted that, although cyber DV perpetration and victimization were included in the composite scores, these scores could not be analyzed separately due to the few studies that examined these outcomes. Outcomes were expressed as odds ratios (ORs) or standardized mean differences (SMDs) with 95 % confidence intervals (CIs). Data were presented as continuous in some studies, and as dichotomous in other studies (e.g., the percentage of participants who experienced or perpetrated violence during the follow-up period). To pool the data for comparison purposes, the SMDs and ORs were re-expressed as logarithmic ORs (Chinn, 2000) using the Comprehensive MetaAnalysis software, version 4.0.000 (Biostat). One study included in the meta-analysis had two intervention groups: the first intervention group directly received the intervention; the second group was recruited by the members of the first group and received the intervention through knowledge transfer (Ritchwood et al., 2015). In this case, we made comparisons between the combined intervention group (including both the first and second intervention groups) and the control group. When studies independently assessed attitudes toward boy-against-girl and girl-against-boy DV, scores were combined to obtain a single effect size. To avoid differences in the baseline from biasing the analysis of the results from the intervention, and when studies reported baseline scores, data were entered as the mean difference from the baseline and the SD of this mean difference for the intervention and control groups (Borenstein et al., 2021) and were re-expressed as logarithmic ORs. If studies had more than one follow-up period, the data from the longest follow-up period were included to capture any long-term effects (Cuzick, 2023). The Galbraith plot method was utilized to perform the publication bias analysis (Galbraith, 1988). Statistical heterogeneity between the studies was assessed using the I-squared (I^2) statistic. I^2 of 25 %, 50 %, and 75 %

were considered low, moderate and high, respectively (Higgins et al., 2003). To assess the characteristics of the studies associated with the composite score of DV perpetration, the composite score of DV victimization and attitudes toward DV, exploratory subgroup and meta-regression analyses were carried out. Subgroup analyses were conducted depending on the type of study (RCT vs. non RCT) and intervention length (<12 h of intervention vs. 12 h or more). Meta-regression analyses were computed for the continuous variables, which included the follow-up length and the risk of any bias.

3. Results

Database searches yielded 8135 potentially relevant articles. Once duplicates were removed, a total of 5663 articles remained. These were screened against inclusion and exclusion criteria by title and abstract, of which 283 were selected for full-text reviews. Of these, 266 articles were excluded for the following reasons: they were not RCTs or quasi-experimental studies ($n = 35$); the interventions did not target adolescents identified as being at elevated risk of DV ($n = 145$); the interventions were not aimed at preventing DV ($n = 69$); they presented follow-up periods of less than one month ($n = 12$); and they were redundant (i.e., studies using the same dataset or erratum) ($n = 5$). The remaining seventeen articles met the full inclusion criteria and were included in the qualitative analysis. Of these, eleven studies had suitable data for inclusion in the meta-analysis (Studies 4, 5, and 7 to 15) (see Table 2). Fig. 1 shows the PRISMA flowchart of the study selection process.

3.1. Qualitative analysis

The majority of the recruited trials were implemented in the United States ($n = 15$; Studies 1 to 14 and 16), one in the Netherlands (Study 15), and one in Canada (Study 17). The articles were published from 2003 (Study 17) to 2021 (Study 14). The characteristics of the studies presented below are described in Table 3.

The risk characteristics of the population varied among the studies. There were adolescents who had previously experienced DV ($n = 3$, Studies 1, 7, 13), adolescents who had been exposed to DV in childhood ($n = 4$, Studies 3, 11, 15, 17), youths living in disadvantaged neighborhoods ($n = 4$, Studies 2, 8, 12, 16), adolescents belonging to ethnic minorities ($n = 4$, Studies 5, 9, 10, 14), and adolescents in residences who had previously experienced violence and had an unstable family environment ($n = 2$, Studies 4, 6).

Most trials targeted both boys and girls ($n = 14$, Studies 1 to 5, 7 to 12, 14, 16 and 17). Only two trials were implemented with girls (Studies 6, 13) and one targeted only boys (Study 15). The total sample of participants ranged from 68 (Study 15) to 3301 (Study 16). The treatment group sample size ranged from 22 (Study 15) to 1662 participants (Study 16). The sample of the control group ranged from 23 (Study 4) to 1639 participants (Study 16). There was one trial that did not provide information on the numbers of participants in the control group (Study 3).

Of the 17 articles included (see Table 1) 12 were RCTs (70.59 %; Studies 1, 2, 3, 5, 7, 9, 10, 13, 14, 15, 16, 17) and five were quasi-experimental (29.41 %; Studies 4, 6, 8, 11, 12). Two of the trials used two treatment groups and one comparison group (Studies 1, 12). For the control groups, there were trials in which the participants in these control groups received no intervention ($n = 5$; Studies 1, 2, 3, 12, 15). Of those who received some type of intervention, some received interventions other than the treatment group ($n = 4$; Studies 7, 8, 13, 16), others received usual health education as part of the academic curriculum in the USA ($n = 5$; Studies 5, 9, 10, 11, 14), one received the usual treatment in the residence where the program was conducted (Study 4) and another received the usual treatment mandated by Child Protective Services (Study 17). There was one trial in which the same program was developed for the experimental and control groups, but with different

methodologies (Study 6).

Follow-up length varied between trials. There were eight trials with follow-up from the baseline. There was one trial with follow-up at 6 months from the baseline (Study 15), another at 9 months (Study 8), several trials with follow-up at 12 months ($n = 4$; Studies 1, 7, 10, 11), another at 24 months (Study 9) and, finally, one trial at 30 months (Study 16). Furthermore, nine trials had follow-up after the intervention. The shortest follow-up was 5 months (Study 2), and the longest was 16 years after the intervention (Study 4). Three trials had follow-up at 6-month post-intervention (Studies 12, 13), two trials had follow-up at 9 months (Studies 12, 13), one at 12 months after the intervention (Study 14) and one at 18 months (Study 17).

Interventions took place in a variety of settings, with schools being the commonest ($n = 10$, Studies 2, 5, 7 to 10, 13, 14, and 16), followed by community settings ($n = 3$, Studies 6, 12, 17), youth residences ($n = 2$, Studies 4, 15), homes ($n = 1$, Study 3) and medical centers ($n = 1$, Study 1). Most interventions were administered by people not involved in research (pre- and postdoctoral psychology students, social workers, mothers, computers, lawyers, peers, teachers, mental health counselors) ($n = 9$; Studies 1, 3 to 7, 13, 14, and 17), followed by interventions administered by trained personnel who were involved in research ($n = 6$, Studies 2, 8, 9, 10, 11, 15). Two studies did not report who delivered interventions (Studies 12, 16).

We found a wide variation in the duration of interventions. The shortest intervention had a mean duration of 37 min (Study 1), followed by an intervention that took 6 h (Study 6). The longest interventions lasted 18 months (Study 4) and 2 years (Study 9).

Regarding program content, education and training in skills for the promotion of healthy relationships were the commonest ($n = 9$; Studies 4, 7, 8, 9, 10, 11, 12, 14, 16). The second most frequent topic was sexual relationships, with participants receiving specific training on how to address risky behaviors and cultivate healthy sexual relationships ($n = 5$; Studies 2, 6, 9, 15, 16). The third commonest content was training in recognizing abusive relationships ($n = 5$; Studies 3, 9, 11, 14, 17). This was followed by content on relationship conflict resolution skills ($n = 4$; Studies 1, 10, 13, 16) and assertive communication with partners ($n = 4$; Studies 13, 14, 16, 17).

Regarding the main outcomes analyzed in the RCTs and quasi-experimental studies, twelve trials analyzed physical DV victimization and perpetration (Studies 1, 3, 6 to 11, 13, 14, 16, and 17). To assess this variable, different instruments were administered: the Conflict in Adolescent Dating Relationships Inventory ([CADRI]; Wolfe et al., 2001) ($n = 4$; Studies 1, 10, 14, 17), an adaptation of the CADRI ($n = 1$; Study 11), the Safe Dates Teen Dating Violence (TDV) Scales (Foshee et al., 1998) ($n = 1$; Study 11), the Safe Dates Physical Dating Abuse Scale (Foshee, 1996) ($n = 1$; Study 3), the Intimate Partner Scale (Dahlberg et al., 2005) ($n = 1$; Study 8), an adaptation of the Peer Rejection Questionnaire (Prinstein et al., 2000) ($n = 1$; Study 9), an ad hoc scale from Foshee et al. (1996) ($n = 1$; Study 6), a semi-structured interview based on the Timeline Follow-Back-Dating Violence (TLFB-DV) developed by Fals-Stewart et al. (2003) ($n = 1$; Study 13). Finally, two studies used an ad hoc scale (Studies 7, 16).

Psychological DV victimization and perpetration was assessed in six trials (Studies 3, 7, 9, 10, 11, 17). As for the instruments used to measure this variable we found: the CADRI (Wolfe et al., 2001) ($n = 2$; Studies 10, 17); an adaptation of the CADRI ($n = 1$; Study 11), the Safe Dates TDV Scales (Foshee et al., 1998; $n = 1$; Study 11), the Safe Dates Psychological Abuse in Dating Scale (Foshee, 1996; $n = 1$; Study 3), an adaptation of the Peer Rejection Questionnaire (Prinstein et al., 2000; $n = 1$; Study 9), and, finally, an ad hoc scale ($n = 1$; Study 7).

For sexual DV, four trials assessed this outcome (Studies 6, 10, 11, 13). Two trials (Studies 10, 13) used the CADRI (Wolfe et al., 2001). Another trial (Study 11) used an adaptation of CADRI and the Safe Dates TDV scales (Foshee et al., 1998). The other trial (Study 6) used an adaptation of the Youth Risk Behavior Survey (CDC, 1999).

Four trials assessed cyber DV (Studies 3, 10, 13, 16). Each study used

a different scale: The Teach Abuse in Teen Relationships Scale (Picard, 2007; $n = 1$; Study 3), the CADRI (Wolfe et al., 2001; $n = 1$; Study 10), the AAUW Sexual Harassment Survey (American Association of University Women Educational Foundation, 2001; $n = 1$; Study 16), and one study used an ad hoc scale (Study 13).

Five trials assessed acceptability of DV (Studies 3, 5, 6, 10, 12). The scale developed by Foshee et al. (1998), Foshee and Bauman (1992), and an ad hoc scale were used to evaluate it.

3.2. Trial authors' findings and conclusion

3.2.1. Physical violence

Two trials found a significant reduction in physical DV perpetration and victimization, and targeted adolescents who had experimented DV (Study 7) and ethnic minority adolescents (Study 14). Four trials reported a significant reduction in DV perpetration; two targeted the youths living in disadvantaged neighborhoods (Studies 8 and 16), one targeted ethnic minority adolescents (Study 10), and one targeted adolescents who had been exposed to domestic violence in childhood (Study 17). One trial indicated significant changes in victimization, but not perpetration, among ethnic minority adolescents (Study 9). One trial found no significant reduction in either victimization or perpetration of physical DV in adolescents who had been exposed to domestic violence in childhood (Study 11). Four trials obtained no significant reduction in physical DV victimization—one involving adolescents who had experienced DV (Study 1), one involving adolescents who had been exposed to domestic violence in childhood (Study 3), one involving ethnic minority adolescents (Study 10), and one involving adolescents who lived in disadvantaged neighborhoods (Study 16).

3.2.2. Psychological violence

Three trials found a significant reduction in psychological DV victimization and perpetration: one targeted adolescents who lived in disadvantaged neighborhoods (Study 3), another one focused on adolescents who had experienced DV (Study 7), and the third addressed ethnic minority adolescents (Study 9). In contrast, there was one trial that showed no significant change in either perpetration or victimization (Study 11); this was conducted with adolescents who had been exposed to domestic violence in childhood. One trial found a significant reduction in psychological DV perpetration but not victimization, in ethnic minority adolescents (Study 10). Finally, Study 17 did not find significant changes in perpetration in adolescents who had been exposed to domestic violence in childhood.

3.2.3. Sexual violence

One trial reported a significant reduction in sexual perpetration and victimization (Study 13) in adolescents who had experienced DV. However, Study 11 did not find significant changes in the victimization and perpetration of sexual violence in adolescents who had been exposed to domestic violence in childhood. Study 6 evaluated sexual risk behavior in adolescents who had experienced previous violence and had an unstable family environment, and found a significant increase in the use of condoms and communication strategies to defuse violence. Study 10 targeted ethnic minority adolescents, and found a significant reduction in sexual victimization but not in perpetration.

3.2.4. Cyber DV

Two trials did not find a significant reduction in cyber DV victimization and perpetration: one of them targeted ethnic minority adolescents (Study 10); the other addressed adolescents who had experienced DV (Study 13). Study 3 found a significant reduction in cyber DV perpetration in adolescents who had been exposed to domestic violence in childhood. Study 16 targeted the youths who lived in disadvantaged neighborhoods, and found a significant reduction in cyber DV victimization and perpetration only in girls.

3.2.5. Acceptation of DV

Two trials found a greater improvement in the acceptance of DV after the intervention; one addressed adolescents who had previously experienced violence and had an unstable family environment (Study 6); the other targeted adolescents who had experienced DV (Study 10). Study 12 targeted the youths living in disadvantaged neighborhoods, and found a significant improvement in only one of the treatment groups. Two trials did not find any significant changes; one targeted adolescents who had been exposed to domestic violence in childhood (Study 3); the other targeted ethnic minority adolescents (Study 5).

3.2.6. Other variables

A trial targeted the youths who lived in disadvantaged neighborhoods, and reported a significant reduction in the acceptance of rape myths; however, they did not find significant changes in the attitudes toward DV (Study 2). Study 3 targeted adolescents who had been exposed to domestic violence in childhood, and reported a significant increase in mothers' self-efficacy for enacting teen DV prevention, teen conflict management skills, and the feeling of family closeness and cohesion among teenagers. Study 5 targeted ethnic minority adolescents, and found a significant increase in the knowledge about DV and the law. Study 7 found improvements in healthy relationship skills among adolescents who had experienced DV. Study 11 found a significant reduction in reactive and proactive aggression in adolescents who had been exposed to domestic violence in childhood. Study 15 targeted adolescents who had been exposed to domestic violence in childhood, and found no significant changes in the antecedent variables of sexual harassment; they further indicated an increase in social norms supporting this sexual harassment. Study 17 reported a significant reduction in both victimization and perpetration of threatening behaviors in adolescents who had been exposed to domestic violence in childhood.

3.3. Risk of bias results

We assessed bias within the RCTs examined using RoB2 (see Fig. 2). The bias arising from the randomization process could not be clearly assessed because the studies did not provide sufficient information ($k = 10$). Only two studies were assessed as low risk (Studies 1 and 14) since they included an explicit description of the randomization protocol. An analogous situation arose when we analyzed the bias due to deviations from intended interventions. None of the studies provided accurate information on whether the participants or people delivering the intervention were blind to the intervention condition. In terms of bias due to lack of outcome data, most studies were considered low risk ($k = 9$). Two studies (Studies 15 and 16) were assessed as high risk because the number of participants with missing values was considerable. One study (Study 2) was evaluated as some concerns because it indicated that part of the sample was lost due to problems in data collection during follow-up. Concerning measurement of the outcome bias, most of the studies ($k = 11$) did not adequately report on whether the outcome assessors or participants in the case of self-reports were blind to the intervention condition. Study 1 was assessed as low risk, as it reported and met all the criteria for this domain. Finally, in the selection of the reported outcome bias, most of the studies were assessed as low risk ($k = 9$). Three studies (Studies 7, 9 and 10) were evaluated as having some concerns due to multiple eligible analyses of the data.

To evaluate quasi-experimental studies, we used the JBI Checklist (see Table 4). All studies ($k = 5$) fulfilled at least six of the nine items. In three studies (Studies 6, 11 and 12), there were significant differences between participants included in the groups compared at baseline, indicating a risk of selection bias. Three studies (Studies 4, 8 and 12) were assessed as unclear risk because they did not report effect sizes, despite the use of appropriate statistical analyses.

		Risk of bias domains				
		D1	D2	D3	D4	D5
Study	Cunningham et al. (2013)					
	Fay and Medway (2006)					
	Foshee et al. (2016)					
	Jaycox et al. (2006)					
	Levesque et al. (2016)					
	Peskin et al. (2014)					
	Peskin et al. (2019)					
	Rizzo et al. (2018)					
	Temple et al. (2021)					
	Van Lieshout et al. (2019)					
	Vivolo-Kantor et al. (2019)					
	Wolfe et al. (2003)					

Domains:

D1: Bias arising from the randomization process.

D2: Bias due to deviations from intended intervention.

D3: Bias due to missing outcome data.

D4: Bias in measurement of the outcome.

D5: Bias in selection of the reported result.

Judgement

High

Some concerns

Low

Fig. 2. Summary of risk of bias of the included RCTs.

Note. "Low risk of bias" indicates that a domain is well-designed, conducted and reported. "Some concerns" indicates that there are some potential issues or limitations in a domain, but they are not expected to significantly impact the overall assessment of the study's risk of bias. "High risk of bias" indicates that the design, conduct or reporting of a domain may have introduced biases that could affect validity and reliability.

Table 4

Summary of risk of bias of the included quasi-experimental studies.

Study reference	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9
Huefner et al. (2007)	✓	✓	✓	✓	–	✓	✓	✓	U
Kelly et al. (2007)	✓	–	✓	✓	✓	✓	✓	✓	✓
Oscós-Sánchez et al. (2013)	✓	✓	✓	✓	✓	✓	✓	✓	U
Reidy et al. (2017)	✓	–	✓	✓	✓	✓	✓	✓	✓
Ritchwood et al. (2015)	✓	–	✓	✓	✓	–	✓	✓	U

Note. Q.1-Are the “cause” and “effect” clear in the study (i.e., there is no confusion about which variable comes first)? Q.2-Were the participants included in any similar comparisons? Q.3-Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest? Q.4-Was there a control group? Q.5-Were there multiple measurements of the outcome both pre and post the intervention/exposure? Q.6-Was follow-up complete and if not, were the differences between groups in terms of their follow-up adequately described and analyzed? Q.7-Were the outcomes of participants included in any comparisons measured in the same way? Q.8-Were outcomes measured in a reliable way? Q.9-Was appropriate statistical analysis used? ✓ = Yes; – = no; U = unclear; NA = not applicable.

3.4. Meta-analysis

The outcomes analyzed in the meta-analysis were self-reported physical, psychological, and sexual DV perpetration and victimization, a composite score of DV perpetration (i.e., physical, psychological, sexual and cyber), a composite score of DV victimization (i.e., physical, psychological, sexual and cyber), and attitudes toward DV.

3.4.1. Physical perpetration of DV

We included nine studies (7368 participants) in the meta-analysis for physical DV perpetration. The pooled effect was significant ($OR = 0.83$, 95%CI [0.75, 0.92], $p < 0.0001$) and highly heterogeneous ($I^2 = 97\%$; $\chi^2 = 296.50$, $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 8; Fig. 3A). After excluding these outliers, seven studies were examined (4540 participants). Heterogeneity was moderate ($I^2 = 45\%$; $\chi^2 = 11.00$; $p = 0.09$) and a significant reduction in the occurrence of physical perpetration of DV was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.78$, 95%CI [0.64, 0.95], $p = 0.02$; Fig. 4).

3.4.2. Physical DV victimization

We included seven studies (6186 participants) in the meta-analysis for physical DV victimization. A significant reduction in the occurrence of physical DV victimization was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.80$, 95%CI [0.68, 0.94], $p = 0.007$; Fig. 5). Heterogeneity was moderate ($I^2 = 43\%$; $\chi^2 = 10.51$; $p = 0.10$). The Galbraith plot did not identify any outlier studies (Fig. 3B).

3.4.3. Psychological perpetration of DV

We included six studies (6038 participants) in the meta-analysis for the psychological perpetration of DV. The pooled effect was not significant ($OR = 0.78$, 95%CI [0.59, 1.02], $p = 0.07$) and highly heterogeneous ($I^2 = 83\%$; $\chi^2 = 28.69$; $p < 0.0001$). The Galbraith plot identified two outlier studies (Studies 7 and 11; Fig. 3C). After excluding these outliers, four studies were analyzed (2103 participants). Heterogeneity was moderate ($I^2 = 49\%$; $\chi^2 = 5.90$; $p = 0.12$). The pooled effect remained non significant ($OR = 0.81$, 95%CI [0.62, 1.06], $p = 0.12$; Fig. 6).

3.4.4. Psychological DV victimization

We included six studies (6032 participants) in the meta-analysis for psychological DV victimization. The pooled effect was not significant ($OR = 0.84$, 95%CI [0.58, 1.22], $p = 0.36$). Heterogeneity was high ($I^2 = 91\%$; $\chi^2 = 54.21$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 11; Fig. 3D). After excluding these outliers, four studies were examined (2097 participants) and heterogeneity was moderate ($I^2 = 65\%$; $\chi^2 = 8.67$; $p = 0.03$). The results showed a non significant reduction in the occurrence of psychological DV victimization in the

participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.86$, 95%CI [0.62, 1.18], $p = 0.35$; Fig. 7).

3.4.5. Sexual violence perpetration

We included four studies (2667 participants) in the meta-analysis for sexual DV perpetration. A significant reduction in the occurrence of sexual perpetration was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.83$, 95%CI [0.70, 0.98], $p = 0.02$; see Fig. 8), and heterogeneity was low ($I^2 = 8\%$; $\chi^2 = 3.24$; $p = 0.36$). The Galbraith plot did not identify any outlier study (Fig. 3E).

3.4.6. Sexual violence victimization

We included four studies (2661 participants) in the meta-analysis for sexual DV victimization. The pooled effect was non significant ($OR = 0.85$, 95%CI [0.68, 1.06], $p = 0.16$; Fig. 9) and heterogeneity was moderate ($I^2 = 38\%$; $\chi^2 = 4.80$; $p = 0.19$). The Galbraith plot did not identify any outlier study (Fig. 3F).

3.4.7. Composite score of DV perpetration

We included nine studies (7368 participants) in the meta-analysis for this outcome. The pooled effect was non significant ($OR = 1.27$, 95%CI [0.77, 2.10], $p = 0.36$) and heterogeneity was high ($I^2 = 97\%$; $\chi^2 = 312.27$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 8; Fig. 3G). After excluding these outliers, seven studies were examined (4540 participants) and heterogeneity was moderate ($I^2 = 34\%$; $\chi^2 = 9.15$; $p = 0.17$). The results showed a significant reduction in the occurrence of perpetration in the participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.78$, 95%CI [0.69, 0.88], $p < 0.0001$; see Fig. 10).

3.4.8. Composite score of DV victimization

We included seven studies (6186 participants) in the meta-analysis for this outcome. The pooled effect was significant ($OR = 0.74$, 95%CI [0.59, 0.93], $p = 0.01$) and heterogeneity was high ($I^2 = 86\%$; $\chi^2 = 42.84$; $p < 0.0001$). The sources of this heterogeneity were analyzed using the Galbraith plot, which identified two outlier studies (Studies 7 and 11; Fig. 3H). After excluding these outliers, five studies were examined (2251 participants) and heterogeneity was moderate ($I^2 = 59\%$; $\chi^2 = 9.76$; $p = 0.04$). A significant reduction in the occurrence of victimization was observed in the participants allocated to the experimental groups compared to those allocated to the comparison groups ($OR = 0.74$, 95%CI [0.59, 0.93], $p = 0.01$; see Fig. 11).

3.4.9. Attitudes toward DV

We included six studies (6348 participants) in the meta-analysis for attitudes toward DV. The pooled effect was non significant ($OR = 0.89$, 95%CI [0.77, 1.03], $p = 0.12$; Fig. 12) and heterogeneity was moderate ($I^2 = 40\%$; $\chi^2 = 8.39$; $p = 0.14$). The Galbraith plot did not identify any

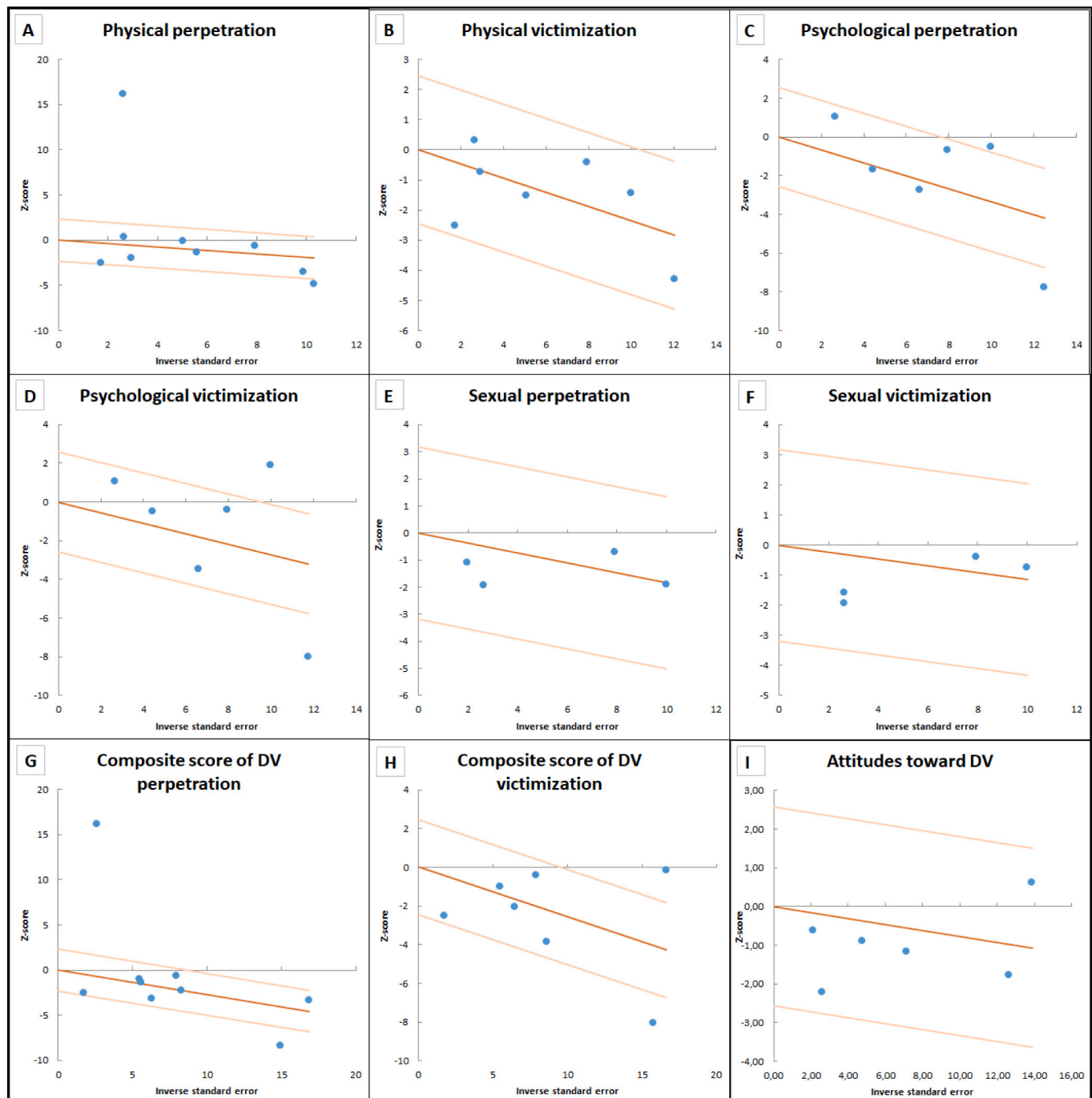


Fig. 3. Publication bias analysis (Galbraith plot).

Note. A) Physical perpetration; B) Physical victimization; C) Psychological perpetration; D) Psychological victimization; E) Sexual perpetration; F) Sexual victimization; G) Composite score of DV perpetration; H) Composite score of DV victimization; I) Attitudes toward DV.

outlier studies (Fig. 3I).

3.4.10. Subgroup and meta-regression analyses

The subgroup analyses showed no significant differences in the pooled effects depending on the type of study (RCT vs. non RCT) for the composite score of DV perpetration ($\chi^2 = 0.17$; $p = 0.68$). For the composite score of DV victimization and attitudes toward DV, the comparison by type of study (RCT vs. non RCT) could not be carried out because only one of the studies examining this outcome was non RCT. The subgroup analyses showed no significant differences in the pooled effects depending on intervention length (<12 h of intervention vs. 12 h

or more) for the composite score of DV perpetration ($\chi^2 = 0.01$; $p = 0.92$), the composite score of DV victimization ($\chi^2 = 1.67$; $p = 0.20$) and attitudes toward DV ($\chi^2 = 0.46$; $p = 0.11$). The meta-regression analyses are shown in Table 5. Follow-up length was negatively and significantly associated with effect sizes for the composite score of DV perpetration and the composite score of DV victimization, but not for attitudes toward DV. The meta-regression analyses did not show any significant associations between the pooled effect sizes and the risk of bias.

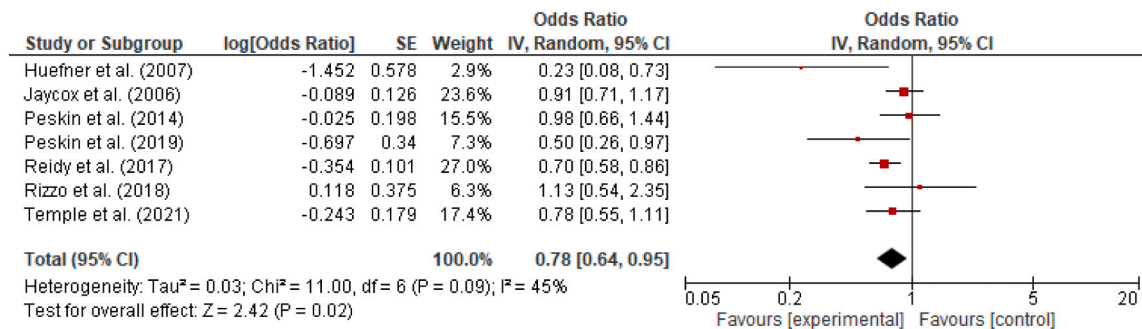


Fig. 4. Physical perpetration of DV.

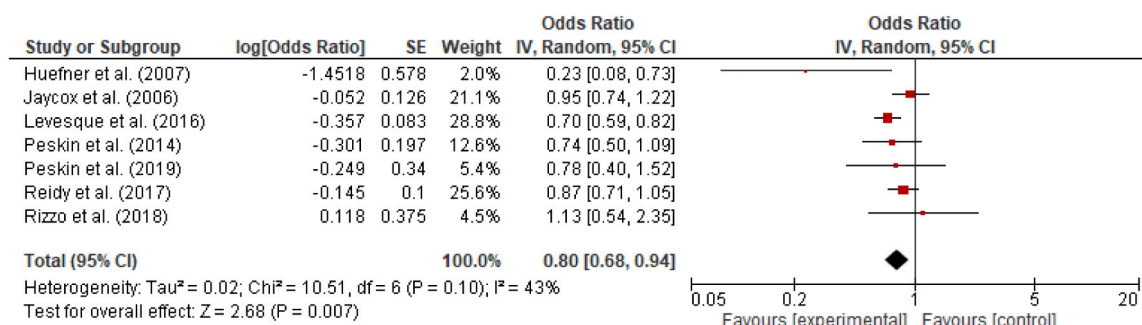


Fig. 5. Physical DV victimization.

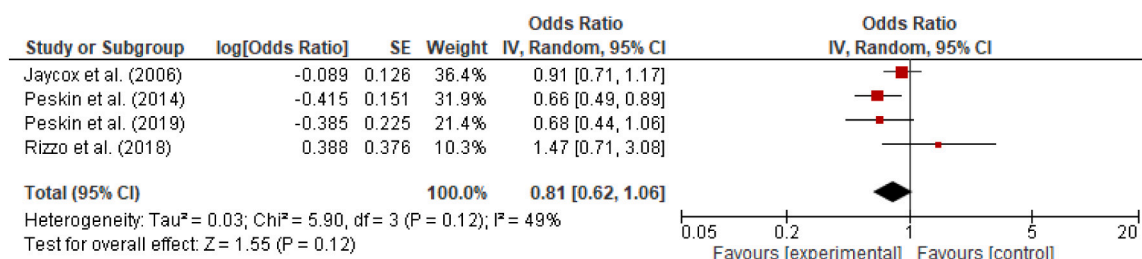


Fig. 6. Psychological perpetration of DV.

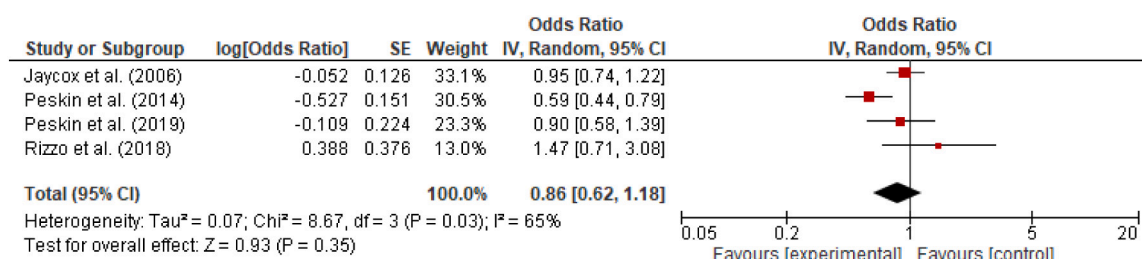


Fig. 7. Psychological DV victimization.

4. Discussion

The present systematic review has focused specifically on secondary DV prevention programs for adolescents who present at-risk factors for DV (e.g., previous exposure to violence, living in disadvantaged neighborhoods, belonging to ethnic minorities, and living in residential care). This systematic review included interventions carried out in any setting irrespectively of the context in which they were delivered. We collected RCTs and quasi-experimental studies with a follow-up longer than a month. In addition, a meta-analysis was carried out to assess the impact of DV prevention programs among at-risk adolescents. The main results

of the composite measures analyzed in the meta-analysis indicated that the implementation of DV prevention programs that targeted at-risk adolescent populations was associated with an overall reduction in DV perpetration and victimization. The analyses that evaluated the different types of violence separately indicated a reduction in physical and sexual DV perpetration and physical DV victimization. However, no reduction in sexual DV victimization or psychological DV perpetration and victimization was observed. Additionally, there were no significant changes in attitudes toward DV.

Our results on composite measures of DV are consistent with the previous literature because a decrease in perpetration is expected to

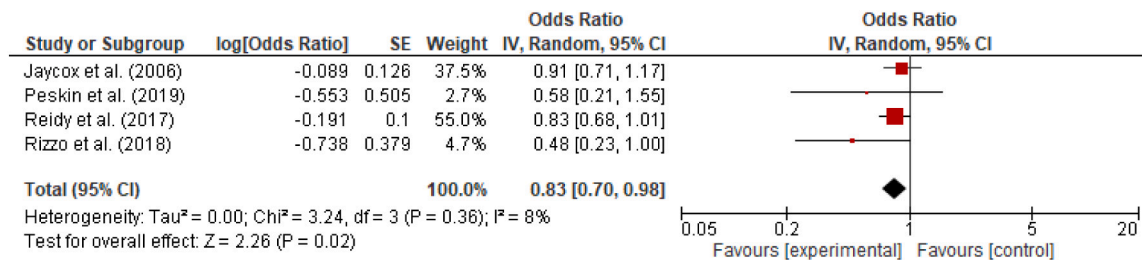


Fig. 8. Sexual violence perpetration.

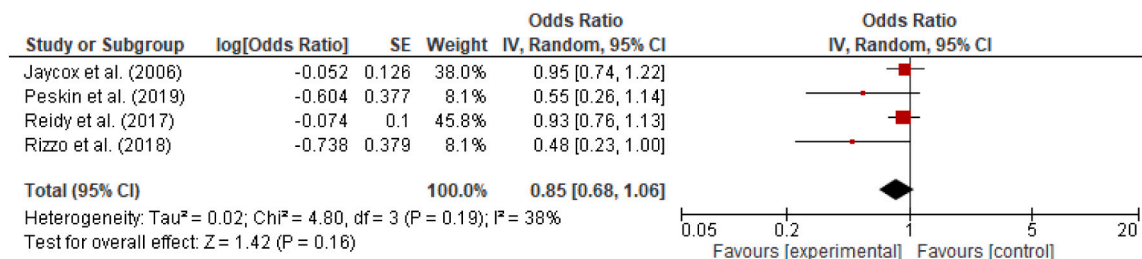


Fig. 9. Sexual violence victimization.

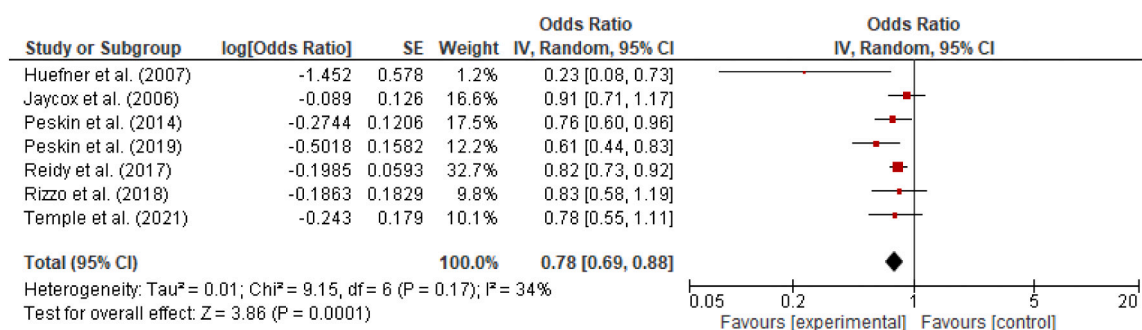


Fig. 10. Composite score of DV perpetration.

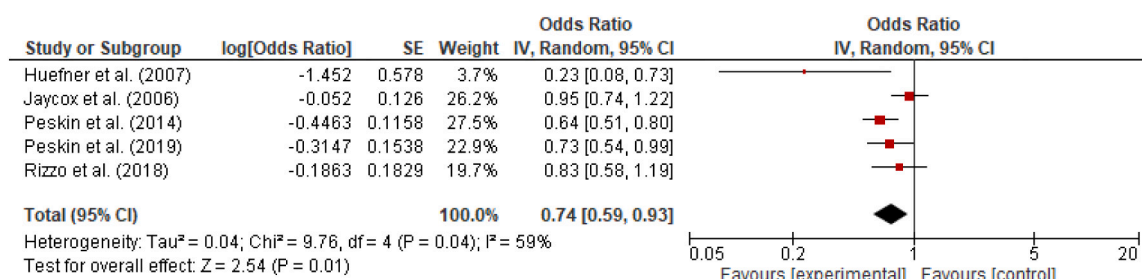


Fig. 11. Composite score of DV victimization.

produce a decrease in victimization (Lee & Wong, 2020). Regarding DV perpetration, previous studies that did not focus on at-risk populations showed mixed results. There were studies that indicated significant effects (Edwards & Hinsz, 2014; Lee & Wong, 2020; Piolanti & Foran, 2021), and others that obtained no differences in overall DV perpetration between the intervention and control participants (De la Rue et al., 2017; Russell et al., 2021). Regarding DV victimization, except for the Piolanti and Foran (2021) meta-analysis that obtained significant differences in overall DV victimization between the intervention and control participants, the other meta-analyses did not obtain significant results on this variable (De la Rue et al., 2017; Lee & Wong, 2020; Russell et al., 2021).

Our results for the combined measures of DV victimization and perpetration are consistent with the meta-analysis of Piolanti and Foran (2021). Furthermore, in a sub-analysis, they showed that the effects of programs conducted on DV in at-risk adolescents had significantly stronger effects than those that target the general population. However in their composite measures of victimization and perpetration, Piolanti and Foran (2021) included physical and sexual violence, unlike our meta-analysis, which included physical, psychological, sexual and cyber DV. For this reason, our meta-analysis represents an important advance in the literature by including more types of DV and obtaining a significant reduction in DV in its results.

According to the separate results of the different types of DV, as far as

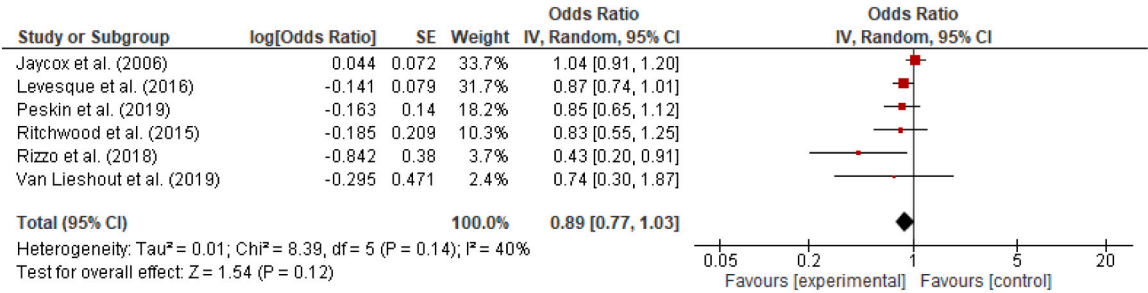


Fig. 12. DV attitudes.

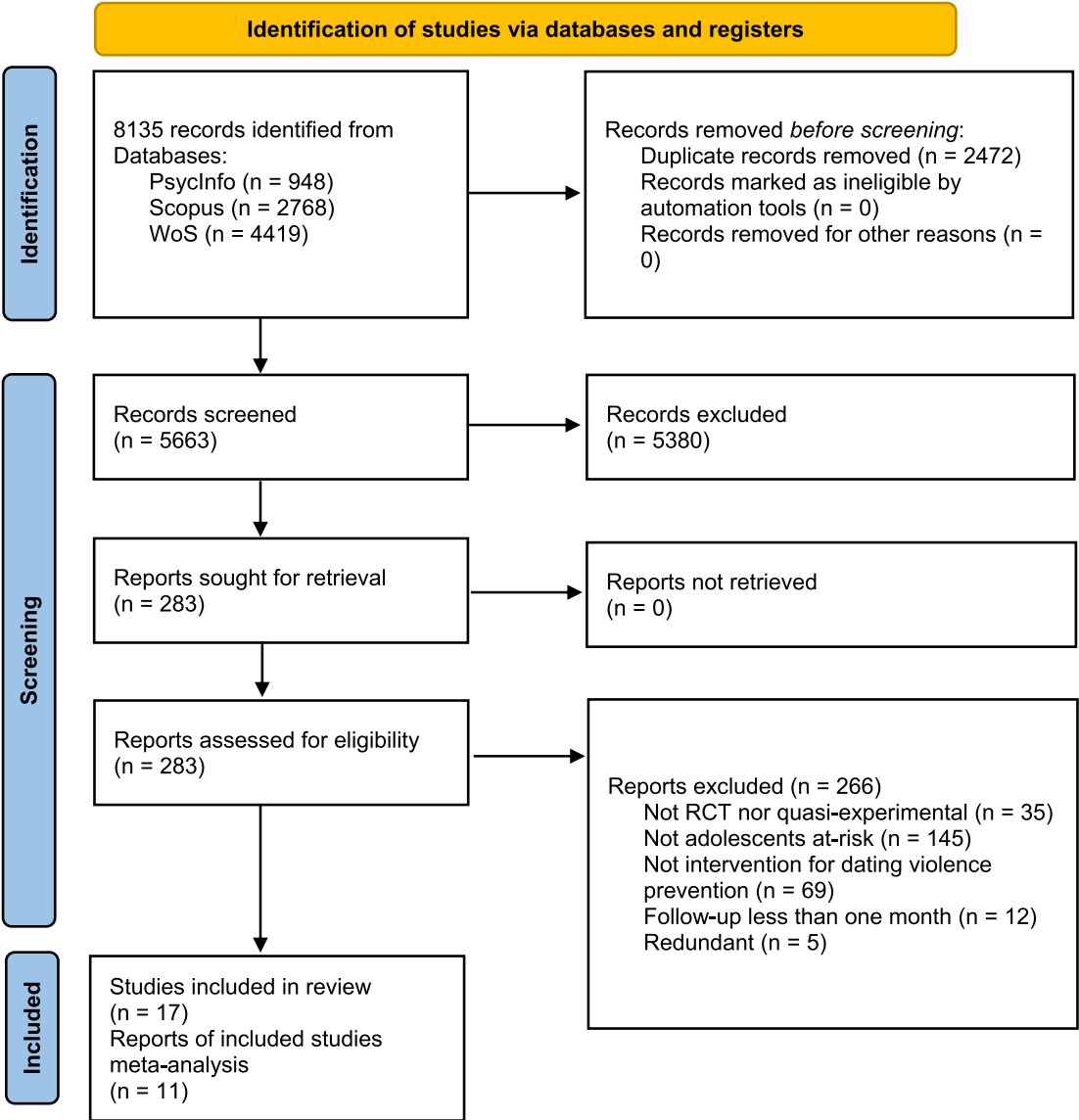


Fig. 1. Flow diagram.

physical DV is concerned, our results are consistent with two previous meta-analyses that found a significant reduction in this variable after intervention (Piolanti & Foran, 2021; Russell et al., 2021). The studies included in the meta-analysis showed significant results for sexual DV perpetration. This result had only been found in two previous meta-analyses. However, those studies did not focus on a specific population of at-risk adolescents (Lee & Wong, 2020; Russell et al., 2021).

These results are encouraging because programs that focus on at-risk populations could be effective in reducing the perpetration of sexual DV. For sexual DV victimization, the results did not indicate a significant reduction and, thus, continued in the same direction as most previous meta-analyses, in which no changes in behavioral variables, specifically sexual DV, were obtained (De la Rue et al., 2014, 2017; Fellmeth et al., 2013, 2015; Piolanti & Foran, 2021). In the meta-analysis of Piolanti and

Table 5
Meta-regression analyses.

Outcome	Moderator	Coefficient (95% CI) ^a	p value
Composite score of DV perpetration	Follow-up length	−0.01 (−0.01, 0.00)	0.02
	Risk of bias	−0.11 (−0.65, 0.44)	0.70
Composite score of DV victimization	Follow-up length	−0.01 (−0.01, 0.00)	0.03
	Risk of bias	0.63 (−1.24, 2.49)	0.51
Attitudes toward DV	Follow-up length	−0.03 (−0.09, 0.03)	0.34
	Risk of bias	−0.04 (−1.07, 0.10)	0.94

^a Random-effects model.

Foran (2021), reductions in this variable were found, but without reaching significance. In particular, sexual DV is considered to be a sensitive topic to deal with in adolescence and, therefore, may provoke defensive reactions leading to minor effects of this variable (Lee & Wong, 2020). Contrary to expectations, no significant results were obtained in psychological DV. This may be due to the fact that, as this type of violence is more difficult for adolescents to identify, it is more complicated for them to recognize having suffered or perpetrated psychological DV. As this type of violence is more difficult to identify, future programs with at-risk populations should specifically address it to reduce its victimization and perpetration.

The results of the trials included in the meta-analysis did not indicate a significant increase in the rejection attitudes toward DV in the experimental group compared to the control group. It must be noted that previous studies have found significant increases in rejection attitudes toward DV (De la Rue et al., 2014, 2017; Fellmeth et al., 2013, 2015; Lee & Wong, 2020; Ting, 2009). In this sense, some authors assert that it is easier to modify attitudes than behaviors (Kelly & Barker, 2016). Our results are inconsistent with the previous literature, which may be related to the fact that our sample consisted of at-risk adolescents. These adolescents live in disadvantaged neighborhoods where there are high levels of conflict and acceptance toward violence (Gracia et al., 2021). Moreover, these adolescents have probably had DV experiences that would favor the acquisition of acceptance attitudes toward DV. For this reason, at-risk adolescents are likely to be resistant to changing their attitudes.

The subgroup analyses did not identify any significant effects on DV or attitude toward DV according to intervention length similarly to what was obtained in the meta-analysis by Piolanti and Foran (2021). This could be due to the fact that wide variability has been found in the duration of programs, which makes it difficult to assess their impact on the results. However, the meta-analysis by Lee and Wong (2020) found that shorter programs produced significantly stronger effects because they were more direct. Their subanalysis, unlike ours, was conducted with all types of populations, and not specifically with at-risk adolescents. So the results may differ when analyzing this variable and its effects on intervention duration. More studies focused on at-risk populations are needed to further investigate the impact of the duration of interventions on this population.

Moreover, the fact that the effect size was larger after the intervention compared to a subsequent follow-up falls in line with some previous meta-analyses (De la Rue et al., 2017; Piolanti & Foran, 2021). This result is consistent because program effects tend to be stronger at the end of the program and decrease over time (De la Rue et al., 2017). It should be noted that the meta-regression analyses did not show significant associations between the pooled effect sizes and the risk of bias of studies. Future research should analyze which other mediating variables influence the effectiveness of a program that addresses adolescents at risk over time.

Most of the studies included in the review were conducted in school

settings. On the one hand, it is possible that students at higher risk of DV have dropped out of the school setting and are, therefore, not susceptible to receiving these interventions. The scarcity of interventions outside the school setting makes it difficult to compare these interventions with others carried out in community-type settings. Among the components of effective interventions that we have identified are education and training in skills for the promotion of healthy relationships and conflict resolution skills in relationships. De la Rue et al. (2017), in a previous systematic review, also pointed out the importance of including skill development components to favor a change in participants' behavior. Therefore, a proposal to improve interventions would be to include this content in the curriculum of programs.

It is worth noting that among the programs included in the meta-analysis, the programs aimed at a single gender (Rizzo et al., 2018; Van Lieshout et al., 2019) showed no significant results on the attitudinal variable. However, programs with mixed samples (Levesque et al., 2016; Peskin et al., 2019) showed an increase in attitudes of rejection toward DV. It would be interesting to study why programs delivered to mixed samples obtained significant results whereas those for participants of the same gender had no positive effect on attitude change. These differences raise a question: to what extent does the program participants' gender influence attitudinal change?

In terms of measurement instruments, the CADRI (Wolfe et al., 2001) was the most widely used instrument to assess physical, psychological and sexual variables. This instrument is developed and validated specifically for DV in adolescents. It is characterized by measuring both victimization and perpetration behaviors of physical, psychological, and sexual violence (Wolfe et al., 2001). It also incorporates subtle forms of sexual violence that are more in line with adolescents' experiences (Smith et al., 2015). In contrast to behavioral variables, where the CADRI is the most frequently used instrument, a variety of instruments are used to assess attitudes toward DV. It would be necessary to standardize the assessment of these attitudes to facilitate the comparison of the results between trials.

Finally, the following recommendations from the present systematic review are important for future studies. More precise information regarding the duration of the interventions is needed. For example, some studies indicated the time frame in which the interventions were performed; however, the amount of total intervention time as well as the number of sessions and hours, and the periodicity of these, should be further clarified. Moreover, it is important to establish a clear definition of follow-up, as there are studies that use different reference points (e.g., baseline, post-intervention, post-enrollment) when reporting the follow-up time. This information could improve the comparison between studies. In addition, further specification of the education and amount of training of the staff delivering interventions is needed. It is important that the staff of these programs are well-trained and sensitized to the specific characteristics of these at-risk adolescents (Ting, 2009).

This systematic review has some limitations. First, the included studies showed great heterogeneity in terms of their duration, sample size and the instruments used to assess the results. This makes a detailed evaluation and comparison of all components of the interventions difficult (Smith et al., 2015). Second, many studies did not present the results in a suitable form for incorporation into the meta-analysis. Only eleven of the seventeen studies included in the systematic review were incorporated into the meta-analysis. Third, since the heterogeneity statistics showed moderate levels in most contrasts, the results of the meta-analysis should be interpreted with caution. Fourth, this study includes peer-reviewed articles, which implies the exclusion of works not published in scientific journals, such as dissertations and gray literature. Finally, most of the studies were conducted in the United States, which may limit the generalizability of the results to other settings.

Despite these limitations, the present systematic review has several strengths. It is the first systematic review that has focused on DV prevention programs for at-risk adolescents. Moreover, RCTs and quasi-

Table 1
Qualitative data extracted from included studies.

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[1]	Cunningham et al. (2013) USA	Adolescents who had experienced dating violence (DV) and consumed alcohol in the previous year N = 329; ages: 14–18 [EG1 = 113; EG2 = 103; CG: N = 113]; 36 % boys Randomized controlled trial (RCT; 3, 6, and 12 months after baseline)	EG1: <i>Therapist + Computer Brief Intervention SafeRteens</i> (Cunningham et al., 2009): Role-playing about different DV situations. The intervention messages included the increased likelihood of violence when drinking, waiting to resolve conflicts until both partners are calm and sober, anger management strategies, if your partner has hit you before or you are afraid of him/her not talking to the partner alone, and ask someone for help. EG2: <i>Computer Brief Intervention SafeRteens</i> (Walton et al., 2010): Activities like role-playing. The therapist provided information, including weighing the pros and cons of talking to a partner when either the participant or his/her partner is drunk or angry. Safety plans were discussed if the participant felt afraid of a partner. CG: no intervention.	1. Dating victimization (3 and 6 months follow-up: EG1 < CG; 12 months follow-up: ns; EG2 vs CG: ns) 2. Frequency of moderate dating victimization (3 and 6 months follow-up: EG1 < CG; 12-m follow-up: ns; 6 and 9 months follow-up: EG2 < CG) 3. Frequency of severe dating victimization (3 months follow-up: EG2 < CG; 6 and 12 months follow-up: ns)
[2]	Fay and Medway (2006) USA	1st grade high school students living in a rural South Carolina community with high-risk factors (high rates of poverty and rapes above the national average) N = 154; ages: 15–16 [EG: N = 78; CG: N = 76]; 44 % boys RCT (1 week and 5 months post-intervention)	EG: <i>Acquaintance Rape Education Program</i> (Fay & Medway, 2006): Activities (role-playing, discussion groups, questionnaires and videotapes about rape) to encourage self-exploration, increase communication, raise awareness of DV and provide practical strategies for prevention. Throughout the program, these points were emphasized: open and clear communication; acting assertively; understanding that people have varying expectations and perceptions; taking responsibility for one's own actions; the role of alcohol and drug use in acquaintance rape. CG: no intervention.	1. Acceptance of rape myths (EG < CG) 2. Attitudes toward DV (ns)
[3]	Foshee et al. (2016) USA	Adolescents exposed to domestic violence N = 409 [N (mothers) = 305, N (teens) = 295; ages: 12–15 [EG: N = N.R.; CG: N = N.R.]; 36 % boys RCT (6 months post-intervention)	EG: <i>Moms and Teens for Safe Dates</i> (Foshee et al., 2015): six mailed booklets of DV prevention information and interactive activities, such as role plays, puzzles, games, scenario analyses and guided discussions. Mothers delivered the program to their adolescents who had been exposed to violence. CG: no intervention	1. Psychological DV victimization and perpetration (EG < CG) 2. Physical DV victimization (ns) 3. Cyber DV perpetration (EG < CG) 4. Mother-perceived susceptibility of teen to DV (EG < CG) 5. Mother-perceived severity of DV (EG > CG) 6. Mother's response efficacy for preventing DV (ns) 7. Mother's comfort in communicating with her teen (EG > CG) 8. Mother's self-efficacy for enacting teen DV prevention (EG > CG) 9. Mother's communication skills with teen (ns) 10. Mother's knowledge of DV (ns) 11. Teen conflict management skills (EG > CG) 12. Teen feeling of family closeness and cohesion (EG > CG) 13. Teen acceptance of DV (ns) 14. Maternal monitoring of teen (ns)
[4]	Huefner et al. (2007) USA	Youths from unstable environments (prior abuse, school failure, behavioral disorders, criminal activity). N = 154; ages at intervention: 10–18; ages at follow-up: 27–37 [EG: N = 131; CG: N = 23; 92 % boys Quasi-experimental (16 years post-intervention)	EG: <i>Family Home Program</i> (Davis & Daly, 2003): A married couple lives in each home with six to eight girls or boys. The couple, with the help of a full-time assistant, focuses on each youth's physical, spiritual, emotional development, and treatment needs. CG: <i>Treatment-as-usual</i>	1. Study IPV rates vs National Survey of Families and Households (NSFH) Intimate Partner Violence (IPV) rates (EG: ns; CG > NSFH). * EG vs CG: N.R.
[5]	Jaycox et al. (2006) USA	9th grade high school with 80 % or more Latino students (Hispanic students reported a DV rate 2.3 % higher than that by White students)	EG: <i>Ending Violence</i> (Jaycox et al., 2006): The curriculum aims to reverse acceptance of violence by stressing that is illegal and to increase knowledge and help-seeking by providing information and resources. It	1. Knowledge about DV and the law (EG > CG) 2. Help-seeking in DV situations (ns) 3. Acceptance of female-on-male aggression and male-on-female aggression (ns)

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Table 1 (continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[6]	Kelly et al. (2007) USA	<i>N</i> = 2540; ages: 14–15 [EG: <i>N</i> = 1384; CG: <i>N</i> = 1156]; 48 % boys	includes psycho-educational materials, videos, role-playing and exercises. CG: <i>Regular health curriculum</i>	4. Negative dating experiences (ns) 5. Victimization and perpetration in DV (ns)
		RCT (6 months post-intervention)	EG: <i>The Girl Talk-2 Intervention</i> (Kelly & Bean, 2003): The goal was to decrease sexual and DV risk behaviors. The format was interactive and included opportunities for participants to write in journals, participate in role playing, and take part in hands-on demonstrations with condoms and with the materials used during pelvic examinations, and discussion about alternatives in relationships and future goals.	1. Knowledge about sexually transmitted infections (ns) 2. Attitudes about sexual health practices and condom use (ns) 3. Acceptance of couple violence (EG < CG) 4. Self-efficacy on protective behaviors, condom use, and DV (ns) 5. Sexual risk behaviors (used condom at their last sexual encounter 6 months post-intervention: EG > CG; used the communication strategies to defuse violence 6 months post-intervention: EG > CG; less than one sexual partner (ns); negative chlamydia test (ns) 6. Self-reported physical violence within dating relationships (N.R.)
		Girls involved in the juvenile system with high rates of risk factors (sexual risk behaviors, substance abuse, school truancy, family violence, and a history of childhood sexual abuse) <i>N</i> = 480; ages: 11–18 [EG: <i>N</i> = 197; CG: <i>N</i> = 284]; 0 % boys Quasi-experimental (6 months post-intervention)	CG: <i>Lecture and Video Comparison Group</i> (Kelly & Bean, 2003): Received the same amount of contact time (3-h segments on 2 consecutive days), but in a standard lecture and video format. The group was shown “Dating and Sexual Responsibility: Beliefs, Attitudes, and Expectations,” “Refusal Skills and Responses,” and “Beyond Puberty,” 3 engaging videos with current and accurate information targeted for an adolescent audience. They received lectures on sexually transmitted infections and answered questions about the content of the lectures and videos. Participants were provided with a list of community resources for sexual and reproductive health services. EG: <i>Teen Choices: A Program for Healthy, Nonviolent Relationships</i> (Levesque et al., 2016): System intervention that integrates, in a stage-matched manner (text, images, audio, video), key content (e.g., warning signs, statistics on dating violence) and activities (e.g., expectations regarding the balance of power in dating relationships).	
[7]	Levesque et al. (2016) USA	9th, 10th, and 11th grade students with a history of emotional or physical DV victimization or perpetration <i>N</i> = 2605; ages: 14–17 [EG: <i>N</i> = 1389; CG: <i>N</i> = 1216]; 47 % boys	CG: <i>Health in Motion</i> (Mauriello et al., 2010): An alternative evidence-based online that targets physical activity, screen time and healthy eating to prevent obesity. EG: <i>El Joven Noble</i> (Tello et al., 2010): Culturally tailored character development program that focuses on establishing and maintaining healthy relationships with self, family, intimate partners, the community and culture. It uses a variety of interactive educational strategies (storytelling, small group discussions, crafts, Native American talking circles).	1. Emotional DV victimization and perpetration (EG < CG) 2. Physical DV victimization and perpetration (EG < CG) 3. Consistent use of healthy relationship skills (EG > CG) 4. Rejection of DV attitudes (6 months follow up: EG > CG; 12 months follow up: ns)
		RCT (6 and 12 months after baseline)	CG: <i>Health in Motion</i> (Mauriello et al., 2010): An alternative evidence-based online that targets physical activity, screen time and healthy eating to prevent obesity. EG: <i>El Joven Noble</i> (Tello et al., 2010): Culturally tailored character development program that focuses on establishing and maintaining healthy relationships with self, family, intimate partners, the community and culture. It uses a variety of interactive educational strategies (storytelling, small group discussions, crafts, Native American talking circles).	
[8]	Oscós-Sánchez et al. (2013) USA	High-risk secondary school students in an economically disadvantaged and predominantly Latino School district (high rates of being victims of homicide, substance use, disruptive conducts, and participation in gang activity) <i>N</i> = 223; ages: 12–19 [EG: <i>N</i> = 96; CG: <i>N</i> = 127]; 69 % boys	CG: <i>Teen Medical Academy</i> (Oscós-Sánchez et al., 2008): Health career promotion program that focuses on common medical conditions frequently managed by primary care physicians. Sessions focus on teaching human anatomy and pathology using hands-on diagnostic and therapeutic medical equipment.	1. Intimate partner violence perpetration (EG < CG)
		Quasi-experimental (3 and 9 months post-enrollment)	EG: <i>It's Your Game ... Keep It Real</i> (Tortolero et al., 2010): Classroom- and computer-based activities in a 24-lesson curriculum. Computer-based activities were set in a virtual world environment and include interactive skills-training exercises, peer role model videos, quizzes, animations, fact sheets and “real world” style adolescent serials. The curriculum includes six parent-child homework activities and individualized journaling activities at each grade level.	
		9th grade ethnic minority students (African American and Hispanic) with a history of dating or at a risk of physical DV perpetration <i>N</i> = 766; ages: 14–15 [EG: <i>N</i> = 303; CG: <i>N</i> = 463]; 42 % boys	CG: <i>Usual health education</i>	1. Physical DV victimization (EG < CG) 2. Physical DV perpetration (ns) 3. Emotional DV victimization and perpetration (EG < CG)
[9]	Peskin et al. (2014) USA	RCT (24 months after baseline)		

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Table 1 (continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[10]	Peskin et al. (2019) USA	Ethnic-minority early adolescent youths (90 % African American or Hispanic youths) who are most at risk of experiencing DV $N = 709$; ages: 11–15 [EG: $N = 438$; CG: $N = 271$]; 48 % boys RCT (12 months after baseline)	EG: <i>Me & You</i> (Peskin et al., 2019): Multilevel technology-enhanced DV prevention program. It consists of: student component, parent component and school component. CG: <i>Regular health education</i>	1. Physical, psychological, and threatening DV perpetration (EG < CG) 2. Sexual and cyber DV perpetration (ns) 3. Threatening and sexual DV victimization (EG < CG) 4. Physical, psychological, and cyber DV victimization (ns) 5. Acceptability of dating aggression from male to female and female to male (EG < CG)
[11]	Reidy et al. (2017) USA	Youths who have been exposed to violence in their home, school, or community $N = 1330$; ages: 11–17 [EG: $N = 756$; CG: $N = 574$]; 39.84 % boys Quasi-experimental (12 months after baseline)	EG: <i>Expect Respect Support Groups</i> (Ball et al., 2009, 2012): Group support sessions focusing on developing healthy relationship skills and modifying maladaptive dating behavior norms. The curriculum includes: (1) developing group skills; (2) choosing equality and respect; (3) recognizing abusive relationships; (4) learning healthy relationship skills; (5) spreading the message. CG: <i>Treatment as usual</i> EG1: <i>Teach One Reach One</i> (Ritchwood et al., 2015): The curriculum focuses on abstinence, condom use and healthy dating relationships. The curriculum for caregivers focuses on parenting practices and communication about sexual health and healthy dating. Each session is structured to target specific behavioral determinants from our guiding theoretical framework, such as knowledge, attitudes, skills, self-efficacy, outcome expectations, social networks and perceived norms for youth and parents on abstinence, condom use, healthy dating and communication. EG2: receive information from participants who have attended the “ <i>Teach One Reach One</i> ” program	1. DV perpetration and victimization: controlling behaviors, psychological DV, physical DV, sexual DV, fear/intimidation, injury, use of self-defense (ns) 2. Reactive aggression (EG < CG) 3. Proactive aggression (EG < CG)
[12]	Ritchwood et al. (2015) USA	High risk Rural African American youths (greater rates of marginalization, poverty, and exposure to community violence) $N = 331$; ages: 10–14 [EG1: $N = 79$; EG2: $N = 135$; CG: $N = 117$]; 45 % boys Quasi-experimental (9 months post-intervention)	EG1: <i>Teach One Reach One</i> (Ritchwood et al., 2015): The curriculum focuses on abstinence, condom use and healthy dating relationships. The curriculum for caregivers focuses on parenting practices and communication about sexual health and healthy dating. Each session is structured to target specific behavioral determinants from our guiding theoretical framework, such as knowledge, attitudes, skills, self-efficacy, outcome expectations, social networks and perceived norms for youth and parents on abstinence, condom use, healthy dating and communication. EG2: receive information from participants who have attended the “ <i>Teach One Reach One</i> ” program	1. Acceptance of DV (EG1: baseline < follow-up; EG2 and CG: ns) 2. Parent–teen communication (ns) 3. Family functioning (CG: baseline > follow-up; EG1 and EG2: ns) 4. Youth's knowledge of healthy dating behaviors (ns) 5. Self-efficacy for healthy dating behaviors (EG1 and EG2: baseline < follow-up; CG: ns)
[13]	Rizzo et al. (2018) USA	Adolescent girls with a history of victimization or perpetration of physical DV. $N = 109$; ages: 14–17 [EG: $N = 59$; CG: $N = 50$]; 0 % boys RCT (3, 6, and 9 months post-intervention)	CG: no intervention EG: <i>Date SMART</i> (Rizzo et al., 2018): It focuses on providing a toolkit of skills that arm teens with choices for how to handle situations involving risk, including mutual aggression and unprotected sex. Skills include self-assessment, cognitive restructuring, problem solving, assertive communication training, self-shooting and emotion regulation strategies that target anger, jealousy and sadness. CG: <i>Knowledge-only</i> (Rizzo et al., 2018): Classes based on interactive games and activities that cover common prevention topics in health class. Increase knowledge about DV and sexually transmitted infections, as well as shift attitudes. EG: <i>Fourth R</i> (Temple et al., 2021): The intervention presents information in an engaging and interesting format, aims to increase adolescents' motivation and teaches skills that promote healthy relationships and reduce conflict, risky behavior and substance abuse.	1. Sexual DV (EG < CG) 2. Cyber DV perpetration and victimization (ns) 3. Number of dating relationships (ns) 4. Total sex acts (ns) 5. Condomless sex acts (ns) 6. Number of physical DV (hit, slapped, punched)(ns) 7. Intervention mechanisms (depression, emotion regulation, condom self-efficacy, attitudes about couple violence, and HIV knowledge: ns)
[14]	Temple et al. (2021) USA	7th grade students who are ethnically diverse and economically disadvantaged $N = 2768$; ages: 11–13 [EG: $N = 1237$; CG: $N = 1531$]; 50 % boys RCT (12 months post intervention)	EG: <i>Fourth R</i> (Temple et al., 2021): The intervention presents information in an engaging and interesting format, aims to increase adolescents' motivation and teaches skills that promote healthy relationships and reduce conflict, risky behavior and substance abuse. CG: <i>Standard health curriculum</i>	1. Physical DV (EG < CG) 2. Substance use (ns) 3. Bullying perpetration (ns)
[15]	Van Lieshout et al. (2019) Netherlands	Youths in residential care who have grown up with emotional, sexual, and/or physical abuse or neglect; and have witnessed domestic violence or have substance abusing parents $N = 68$; ages: 12–18 [EG: $N = 22$; CG: $N = 46$]; 100 % boys RCT (6 months after baseline)	EG: <i>Make a Move</i> (Rutgers – Centers for Sexual and Reproductive Health and Rights): Group intervention for boys about sexuality and relationships, designed to prevent sexual harassment and DV. The themes covered during meetings are: men, image, girls, sex, flirting, dating, pleasurable sex and the future. Each meeting includes several exercises, such as role play, discussion and watching short movie clips.	1. Self-esteem (ns) 2. Empathy (ns) 3. Adverse sexual beliefs (ns) 4. Attitude toward DV (ns) 5. Rape attitude (ns) 6. Outcome expectancies (ns) 7. Attitudes toward communicating with a partner (ns) 8. Attitudes toward self-control (ns) 9. Attitudes toward stating boundaries with friends (ns)

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Table 1 (continued)

Study number	Authors and country	Sample characteristics and study design (follow-up)	Interventions in experimental group (EG) and comparison groups (CG)	Outcomes and results
[16]	Vivolo-Kantor et al. (2019) USA	6th, 7th, and 8th grade students living in high-risk urban communities (elevated levels of violent crime, homicide, aggravated assault, felony assault, sexual assault, and poverty)	CG: no intervention	10. Self-efficacy toward self-control (ns) 11. Self-efficacy toward communication (ns) 12. Social norms that support sexual harassment (EG > CG) 13. Self-efficacy to deal with peer pressure (ns) 14. Intention (ns)
		N = 3301; ages: 10–15 [EG: N = 1662; CG: N = 1639]; 47 % boys RCT (6, 12, 18, 24, and 30 months after baseline)	EG: <i>Dating Matters: Strategies to Promote Healthy Teen Relationship</i> (Niolon et al., 2016): Comprising preventive components at the individual, relationship, and community levels, including: (1) classroom-delivered programs for 6th (6 sessions), 7th (7 sessions), and 8th (10 sessions) grade students; (2) training for parents; (3) training for educators; (4) a youth communications program; (5) activities in the local health department. CG: <i>Safe Dates</i> (Foshee et al., 2005): Classes about conflict management and prosocial skills, norms associated with partner violence and gender stereotypes, and beliefs in the need for help and in given action to provide help. Theater production performed by students.	1. Bullying victimization (ns) 2. Bullying perpetration (EG < CG) 3. Cyber bullying victimization (girls: EG < CG; boys: ns) 4. Cyber bullying perpetration (girls: EG < CG; boys: ns) 5. Physical violence perpetration (EG < CG) 6. Physical violence victimization (ns)
[17]	Wolfe et al. (2003) Canada	Teens from Child Protective Services agencies with histories of maltreatment. N = 158; ages: 14–16 [EG: N = 96; CG: N = 62]; 50 % boys RCT (16 months post-intervention)	EG: <i>Youth Relationship Project</i> (Wolfe et al., 1996): A co-educational intervention group program that uses a health-promotion approach to prevent DV by focusing on positive alternatives to aggression. The curriculum involves: (a) education and awareness of abuse and power dynamics in close relationships; (b) skill development; (c) social action. CG: <i>Standard Child Protective Services</i>	1. Physical and emotional abuse perpetration (EG < CG) 2. Threatening behavior perpetration (EG < CG) 3. Emotional abuse (EG < CG) 4. Threatening behavior victimization (EG < CG) 5. Emotional distress (trauma symptoms: EG < CG; interpersonal hostility: ns) 6. Healthy relationship skills (ns)

Note. ≥ significantly higher than; ≤ significantly lower than; ns = non-significant differences; vs. = versus; N.R. = Not Reported.

Table 2
Studies included in the meta-analyses.

Study number	Authors	Meta-analysis studies
[1]	Cunningham et al. (2013)	
[2]	Fay and Medway (2006)	
[3]	Foshee et al. (2016)	
[4]	Huefner et al. (2007)	X
[5]	Jaycox et al. (2006)	X
[6]	Kelly et al. (2007)	
[7]	Levesque et al. (2016)	X
[8]	Oscós-Sánchez et al. (2013)	X
[9]	Peskin et al. (2014)	X
[10]	Peskin et al. (2019)	X
[11]	Reidy et al. (2017)	X
[12]	Ritchwood et al. (2015)	X
[13]	Rizzo et al. (2018)	X
[14]	Temple et al. (2021)	X
[15]	Van Lieshout et al. (2019)	X
[16]	Vivolo-Kantor et al. (2019)	
[17]	Wolfe et al. (2003)	

experimental studies with a follow-up longer than one month were selected, and the search strategy was not restricted in terms of language. Another aspect to highlight is that this systematic review has included prevention programs regardless of the setting (school setting, community, medical centers, etc.). As far as we know, this has only been included in one previous systematic review, which did not focus on at-risk adolescents (Russell et al., 2021). The priority of the systematic review was to select programs aimed at vulnerable adolescents across all settings. Another strength is that it is the first meta-analysis to assess physical, psychological, sexual and cyber violence and attitudes toward DV in an at-risk population.

5. Conclusions

This is the first systematic review to collect only prevention programs that target at-risk adolescents, and the first meta-analysis to measure physical, psychological, sexual, and cyber violence on combined measures. Moreover, the obtained results are very encouraging because they indicate that interventions with these at-risk groups are effective in reducing DV perpetration and victimization. Therefore, the results serve as a basis for future systematic reviews. Future research should focus on specific at-risk populations to provide more detail on what factors influence the effectiveness of such programs (Reyes et al., 2020). Knowing what works with this population will allow us to move forward in improving these interventions, with the goal of reducing the risk of committing and/or experiencing DV. Previous studies highlight the need for further research into the development and identification of effective interventions for the most vulnerable groups (Crooks et al., 2019; Reyes et al., 2020). It is important to focus on these interventions and highlight the need to evaluate the results independently of those of the universal population due to the different and particular characteristics presented by this population. Future research should target this population to analyze what factors are critical for these programs to work and to be effective in DV prevention (Shorey et al., 2012; Wilkins et al., 2014).

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Table 3
Characteristics of Included Studies.

Characteristics of studies		N (%)
Publication year	2003–2014	7 (41.18 %)
	2015–2021	10 (58.82 %)
Intervention country	United States	15 (88.24 %)
	Netherlands	1 (5.88 %)
	Canada	1 (5.88 %)
Adolescent risk characteristics	Previous DV experience	3 (17.65 %)
	Previous exposure to violence in childhood	4 (23.53 %)
	Living in disadvantaged neighborhoods	4 (23.53 %)
	Belonging to ethnic minorities	4 (23.53 %)
Gender of the target population	Living in residences because of past violence and an unstable family environment.	2 (11.76 %)
	Boys and girls	14 (82.35 %)
	Girls	2 (11.77 %)
	Boys	1 (5.88 %)
Research design	RCTs	12 (70.59 %)
	Quasi-experimental	5 (29.41 %)
Follow-up period	Follow-up from baseline	8 (47.06 %)
	Follow-up after intervention	9 (52.94 %)
Setting of intervention	School	10 (58.82 %)
	Youth residences	2 (11.77 %)
	Community	3 (17.65 %)
	Home	1 (5.88 %)
	Medical center	1 (5.88 %)
Intervention facilitators	Trained staff involved in research	6 (35.29 %)
	Nonintervention staff	9 (52.94 %)
Duration of intervention (hours)	< 6	5 (29.41 %)
	6–18	7 (41.17 %)
	> 20	4 (23.53 %)
Program content	Healthy relationships	9 (52.94 %)
	Sexual relationships	5 (29.41 %)
	Recognize abusive relationships	5 (29.41 %)
	Conflict-resolving skills	4 (23.53 %)
	Assertive communication	4 (23.53 %)
	Resources and support services	2 (11.77 %)
	DV parent training	2 (11.77 %)
	Preventing DV	2 (11.77 %)
	Legal issues related to DV	1 (5.88 %)
	Resources to leave unhealthy relationships	1 (5.88 %)

Table 3 (continued)

Characteristics of studies		N (%)
Main outcomes analyzed	Physical DV	12 (70.59 %)
	Psychological DV	6 (35.29 %)
	Sexual DV	4 (23.53 %)
	Cyber DV	4 (23.53 %)
	DV acceptance	5 (29.41 %)

Declaration of competing interest

None.

Data availability

No new data were generated in this study, and the data supporting the results are available in the article and its supplementary materials. Therefore, data sharing does not apply to this article.

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Publication 2

Validation of the Adolescent Dating Violence Victim-Blaming Attitudes Scale¹

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Abstract

Dating violence (DV) is a social problem that affects adolescents worldwide. Prevalence figures show that this type of violence is starting at an increasingly younger age, which is why it is important to study attitudes toward DV, as they are an important risk factor. Victim-blaming attitudes justify this type of violence by excusing perpetrators and blaming victims. The present study aimed to validate an instrument developed to assess victim-blaming attitudes in DV cases among the adolescent population: The Adolescent Dating Violence Victim-Blaming Attitudes Scale (ADV-VBA). Two samples of high school students were recruited using a two-stage stratified sampling by conglomerates, one consisting of 758 adolescents (48% females) and the other of 160 (50% females), whose ages ranged from 12 to 18 years. We found that this instrument presented good reliability and validity evidence, showing good internal consistency, a clear one-factor latent structure, and a close relation to other related constructs, such as ambivalent sexism and perpetration and victimization of DV. We also found that items did not present differential item functioning across gender and the instrument was especially informative for assessing moderate to high levels of victim-blaming

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attitudes. A short five-item version is also presented for use when time and space constraints exist. Our results indicate that the ADV-VBA scale is a psychometrically sound measure to assess victim-blaming attitudes in cases of adolescent DV.

Keywords

dating violence, adolescence, attitudes, victim-blaming, measurement

Dating violence (DV) is an important social problem that affects adolescents worldwide (Collibee et al., 2021; European Union Agency for Fundamental Rights, 2014; Fellmeth et al., 2013; Vives-Cases et al., 2021; Wincentak et al., 2017) with serious consequences for their health and well-being (Hossain et al., 2020; Taquette & Monteiro, 2019; Wincentak et al., 2017). According to the systematic review by Wincentak et al. (2017), the global prevalence for adolescents aged 13 to 18 years is 20% for physical violence and 9% for sexual violence. In its latest study, the World Health Organization (2021) indicated that 24% of adolescent girls aged 15 to 19 years had experienced physical and/or sexual violence by their partner at least once in their lifetime. The Centers for Disease Control and Prevention (2019) reported that 26% of girls and 15% of boys had been victims of some form of DV before age 18.

Adolescents' attitudes toward violence in intimate relationships are an important risk factor for DV (Bell & Bailey, 2020; Courtain & Glowacz, 2021; Leen et al., 2013; McCauley et al., 2013; Stith et al., 2004; Vagi et al., 2013). Although in prior intervention trials, the change in attitudes toward DV has not always been related to a change in DV behaviors (Lee & Wong, 2020; De La Rue et al., 2017), several studies have found that adolescents who hold more tolerant attitudes toward DV are more likely to engage in subsequent DV perpetration (Brendgen et al., 2002; Courtain & Glowacz, 2021; Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). For instance, in their study, Courtain and Glowacz (2021) found that positive attitudes toward DV were significantly associated with violent behavior. They suggest that these programs can help prevent and/or reduce DV, including attitudes toward DV in their curricula (Brendgen et al., 2002; Courtain & Glowacz, 2021). Therefore, addressing attitudes toward DV could be considered a key aspect of interventions with the adolescent population (Leen et al., 2013).

Victim-blaming attitudes in the context of intimate partner violence (IPV) are a type of attitude that justifies the violence perpetrated by men against women and legitimizes it in certain circumstances (Gracia, 2014). These attitudes excuse and partially absolve the male perpetrators of violence

and attribute responsibility for it to the female victims (Gracia, 2014). The perception of who is responsible for violence is important because it will influence public responses to these incidents of violence (Gracia, García, et al., 2009; Martín-Fernández et al., 2018, 2022; Taylor & Sorenson, 2005; Waltermaurer, 2012). If responsibility falls on the female victims, there will be fewer complaints by acquaintances about this type of violence and they will, therefore, receive less support from their informal social network (Gracia et al., 2018; Waltermaurer, 2012). Specifically, these victim-blaming attitudes can make perpetrators publicly feel that their violence is justified and can reinforce their violent behaviors (Gracia, 2014; Taylor & Sorenson, 2005; Waltermaurer, 2012). Despite public awareness and educational policies in the past few years, victim-blaming attitudes are still persistent, and prevalence of Intimate Partner Violence against Women (IPVAW) remains alarmingly high among younger generations (Gracia et al., 2020, 2023). Previous research highlights the importance of addressing victim-blaming attitudes, but this research focused on the adult population in the IPVAW context (Martín-Fernández et al., 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). Research on such attitudes in adolescent populations is scarce, and these studies have limitations regarding the psychometric properties of the instruments (Morrison et al., 2023). Additionally, there is a need to expand the knowledge base on the social aspects that contribute to DV prevalence in the adolescent population.

Different instruments have been developed to analyze adolescents' attitudes toward DV. These instruments have focused on acceptability attitudes toward different types of violence, for example, *Attitudes Towards Dating Violence Scales* (Price et al., 1999), *Attitudes about Aggression in Dating Situations* (Slep et al., 2001), *Adolescent Attitudes Regarding Dating Relationships* (Davidson, 2005). Foshee et al. (2001) assessed attitudes toward the social norms of DV through the *Prescribed Dating Violence Norm Scale*. Some of these instruments have been validated in the Spanish adolescent population (Fernández-González et al., 2017; Muñoz-Rivas et al., 2011). Yet, to our knowledge, there are no validated instruments that focus exclusively on victim-blaming attitudes in the adolescent population.

Therefore, the present study focuses on adapting the *Victim-Blaming Attitudes in cases of IPVAW* scale (VB-IPVAW; Martín-Fernández et al., 2018) to the adolescent population. This instrument has been validated in adults to assess victim-blaming attitudes, provides strong evidence for reliability and validity and also has a five-item abridged form. To this end, the VB-IPVAW items were adapted by a panel of experts to cases of DV. We examined the psychometric properties of both the complete and five-item versions of the resulting scale in a Spanish adolescent population and tested

for differential item functioning (DIF) across genders. For validity purposes, we also evaluated the relation of victim-blaming attitudes to ambivalent sexism and perpetration and victimization of DV.

Method

Participants

Two-stage stratified sampling by conglomerates was used to collect the data pool. In the first stage, we drew up a list of all the public and private high school centers from the Spanish region of Valencia. Three public and three private centers were selected. In the second stage, five groups from each center were randomly selected to participate in the present study, and 921 responses were collected.

The data pool was divided into two samples. The first sample was used to assess the scale's psychometric properties scale and consisted in 758 high school students (48% females) aged 12 to 18 years ($M=15.31$, $SD=1.52$). Of them, 64.2% were studying Compulsory Secondary Education, 23.8% Baccalaureate, and 12.0% Technical and Vocational Education. The nationality of 86.0% was Spanish, and the remaining 14.0% were immigrants. When this study was conducted, 50.1% of the participants declared to be ($n=180$) or having been ($n=200$) in a dating relationship. Three participants were non-binary and were dropped from the sample.

The second sample was used to adapt the short-scale version. It was composed of 160 students (50% females) aged 12 to 18 years ($M=15.27$, $SD=1.52$). Their level of education was as follows: 66.9% were studying Compulsory Secondary Education, 20.6% Baccalaureate, and 12.5% Technical and Vocational Education. Regarding their nationality, 83.1% were Spanish and 16.9% immigrant.

Instruments

The Adolescent Dating Violence Victim-Blaming Attitudes (ADV-VBA) Scale. This scale is based on the Victim-Blaming Attitudes in the cases of the IPVAW scale (Martín-Fernández et al., 2018). It is designed to assess victim-blaming attitudes in adults and is adapted to DV. To this end, a panel of four experts in the field reviewed the items that reflect DV into two stages. The experts were selected attending to their theoretical knowledge of DV (i.e., more than 5 years of experience researching this field) or their practical expertise (i.e., more than 5 years working with victims or perpetrators of DV). In the first stage, two experts adapted the language of the item

statements individually (e.g., “Boys are violent with their girlfriends because their girlfriends make them jealous”). The other two experts assessed the clarity and representativeness of each item to assess the construct. In the second stage, a focus group was formed with all the experts and the research team to discuss disagreements with two items and to formulate the final version of the scale, which can be found in Supplemental Appendix 1. The response format of items was a 4-point Likert-type scale, on which respondents had to indicate their level of agreement with the item statements (0 = *strongly disagree*, 3 = *strongly agree*).

Ambivalent sexism inventory (ASI; Glick & Fiske, 1996). We used the Spanish adaptation for adolescents (Lemus-Martín et al., 2008). This instrument includes two subscales, hostile and benevolent sexism, each comprising 10 items with a 6-point Likert-type response format (1 = *strongly disagree*, 6 = *strongly agree*). Hostile sexism is related to prejudice and discrimination toward girls based on their supposed inferiority and subordination to boys (e.g., “Girls tend to exaggerate their problems”). Benevolent sexism is defined as an attitude that views girls in stereotyped ways and is limited to certain roles with a positive affective tone (e.g., “Girls should be cherished and protected by boys”). The ASI has been adapted and validated to assess sexism in different sociocultural contexts (Etchezahar, 2012; Glick et al., 2000, 2002; Ibabe et al., 2016; Rudman & Glick, 2012) and in adolescent population (Glick & Hilt, 2000; Lemus-Martín et al., 2008). The scale for adolescents has been related to the traditional sexist ideology (Lemus-Martín et al., 2008), and the perceived severity of adolescent DV (Arrojo, Martín-Fernández, et al., 2024). The internal consistency of both subscales and the total scale was good in this study for the first sample ($\alpha_{\text{hostile}} = .89$, $\alpha_{\text{benevolent}} = .82$, $\omega_{\text{total}} = .94$, $\omega_{\text{hostile}} = .93$, $\omega_{\text{benevolent}} = .86$) and the second sample ($\alpha_{\text{hostile}} = .88$, $\alpha_{\text{benevolent}} = .83$, $\omega_{\text{total}} = .94$, $\omega_{\text{hostile}} = .93$, $\omega_{\text{benevolent}} = .87$).

Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). We used the two subscales of this instrument from the Spanish version (Fernández-Fuertes et al., 2006): physical abuse, which includes four items (e.g., “I threw something at him/her”); verbal-emotional abuse, comprising nine items (e.g., “I did something to try to make her/him jealous”). It includes two versions of items, one to measure perpetration and the other for victimization, with a total of 26 items. The response format is a 4-point Likert-type scale, which measures the frequency of conflicts experienced by the intimate partner in the last 12 months (0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*). This instrument has been one of the most widely used measures to assess DV (Cunningham et al., 2013; Peskin et al., 2019; Rizzo et al., 2018; Shorey et al., 2017; Temple et al., 2021; Wolfe et al., 2003). The CADRI has shown adequate psychometric properties in

adolescent populations (Wolfe et al., 2001) and in samples belonging to different sociocultural contexts (Fernández-Fuertes et al., 2006; Fernández-González et al., 2012). As the categories *sometimes* and *often* were chosen by <5% of the sample, we dichotomized the responses to this measure (0 = *never*, 1 = *at least once*). The internal consistency of this measure in the first sample was good for the perpetration ($\alpha_{\text{verbal-emotional}} = .80$, $\alpha_{\text{physical}} = .79$, $\omega_{\text{total}} = .93$, $\omega_{\text{verbal-emotional}} = .89$, $\omega_{\text{physical}} = .79$) and victimization measures ($\alpha_{\text{verbal-emotional}} = .84$, $\alpha_{\text{physical}} = .80$, $\omega_{\text{total}} = .96$, $\omega_{\text{verbal-emotional}} = .96$, $\omega_{\text{physical}} = .89$).

Procedure

The participants completed a survey that included the ADV-VBA, ASI, and CADRI measures. In addition, a set of sociodemographic data was collected (i.e., age, gender, nationality, name of high school, current course, socioeconomic level, if they currently have a partner). At the beginning of the survey, the participants were informed about the study objectives and their participation in it was anonymous. Before the survey was handed out, a face-to-face meeting was held with the teachers at each high school. From November 2021 to May 2022, questionnaires were passed in person, and data were collected. This study was approved by the University of Valencia Ethics Committee.

Data Analysis

A descriptive analysis of the items was first conducted to obtain the mean, standard deviation, skew, and kurtosis statistics. Corrected item-test correlations were also computed.

The latent structure and internal consistency of the ADV-VBA were later assessed. A confirmatory factor analysis (CFA) was carried out. It replicated the one-factor model found in the original scale (Martín-Fernández et al., 2018) using weighted least squared mean- and variance-adjusted as the estimation method because this procedure yields accurate parameter estimates with categorical data (Li, 2016). A combination of fit indices was used to evaluate the model's goodness of fit. Any values of the comparative fit index (CFI) and Tucker-Lewis's index (TLI) above 0.95 were considered indicative of a good fit, and the values of the root mean squared error by approximation (RMSEA) below 0.06, 0.08, and 0.10 were considered an excellent, good or mediocre fit, respectively (Hu & Bentler, 1999; McCallum et al., 1996). The scale's internal consistency was evaluated using Cronbach's alpha and McDonald's omega.

After establishing the latent structure of the VB-IPVAW, further properties of items were inspected using the item response theory (IRT). A DIF analysis was conducted to test whether the scale's items were invariant across genders. The ordinal logistic regression method was used for polytomous items (Crane et al., 2006; French & Miller, 1996). This method is able to identify the presence of noninvariance items across groups and if this source of noninvariance is constant (i.e., uniform DIF) or varies across the latent trait continuum (i.e., nonuniform DIF). Samejima's (1969) graded response model was then fitted and the model's goodness of fit was evaluated with the C2 statistic (Monroe & Cai, 2015). This allowed the test information function for males and females to be obtained and the scale's IRT scores (i.e., the person parameter estimates) to be estimated, which were used in the subsequent analyses.

Next, the scale's validity evidence was examined. In particular, criterion-related validity was evaluated to obtain the correlation between the participants' VB-IPVAW scores and their scores on the ASI hostile and benevolent sexism subscales. Predictive validity was also examined by conducting two structural equation modeling (SEM) analyses, in which victim-blaming, gender, and nationality were included as predictors of perpetration and victimization of DV. For the SEM analysis, only the responses of those participants who were or had been in a dating relationship were used.

The psychometric properties of the five-item abridged form of the ADV-VBA were evaluated in the second sample. A one-factor model CFA was conducted using the same estimation method and cutoffs to assess the model's goodness of fit. The internal consistency of the abridged form was assessed with Cronbach's alpha, and criterion-related validity was evaluated by relating scale scores to ambivalent sexism. A correlation between the complete ADV-VBA and the five-item version was also obtained.

All the analyses were carried out in R (R Core Team, 2022) using the *psych* and *lavaan* libraries for the descriptive and SEM analyses (Revelle, 2022; Rosseel, 2012) and the *mirt* and *lordif* libraries for the IRT and DIF analyses (Chalmers, 2012; Choi et al., 2011).

Results

Descriptive Analysis

The descriptive statistics of the ADV-VBA items can be found in Table 1. The mean of all items was below with standard deviations around 0.75, which indicates that most participants strongly disagreed with the statements made

Table 1. Descriptive Statistics of the ADV-VBA Items.

Item	M	SD	Skew	Kurtosis	$r_{\text{item-test}}$
vb1	0.62	0.78	1.06	.38	.58
vb2	0.53	0.76	1.39	1.39	.68
vb3	0.25	0.63	2.79	7.64	.68
vb4	0.40	0.69	1.83	3.13	.69
vb5	0.44	0.69	1.59	2.17	.69
vb6	0.30	0.62	2.35	5.61	.69
vb7	0.34	0.67	2.20	4.68	.70
vb8	0.93	1.00	.69	-.73	.42
vb9	0.40	0.70	1.85	3.02	.72
vb10	0.42	0.74	1.81	2.68	.67
vb11	0.43	0.76	1.84	2.74	.62
vb12	0.32	0.71	2.43	5.43	.54

Note. ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; vb = ADV-VBA item; M = mean; SD = standard deviation; $r_{\text{item-test}}$ = corrected item-test correlation.

by the items. This was also reflected in the skew and kurtosis statistics, which depicted that most of the item distributions were positively skewed and leptokurtic. Item 8 (“*Girls file false complaints to obtain economic benefits and hurt their boyfriends*”) was the only exception for presenting the highest mean and variation values in the participants’ responses. The item-test corrected correlations were high for all the items, which indicates a close relation between each item and the rest of the scale.

Latent Structure and Internal Consistency

The scale’s latent structure was assessed by replicating the one-factor CFA model found in the original scale (Martín-Fernández et al., 2018). The fitted model showed an adequate goodness of fit (CFI=0.96, TLI=0.95, RMSEA [95% CI]=0.092 [0.084, 0.101]). Although the RMSEA was mediocre, the comparative fit indices (i.e., CFI and TLI) were excellent and taken together, we deemed the one-factor model as a parsimonious and adequate solution for the latent structure. When this same model was applied to the second sample, the fit indices were also adequate (CFI=0.95, TLI=0.95, RMSEA=0.059 [0.039, 0.083]). The standardized factor loadings were above 0.70 for all the items except for items 8 and 12, which implies a close relation between the items and the latent construct (Figure 1). The scale’s internal consistency was excellent ($\alpha = .90$, $\omega = .95$).

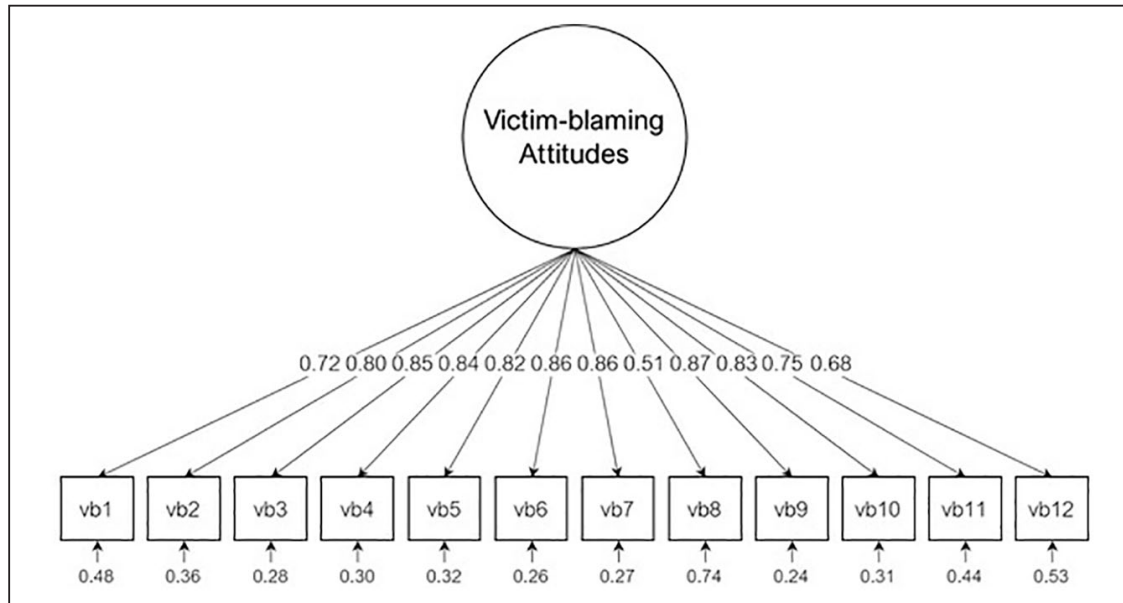


Figure 1. Confirmatory factor analysis of the ADV-VBA.

Note. ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; vb = ADV-VBA item.

Differential Item Functioning and the Item Response Theory

The scale's DIF was tested by conducting a series of ordinal regression models with the first sample (Choi et al., 2011; Crane et al., 2006). Whether belonging to a group (i.e., males or females) had any effect on the participants' responses was particularly compared, and if this effect was constant (uniform DIF) or varied for the different levels of victim-blaming attitudes (nonuniform DIF). Models were compared using a log-likelihood test (LRT), and size effect was assessed by the change in the regression coefficient and McFadden and Nagelkerker's pseudo- R^2 .

Item 6 ("Boys are violent toward their girlfriends because it makes them attractive to girls") and item 8 ("Girls file false complaints to obtain economic benefits and hurt their boyfriends") were flagged as uniform DIF by the LRT (Table 2). However, as Choi et al. (2011) suggest, for polytomous indicators, it is important to bear other statistics in mind, such as a change in β above .10 or pseudo- R^2 values over .02. In this case, effect size attributable to the group was considered negligible for item 6. For item 8, however, as the change in β came close to .10 and presented a Nagelkerke's R^2 above .02, we took effect size to be small. Instead of removing item 8 from the scale, the IRT graded response model was fitted by allowing the thresholds of item 8 to vary across males and females to, hence, reflect the uniform DIF in this item (Crane et al., 2006). The C2 statistic, which is a similar measure to χ^2 for IRT models using polytomous items, yielded an excellent fit for this model (CFI=0.97, TLI=0.97, RMSEA [95% CI]=0.052 [0.046, 0.057]).

Table 2. Differential Item Functioning (DIF).

Item	$\Delta\beta$	Uniform DIF			Nonuniform DIF		
		p	R^2_{McFadden}	$R^2_{\text{Nagelkerke}}$	p	R^2_{McFadden}	$R^2_{\text{Nagelkerke}}$
vb1	.00	.944	.000	.000	.159	.001	.002
vb2	.00	.726	.000	.000	.321	.001	.001
vb3	.00	.938	.000	.000	.528	.000	.000
vb4	.01	.479	.000	.000	.915	.000	.000
vb5	.03	.049	.003	.003	.569	.000	.000
vb6	.07	.001	.012	.012	.397	.001	.001
vb7	.01	.591	.000	.000	.808	.000	.000
vb8	.08	<.001	.015	.029	.185	.001	.002
vb9	.01	.332	.001	.001	.398	.001	.001
vb10	.01	.290	.001	.001	.868	.000	.000
vb11	.00	.843	.000	.000	.440	.001	.001
vb12	.00	.970	.000	.000	.619	.000	.000

Note. vb = ADV-VBA item; $\Delta\beta$ = change in the beta coefficient from the uniform to nonuniform model; p = log-likelihood test p -value; R^2_{McFadden} = McFadden's pseudo-R²; $R^2_{\text{Nagelkerke}}$ = Nagelkerke's pseudo-R².

Table 3. IRT Item Parameter Estimates.

Item	a	b_1	b_2	b_3
vb1	1.93	0.16	1.44	2.75
vb2	2.58	0.35	1.47	2.33
vb3	3.25	1.06	1.75	2.29
vb4	2.84	0.62	1.68	2.38
vb5	2.78	0.50	1.61	2.50
vb6	2.70	0.89	1.85	2.57
vb7	2.74	0.81	1.76	2.38
vb8	0.90	0.10/−0.70 ^a	1.89/0.74 ^a	3.69/2.44 ^a
vb9	3.07	0.64	1.60	2.36
vb10	2.60	0.66	1.55	2.28
vb11	2.12	0.71	1.68	2.45
vb12	1.79	1.10	2.01	2.59

Note. IRT = item response theory; vb = ADV-VBA item.

^aItem thresholds for males.

The item parameter estimates are displayed in Table 3. The discrimination a -parameters of all the items were high, with values above 1.90, except for item 8. The threshold parameters ranged between 0.10 and 3.69 for females

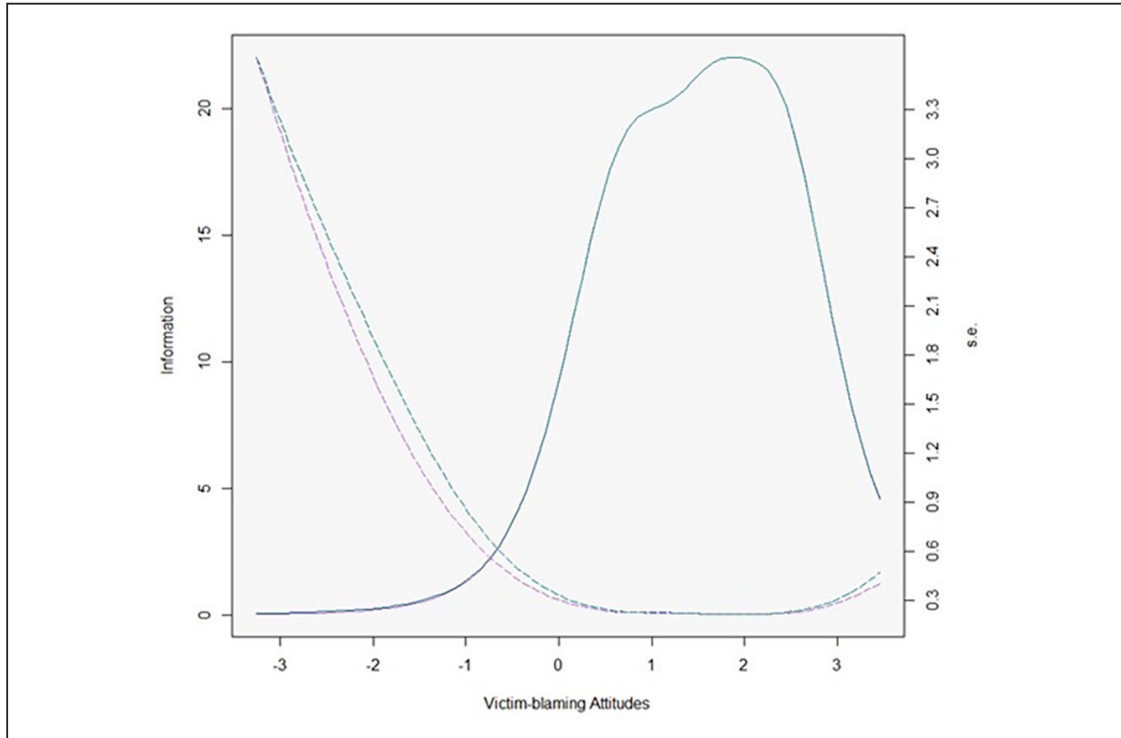


Figure 2. ADV-VBA information function.

Note. The purple and blue solid lines represent the scale information function for females and males, respectively. The broken lines represent the s.e., purple for females and blue for males. ADV-VBA = Adolescent Dating Violence Victim-Blaming Attitudes; s.e. = standard error.

and between -0.70 and 2.75 for males when mapping moderate to high levels of the latent trait continuum (i.e., victim-blaming attitudes). In conjunction, both parameters indicated that the scale was able to discriminate between respondents with moderate to high levels of victim-blaming attitudes. This was also reflected in the test information function, which showed that scale accuracy increases as the levels of victim-blaming attitudes grow (Figure 2) and peaked for the high and very high levels of the latent trait ($1 < \theta < 2$).

Validity Evidence

Criterion-related validity was assessed by obtaining the correlation between the scale's IRT scores and hostile and benevolent sexism. A close positive relation to hostile sexism ($r = .55, p < .001$) and benevolent sexism ($r = .46, p < .001$) appeared and showed that the participants with high levels of victim-blaming attitudes tended to also show high levels of both sexism types. To test predictive validity, a SEM analysis was conducted using victim-blaming, gender, age, immigrant status, and currently being in an intimate relationship as predictors of perpetration and victimization of DV (Figure 3). For the model using the CADRI perpetration scales, item 12

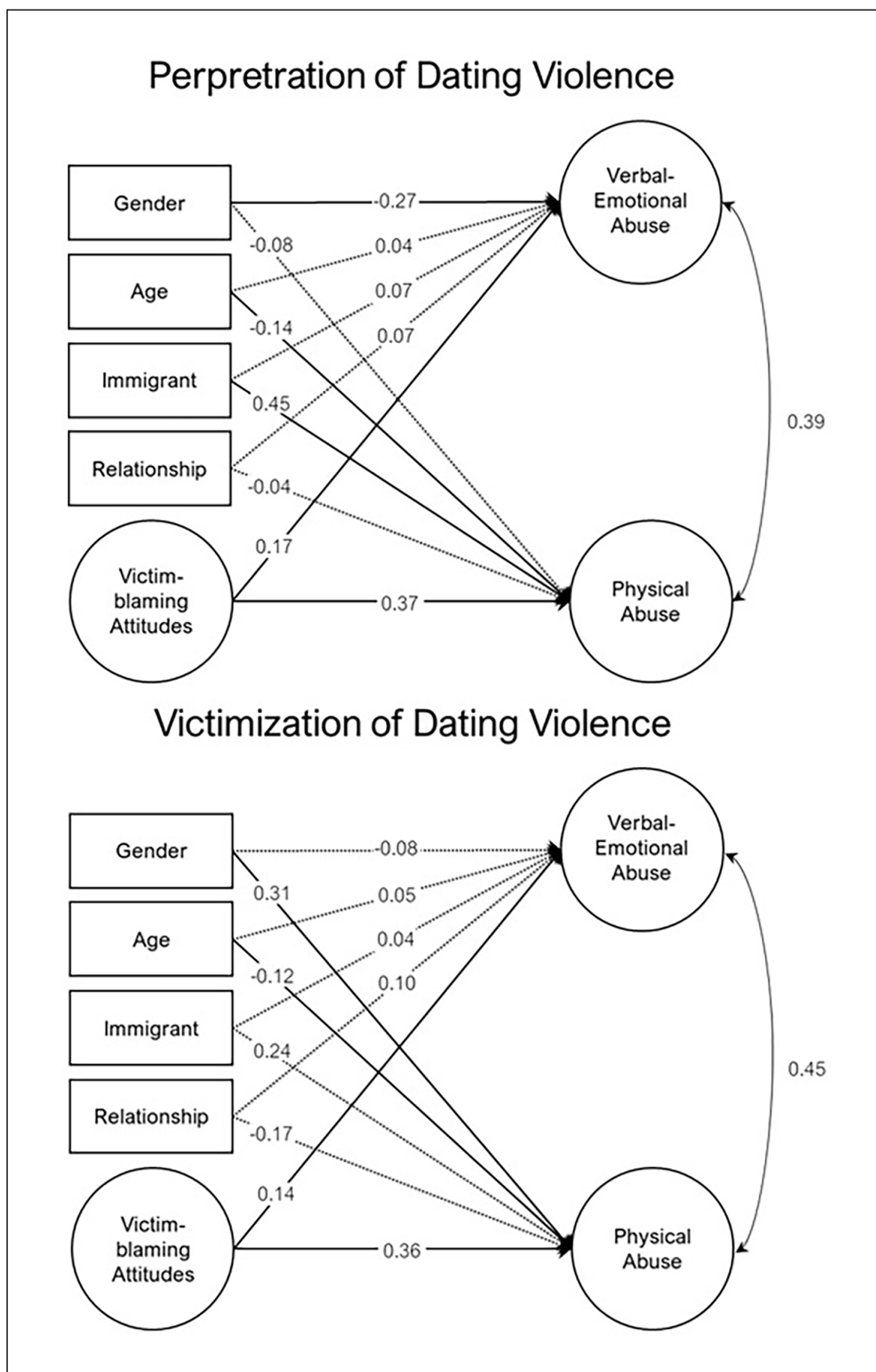


Figure 3. Structural equation modeling analysis of predictive validity.
 Note. Dotted lines: not significant paths.

(“I kicked, hit or punched him/her” “He/she kicked, hit or punched me”) had to be dropped from the analysis because the model did not converge when this indicator was included.

Goodness of fit was good for the perpetration model (CFI=0.95, TLI=0.96, RMSEA [95% CI]=0.046 [0.042, 0.051]). A significant effect of victim-blaming attitudes and gender on perpetration of verbal-emotional abuse, and a significant effect of these attitudes, age, and immigrant status on physical abuse were found. Specifically, our findings indicated that, on average, females reported committing more verbal-emotional abuse than males, and as the victim-blaming attitudes increased, so did the reported perpetration of this violence type. For physical abuse, victim-blaming attitudes predicted the reported perpetration of physical abuse, younger participants reported higher risk of perpetration, and immigrant participants showed greater perpetration of this violence than Spanish participants.

For the victimization analysis, the SEM analysis showed an adequate fit (CFI=0.96, TLI=0.96, RMSEA [95% CI]=0.046 [0.040, 0.051]). Our results revealed a similar trend, showing that victim-blaming attitudes predicted victimization of verbal-emotional and physical abuse and that female and immigrant participants reported more physical abuse victimization than males and Spanish respondents, respectively.

Abridged Form

To validate the five-item abridged form of the scale, the second sample was used. The abridged form presented a clear one-factor latent structure, showing an excellent goodness of fit (CFI=0.99, TLI=0.99, RMSEA [95% CI]=0.057 [0.001, 0.134]) and good internal consistency ($\alpha=.82$). The abridged form also showed a strong relation to hostile sexism ($r=.61$, $p<.001$) and benevolent sexism ($r=.46$, $p<.001$). Finally, we found that the correlation between the complete, 12-item version of the scale and its abridged form was high ($r=.95$, $p<.001$), indicating that both versions ordered participants in a similar manner.

Discussion

Victim-blaming attitudes are an important risk factor for IPV (Gracia, 2014; Gracia et al., 2020; Taylor & Sorenson, 2005; Waltermaurer, 2012). However, there are no validated instruments that measure victim-blaming attitudes in cases of DV among the adolescent populations. This study aimed to adapt the Victim-Blaming Attitudes in cases of IPVAW scale (Martín-Fernández et al., 2018) and validate it in the adolescent population. The results showed that ADV-VBA can fill this gap in the literature, as it provided strong evidence of

the reliability and validity of the ADV-VBA long and short versions. In addition, these scales were related to other constructs such as ambivalent sexism, perpetration and victimization of physical and verbal-emotional abuse, as well as gender and age differences. According to the latent structure, the one-factor model was replicated as the original scale (Martín-Fernández et al., 2018), where a single dimension was sufficient to explain the variability of victim-blaming attitudes in cases of DV.

Our findings also showed that the scale can discriminate well between respondents with moderate to high levels of victim-blaming attitudes. The information function from the IRT analysis showed that as respondents' victim-blaming levels increased, so did the accuracy of the ADV-VBA. Therefore, the use of ADV-VBA scale would be appropriate for use in at-risk adolescent populations. These more vulnerable populations are characterized by presenting factors that increase the risk of victimization and perpetration of DV (Brem et al., 2018; Leadbeater et al., 2018). Among the DV risk factors associated with this population are adolescents who have been exposed to violence during their childhood (Bell & Bailey, 2020; Crooks et al., 2011; Exner-Cortens et al., 2013; Leviton et al., 2015; Wolfe et al., 2003), who currently live in economically disadvantaged neighborhoods (high rates of poverty and delinquency, majority presence of ethnic minorities; Gracia, Herrero, et al., 2009; Gracia et al., 2021; Henry & Zeytinoglu, 2012; Johnson et al., 2015; Niolon et al., 2015), and adolescents belonging to residential care coming from an unstable family and social backgrounds (Van Lieshout et al., 2019). Applying ADV-VBA scale with this population will be especially useful in detecting high levels of victim-blaming attitudes. In the context of DV prevention and intervention programs aimed at-risk adolescents, knowing these attitudes will allow us to improve these interventions. Knowing victim-blaming attitudes before and after the intervention will provide us with useful information for tailoring interventions to the needs of adolescents. In addition, it will allow us to monitor and evaluate the effectiveness of interventions aimed at at-risk populations. This scale can be applied to all interventions aimed at the at-risk population, regardless of the setting in which they are developed (prisons, community interventions, etc.). Another context of application is that of research, where previous studies have highlighted the need to continue investigating which factors are key for DV interventions with at-risk populations to be effective (Arrojo, Santirso, et al., 2024; Crooks et al., 2019; Reyes et al., 2020; Shorey et al., 2012; Wilkins et al., 2014). Therefore, having this instrument will allow researchers to advance knowledge about its conceptualization, measurement, prevalence, and social factors that may influence these attitudes, as well as relationships with other variables.

While the scale is particularly valuable for at-risk adolescents, it can also be used as a measuring tool in schools to identify the prevalence of victim-blaming attitudes in the wider population and to establish effective interventions in this educational environment. The school setting provides access to a significant number of adolescents who are at the stage where they start to engage in dating relationships (Foshee et al., 2005; Petering et al., 2014; Whitaker et al., 2006; Wolfe et al., 2009). In addition, this measure may be useful in guiding DV awareness campaigns for the general population.

Regarding the potential effect of gender in the interpretation of the items, the DIF analysis showed that there were no major differences between boys and girls. We found small differences in the item thresholds for item 8 across genders (*"Girls file false complaint to obtain economic benefits and hurt their boyfriends"*), which in turn indicated that boys needed lower levels of victim-blaming attitudes than girls to show agreement with this particular item (i.e., uniform DIF). These differences, however, had almost no impact on the information function of the scale and could be easily addressed, allowing these thresholds to vary between genders.

Concerning validity evidence based on the relationship of the ADV-VBA scale with other variables, victim-blaming attitudes were found to be strongly and positively related to hostile and benevolent sexism. This means that adolescents who indicated higher levels of victim-blaming showed higher levels of both types of sexism. This is in line with previous research with adults in the framework of IPVAW, where respondents who display sexist attitudes are more likely to blame victims (Capezza & Arriaga, 2008; De Judicibus & McCabe, 2001; Gracia et al., 2014; Scott & Straus, 2007; Valor-Segura et al., 2011; Vidal-Fernández & Megías, 2014). Our preliminary results extend previous results obtained but in adolescent population.

In terms of predictive validity, our results suggest that victim-blaming attitudes predict DV perpetration and victimization. This finding is consistent with previous research focused on the relationship of DV with another type of attitude, that of DV acceptability. Results showed that the higher DV acceptability attitudes predicted subsequent DV perpetration (Brendgen et al., 2002; Foshee et al., 2001; Josephson & Proulx, 2008; Malik et al., 1997). More studies focusing on the impact of victim-blaming attitudes on DV are needed. Regarding verbal-emotional abuse, our results are in line with previous research (Fernández-Fuertes et al., 2006; Gómez et al., 2014; Sears et al., 2007) where women showed greater use of verbal-emotional abuse than men in dating relationships. In terms of age, the literature presents inconsistent findings. Some studies reported significant associations between age and prevalence of DV, indicating higher rates among older adolescents (Borges et al., 2020; Dosil et al., 2020; Mumford et al., 2019; Vives-Cases

et al., 2021; Wincentak et al., 2017). However, other studies have found that younger adolescents report higher rates of DV than older adolescents (Foshee et al., 2013; Rubio-Garay et al., 2017). Our findings are consistent with those of the Foshee et al. (2013) study, in which younger adolescents reported a higher prevalence of physical DV. With regard to relationship status, most studies either lack this information or exclude non-dating adolescents from the analysis, making comparison difficult (Mumford et al., 2019; Rubio-Garay et al., 2017). However, Mumford et al. (2019) analyzed different developmental trajectories of dating relationships and DV, indicating that adolescents who had ever dated were more likely to experience DV. In their study, Gabster et al. (2023) showed that having a greater number of partners correlated with experiencing DV. In contrast, our results showed no significant differences between adolescents with and without partners. Including all adolescents (with or without partners) allows us to gain a broader understanding of DV among adolescents (Mumford et al., 2019), so it is necessary to continue research along these lines.

In this study, an abridged five-item version of ADV-VBA was developed in the same way as the short version of the original scale (Martín-Fernández et al., 2018). The abbreviated scale can be beneficial in circumstances where there is a shortage of either time or space, making it impossible to utilize the extensive version of the scale. The short versions of validated scales may have limitations in terms of reliability and validity, so it is important to ensure they meet appropriate psychometric properties (Smith et al., 2000; Stanton et al., 2002). Our results showed that the short version of ADV-VBA has good internal consistency and adequate validity with a strong relationship to hostile and benevolent sexism. However, we recommend using the long version of the ADV-VBA scale whenever possible.

This study has certain limitations and diversity issues. First, the scale was validated among Spanish adolescents, and therefore, further investigation is required to expand the generalizability of our findings to other and more diverse cultural contexts. Second, no information was collected on sexual orientation or ethnicity, and no data were collected on the gender with which they identified, so it was not available for data analysis. Third, the cross-sectional nature of the design impeded the assessment of victim-blaming attitudes over time and did not allow us to establish any form of causality for the relationships found in our validity analyses. Fourth, the measurement invariance of the scale across ages could not be properly tested since the sample size for most of the age groups was small ($n < 150$), and hence more research is needed to examine this issue. And fifth, in this study we presented the preliminary results of the abridged version of the ADV-VBA, and it would be convenient to re-test its psychometric properties in other samples and settings (Goetz et al., 2013).

The validation of the ADV-VBA scale represents a significant advancement in understanding adolescent victim-blaming attitudes toward DV. It is essential to have a psychometrically sound instrument in the adolescent context to help us understand victim-blaming attitudes toward DV. Knowing these attitudes will have implications for improving the development of DV prevention and intervention strategies. This study provides a tool that is particularly valuable for at-risk adolescents, as it is better at distinguishing among populations with high levels of victim-blaming attitudes. Applying this scale will enhance the effectiveness of interventions by facilitating a more precise targeting of the issue at hand. This study has important implications for practice, as it provides a comprehensive view of attitudes toward DV in the adolescent population that can shed light on how to improve interventions targeting sexism, victim-blaming attitudes and behaviors, and, more generally, DV and future IPV.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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Publication 3

The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale: A Validation Study¹

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The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale: A Validation Study

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ABSTRACT

Objectives: Dating violence is a widespread social problem with increasing prevalence among adolescents. The perceived severity of dating violence is an important factor related to key aspects of this type of violence, such as acceptability, justification, attitudes toward intervention, and victims' willingness to seek help. The aim of this study was to validate an instrument to assess the perceived severity of dating violence in a sample of adolescents: the Perceived Severity of Adolescent Dating Violence (PS-ADV) scale. **Method:** Two groups of high school students, one with 621 adolescents (47.2% females) and another with 300 (50% females), aged 13-18 years were selected by a two-stage stratified sampling procedure. **Results:** The results indicated that the PS-ADV scale has excellent internal consistency ($\alpha = .89$) and a clear one-factor latent structure (CFI = .96, TLI = .94, RMSEA [90% CI] = .074 [.062, .087]). For validity, the PS-ADV scores were related negatively to victim-blaming attitudes and ambivalent sexism (hostile and benevolent sexism), and positively to empathy (empathic concern, perspective taking, fantasy). **Conclusions:** This study provides evidence that the PS-ADV scale is a psychometrically sound measure for assessing the perceived severity of dating violence among adolescents.

Escala de Percepción de la Gravedad de la Violencia en el Noviazgo en Adolescentes: un estudio de validación

RESUMEN

Objetivos: La violencia en el noviazgo es un problema social generalizado con una prevalencia cada vez mayor entre los adolescentes. La gravedad percibida de la violencia en el noviazgo es un factor importante relacionado con aspectos clave de este tipo de violencia, como la aceptabilidad, la justificación, las actitudes hacia la intervención y la disposición de las víctimas a buscar ayuda. El objetivo de este estudio fue validar un instrumento para evaluar la gravedad percibida de la violencia en el noviazgo en una muestra de adolescentes: la escala de Percepción de la Gravedad de la Violencia en el Noviazgo en Adolescentes (PS-ADV). **Método:** Se seleccionaron dos grupos de estudiantes de secundaria, uno con 621 adolescentes (47.2% mujeres) y otro con 300 (50% mujeres), en edades comprendidas entre los 13 y los 18 años, mediante un procedimiento de muestreo estratificado en dos etapas. **Resultados:** Los resultados indicaron que la escala PS-ADV tiene una excelente consistencia interna ($\alpha = .89$) y una clara estructura latente de un factor (CFI = .96, TLI = .94, RMSEA [90% CI] = .074 [.062, .087]). En cuanto a la validez, las puntuaciones del PS-ADV se relacionaron negativamente con las actitudes de culpabilización de la víctima y el sexismo ambivalente (sexismo hostil y benevolente) y positivamente con la empatía (preocupación empática, toma de perspectiva, fantasía). **Conclusiones:** El estudio demuestra que la escala PS-ADV es una medida psicométricamente sólida para evaluar la gravedad percibida de la violencia en el noviazgo entre los adolescentes.

Dating Violence (DV) is a serious issue that affects adolescents worldwide (Collibee et al., 2021; European Union Agency for Fundamental Rights, 2014; Leen et al., 2013; Vives-Cases et al., 2021; Wincentak et al., 2017), with a global prevalence for adolescents aged 13-18 years of 20% for physical violence and 9% for sexual violence (Wincentak et al., 2017). DV is associated with several negative

consequences for adolescents' health and well-being, such as depression, anxiety, post-traumatic stress disorder or substance abuse (Molero et al., 2022; Molero et al., 2023; Park et al., 2018; Ramiro-Sánchez et al., 2018; Taquette & Monteiro, 2019; Wincentak et al., 2017). Victims of DV may also experience fear of starting new relationships, difficulties in communicating with their partners or isolation (Park et al., 2018).

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The literature on adolescent DV has highlighted the important role of attitudes toward this type of violence (Duval et al., 2020; Reyes et al., 2016; Rubio-Garay et al., 2015; Vagi et al., 2013). Attitudes are understood as beliefs, social norms related to perceived severity, acceptability, and tolerance of DV (Edwards et al., 2022). Research has shown that tolerant attitudes toward DV are related to greater subsequent DV perpetration among adolescents (Brendgen et al., 2002; Courtain & Glowacz, 2021; Foshee et al., 2001; Josephson & Proulx, 2008; McCauley et al., 2013; Vagi et al., 2013). Others' attitudes of tolerance toward DV may also lead to adolescent victims to feel personal guilt and shame. As a result, they may receive less support and help that may, in turn, reinforce the perpetrator's violent behavior (Niolon et al., 2017).

Research has generally focused on four sets of public perceptions and attitudes toward intimate partner violence: acceptability, legitimacy, attitudes toward intervention, and perceived severity (Gracia et al., 2020; Villagrán, Santirso et al., 2023). However, the perceived severity of this violence has received the least scholarly attention even though it is an important factor associated with important issues related to this type of violence, including the public's acceptance or tolerance of it, individuals' sense of personal responsibility, attitudes toward intervention, and reactions to incidents of this kind of violence among victims, professionals and bystanders (Gracia et al., 2020).

Perceived DV severity has also been considered a risk factor for this type of violence. For example, qualitative research has shown that lower perceived DV severity is linked with greater DV acceptability, more justification of violence, lesser likelihood of victims seeking help and lower bystander intervention (Bowen et al., 2013; Casey et al., 2017; Cho et al., 2023; Edwards et al., 2022; Rojas-Solís & Romero-Méndez, 2022; Smith et al., 2005). Adolescents who perceive low levels of DV severity are also less likely to intervene to prevent DV recurrence (Casey et al., 2017; García-Díaz et al., 2018). Although previous qualitative studies have addressed perceived DV severity in adolescents, it is rarely their main focus. Hence more research assessing the perceived severity of this type of violence is still needed (Black & Weisz, 2004; Bowen et al., 2013; Storer et al., 2020). Psychometrically sound instruments are key for accurately assessing perceived DV severity in adolescents. However, to the best of our knowledge, there are no validated quantitative instruments that specifically address the perceived severity of DV among adolescents. The appropriate assessment of perceived DV severity can contribute to better inform and assess the effectiveness of interventions to prevent DV among adolescents (Leen et al., 2013; Robles et al., 2015; Rojas-Solís & Romero-Méndez, 2022).

The Present Study

The purpose of this study is to adapt and validate the Perceived Severity of Intimate Partner Violence Against Women scale (PS-IPVAW; Martín-Fernández et al., 2022) to the adolescent population. The PS-IPVAW has appropriate psychometric properties and has been widely used in a variety of contexts for several purposes and with different adult samples (general population, IPVAW offenders and law enforcement professionals) (Catalá-Miñana et al., 2013; El Sayed et al., 2020; Expósito-Álvarez et al., 2021; Gracia et al., 2011, 2014; Lila et al., 2013; Lila et al., 2019; Martín-Fernández, Gracia, & Lila, 2018; Martín-Fernández, Gracia, Marco, et al., 2018; Martín-Fernández et al., 2021, 2022; Sani et al., 2018; Vargas et al., 2017; Villagrán et al., 2020, 2022; Villagrán, Martín-Fernández, et al. 2023; Vitoria-Estruch et al., 2017). In the intimate partner violence against women (IPVAW) context, the perceived severity of this type of violence has been related to other relevant constructs, such as empathy, ambivalent sexism and victim-blaming attitudes

(Gracia et al., 2011; Lila et al., 2013; Martín-Fernández, Gracia, & Lila, 2018; Martín-Fernández et al., 2022).

For validation purposes, the adaptation of the PS-IPVAW to the adolescent population is also conducted by exploring its relations with the same set of theoretically relevant variables (i.e., with victim-blaming attitudes, sexist attitudes and empathy). Victim-blaming attitudes justify and legitimize violence against women in certain circumstances (Gracia, 2014). These attitudes are important because perceptions of who is responsible for violence influence public responses (Gracia et al., 2009; Martín-Fernández, Gracia, & Lila, 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). These attitudes may influence other key factors of DV, such as acceptability of violence, less support for the victims from their informal social network, or aggressors fostering violent behaviors (Gracia, 2014; Gracia et al., 2018; Taylor & Sorenson, 2005; Waltermaurer, 2012). For sexist attitudes, previous studies have documented a close relation between these attitudes and perceived IPVAW severity (Martín-Fernández et al., 2022; Martín-Fernández, Gracia, Marco, et al., 2018; Villagrán et al., 2022). Ambivalent sexism has also been identified as a key factor related to DV (Dosil et al., 2020; Erdem & Şahin, 2017; Fernández-Antelo et al., 2020; Guerra-Marmolejo et al., 2021; Juarros-Basterretxea et al., 2022; Morelli et al., 2016; Olcay & Yeşiltepe, 2023). In this regard, research has linked adolescent DV with higher hostile and benevolent sexism levels (Guerra-Marmolejo, 2021). Finally, empathy is a multidimensional construct that includes cognitive and emotional aspects and has been linked with social competence and violent behavior (Endresen & Olweus, 2001; Halberstadt et al., 2001; Martos Martínez et al., 2021). Several studies conducted with adolescents have found that empathy is negatively associated with violent behavior (Euler et al., 2017; Hartmann et al., 2010; Martos Martínez et al., 2021; Vachon et al., 2014). Other studies have linked empathy with other types of violence, such as bullying (Carmona-Rojas et al., 2023; Espelage et al., 2018; Euler et al., 2017; Hartmann et al., 2010; Zych et al., 2018).

Given the importance of the availability of reliable and valid instruments for research and prevention in the DV field, the present study, first, examines the latent structure and internal consistency of the Perceived Severity of Adolescent Dating Violence (PS-ADV) scale; second, evidence for the validity of this instrument is assessed. Finally, a gender invariance analysis is conducted to ensure the comparability of the PS-ADV scores between boys and girls.

Method

Participants

The sampling method used to collect the dataset was a two-stage stratified cluster sampling. First, all the public and private secondary schools in a region of Spain (Valencia) were selected. Of them, three public and three private schools were then selected. Second, five groups from each school were randomly selected to participate in the present study. The initial sample consisted of 1,048 adolescents. After removing the responses from the participants who did not respond to questionnaires or who had missing socio-demographic data, the final sample consisted of 921 adolescents.

We used two samples for the present study. The first sample was used to assess the psychometric properties of the PS-ADV scale. It comprised 621 participants (47.2% girls) aged 13-18 years ($M = 15.34$, $SD = 1.49$). The second sample was used to assess the measurement invariance of the scale across genders. This sample included 300 additional high school students (50% girls) aged 13-18 years ($M = 15.33$, $SD = 1.55$). The socio-demographic characteristics

of both samples are displayed in Table 1.

Table 1. Socio-demographic Characteristics of Sample 1 and Sample 2

	Sample 1 <i>n</i> (%)	Sample 2 <i>n</i> (%)
Gender		
Female	293 (47.2)	150 (50.0)
Male	328 (52.8)	150 (50.0)
Age		
13	81 (13.0)	40 (13.3)
14	128 (20.6)	38 (12.7)
15	112 (18.0)	66 (22.0)
16	134 (21.6)	61 (20.3)
17	127 (20.5)	44 (14.7)
18	39 (6.3)	65 (21.7)
Level of education		
Compulsory Secondary Education	382 (61.5)	185 (61.7)
Baccalaureate	152 (24.5)	75 (25.0)
Technical and Vocational Training	87 (14.0)	40 (13.3)
Nationality		
Spanish	533 (85.8)	252 (84.0)
Immigrant	88 (14.2)	48 (16.0)

Note. The level of education reflects the students attending each level. In the Spanish educational system, Compulsory Secondary Education comprises 10 years of formal education, Baccalaureate 12 years of formal education, and Technical and Vocational Training 11 or 12 years of formal education. In sample 1, Immigrant includes 55.7% students of Latin American nationalities, 19.3% European, 14.8% African, and 10.2% Asian; in sample 2, immigrant nationality is as follows: 60.4% Latin American, 22.9% European, 14.8% African, and 12.5% Asian.

Measures

- Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale. We adapted and subsequently validated the Perceived Severity of Intimate Partner Violence against Women scale (PS-IPVAW; Martín-Fernández et al., 2022) to an adolescent population. To adapt the PS-IPVAW, a panel of four experts reviewed the items to adapt them to dating violence. First, two experts adjusted the language of items (e.g., “In an argument, a boy hits his girlfriend and later apologizes to her”). The other two experts evaluated their clarity and representativeness for assessing the construct. Second, items were discussed in a focus group with all the experts and the final version of the scale was determined (Appendix). This instrument consists of seven items in which an item presents a DV scenario (e.g., “A girl has reported her boyfriend for assaulting her, but the boy continues to threaten her”). Respondents were asked to rate the severity of each scenario on a scale from 0 to 10 (the higher the number, the more severe the scenario is rated).

- Victim-blaming Attitudes in Cases of Intimate Partner Violence against Women Scale (VB-IPVAW; Martín-Fernández, Gracia, & Lila, 2018). The VB-IPVAW scale comprises 12 items with which respondents have to indicate their level of agreement with each one (e.g., “Boys are violent toward their girlfriends because girls need to be controlled”) on a 4-point Likert-type scale (0 = *strongly disagree*, 3 = *strongly agree*). This scale has been validated in a Spanish population and is closely linked to other related constructs such as ambivalent sexism, and attitudes toward intervention (Gracia et al., 2018; Martín-Fernández, Gracia, & Lila, 2018). This instrument showed good internal consistency ($\alpha = .88$).

- Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996). In this study, we used the adolescent Spanish version (Lemus-Martín et al., 2008). This inventory has two 10-item subscales. The hostile sexism subscale refers to attitudes of prejudice and discrimination against girls based on their perceived inferiority to boys (e.g., “Girls are too easily offended”). Benevolent sexism is defined as an attitude that stereotypes girls and limits them to certain roles (e.g., “A boy can feel incomplete if he doesn't date a girl”). This measure consists of a 6-point Likert-type response format (1 = *strongly disagree*, 6 = *strongly agree*). This inventory has been adapted and validated in different countries and populations (Etchezahar, 2012; Glick et al., 2000; Glick & Hilt, 2000; Glick et al., 2002; Ibabe et al., 2016; Lemus-Martín et al., 2008; Rudman & Glick, 2012). The internal consistency of both subscales and the total scale was good for the first sample and the second sample ($\alpha_{\text{hostile}} = .88$, $\alpha_{\text{benevolent}} = .84$, $\omega_{\text{total}} = .94$, $\omega_{\text{hostile}} = .91$, $\omega_{\text{benevolent}} = .83$).

- Interpersonal Reactivity Index, Brief Form (IRI; Davis, 1980; Ingoglia et al., 2016). The Spanish version of items was used (Carrasco et al., 2011). The brief form of the IRI includes four subscales: a) empathic concern evaluates emotional reactions to others' negative experiences (e.g., “I often have tender feelings and concern for people less fortunate than myself”); b) perspective taking, that assesses respondents' ability to understand the other person's point of view (e.g., “Before I criticize someone, I try to imagine how I would feel if I were in their place”); c) personal distress, that addresses emotional reactions of discomfort when observing others' negative experiences (e.g., “I tend to lose control during emergencies”); and d) fantasy, that focuses on the ability to identify oneself with fictional characters in novels or movies (e.g., “I truly identify with the feelings of the characters in a novel”). The brief version includes 16 items with a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). One item from the empathic concern subscale (item 9) was removed because its item-total corrected correlation was almost zero ($r = -.01$). This scale has been validated in a Spanish population (Carrasco et al., 2011; Pérez-Albeniz et al., 2003) and has been linked to partner violence (Lila et al., 2013; Romero-Martínez et al., 2019). The overall internal consistency of this measure and its subscales was adequate ($\alpha_{\text{empathic concern}} = .66$, $\alpha_{\text{perspective taking}} = .70$, $\alpha_{\text{personal distress}} = .78$, $\alpha_{\text{fantasy scale}} = .82$, $\omega_{\text{total}} = .91$, $\omega_{\text{empathic concern}} = .65$, $\omega_{\text{perspective taking}} = .78$, $\omega_{\text{personal distress}} = .78$, and $\omega_{\text{fantasy scale}} = .87$).

Procedure

A survey was designed to collect data in a face-to-face setting. It included the PS-ADV scale, the VB-IPVAW scale, the ASI, and the IRI. In addition, questions were asked about some socio-demographic data (e.g., age, gender, nationality, school, current grade at high school, socio-economic level, whether they had a partner). Participants were informed of the purpose of the study and the anonymity of the data, which were collected before completing the survey. The high schools in the study were informed of the study prior to data collection, which took place from November 2021 to May 2022. This study was approved by the University of Valencia Ethics Committee.

Data Analysis

The following analyses were conducted in the first sample to assess the psychometric properties of the PS-ADV. First, a descriptive analysis was carried out by computing the mean, standard deviation, skew and kurtosis statistics, and the item-total corrected correlation for each item.

We then tested the factorial structure of the scale by conducting a confirmatory factor analysis (CFA) and replicating the one-factor model

found in previous studies with adult populations (Martín-Fernández et al., 2022; Villagrán et al., 2023). We used robust maximum likelihood (MLR) as the estimation method because this procedure yields accurate parameter estimates for non normally distributed data (Bandalos, 2014; Nalbantoğlu-Yılmaz, 2019). The model's goodness of fit was evaluated by using a combination of fit indices: values of the comparative fit index (CFI) and Tucker-Lewis's index (TLI) equaling or above .95, and values of the root mean squared error by approximation (RMSEA) equaling or lower than .06 or .08 were considered to be an excellent or good fit, respectively (Hu & Bentler, 1999). Once the factor structure was established, we examined the scale's internal consistency using Cronbach's α . The validity evidence of the PS-ADV was inspected later by relating participants' factor scores to other relevant attitudinal constructs, such as ambivalent sexism, victim-blaming attitudes and empathy.

We finally assessed the scale's measurement invariance across gender using a second sample and conducting a multigroup CFA because carrying out this analysis with the same sample can yield overestimated fit indices for the factorial model. To this end, we tested configural, metric, and scalar invariance (Putnick & Bornstein, 2016). Configural invariance evaluates whether participants conceptualize the construct (i.e., perceived severity) in a similar way by ensuring that the same factorial structure can be applied for boys and girls. Metric invariance tests if items have the same factor loadings in both groups, and if items present similar relevance for boys and girls. Scalar invariance assesses whether the same response pattern yields the same factor scores for boys and girls by fixing item loadings and intercepts to the same value across groups. We used MLR as an estimation method and compared all the models by means of the log-likelihood ratio test (LRT) and Cheung and Rensvold's (2002) guidelines for continuous data. In particular, we deemed the instrument to be invariant across gender if the following criteria were met: a) there were no significant differences among the configural, metric, and scalar invariance models in the LRT; b) the difference in the comparative fit index (ΔCFI) was lower than .001 between the configural and metric models, and between the metric and scalar models. If scalar invariance was achieved, then the latent means of the measured construct could be compared across gender.

All the analyses were carried out in the statistical package R (R Core Team, 2023) using the *psych* library (Revelle, 2023), and Mplus 8.4 for the CFA and the multigroup CFA (Muthén & Muthén, 2017).

Results

Descriptive Analysis

The descriptive statistics of the PS-ADV items obtained mean values above 8.00, with standard deviation around 1.70 for most items, which indicates that most participants rated the scenarios depicted by items as severe. The skew and kurtosis statistics depicted how participants' responses were concentrated mainly on the upper extreme of the response scale, which showed a leptokurtic and negatively skewed distribution for most items (Table 2). We also found that the item-test corrected correlations were high for all the items, which indicates a close relation between each item and the direct scores of the scale.

Confirmatory Factor Analysis and Internal Consistency

We conducted a CFA by replicating the one-factor model found in the adults version of the scale (Martín-Fernández et al., 2022). The one-factor model's goodness of fit was adequate (CFI = .96, TLI = .94, RMSEA [90% CI] = .074 [.062, .087]), which indicates that one factor was enough to account for the variability of the PS-ADV. The standardized factor loadings were above .60 for all the items, which supports the notion that all the items were closely related to the measured construct (Figure 1). We found that the scale's internal consistency was good ($\alpha = .89$).

Table 2. Descriptive Statistics of the PS-ADV Items

	<i>M</i>	<i>SD</i>	Skew	Kurtosis	$r_{\text{item-test}}$
PS1	9.19	1.41	-3.00	12.81	.68
PS2	8.01	2.19	-1.21	1.03	.68
PS3	9.45	1.29	-4.00	10.15	.60
PS4	7.88	2.06	-1.18	1.28	.79
PS5	8.67	1.77	-1.82	3.82	.74
PS6	8.98	1.57	-2.16	5.67	.81
PS7	8.71	1.82	-2.01	4.97	.63

Note. PS = PS-ADV item; *M* = mean; *SD* = standard deviation; $r_{\text{item-test}}$ = corrected item-test correlation.

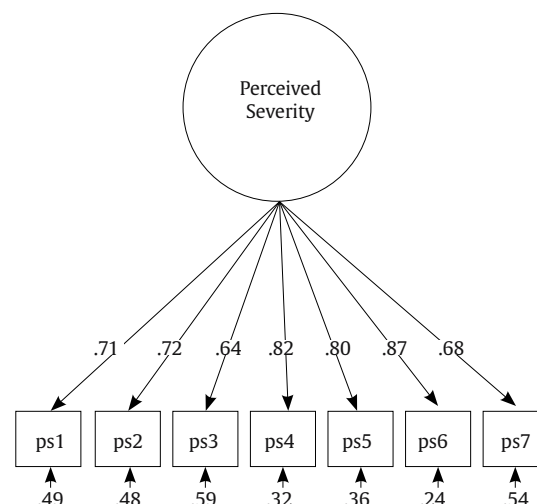


Figure 1. One-factor CFA Model.

Validity Evidence

Using the factorial scores, we explored thereafter the relation of perceived severity to other IPVAV-related constructs, such as victim-blaming attitudes, ambivalent sexism, and empathy (Table 3). We found a close significant and negative relation between the PS-ADV scores and victim blaming, hostile sexism, and benevolent sexism. In particular, our data showed that the participants with higher perceived severity levels had, on average, lower levels of victim-blaming attitudes. A similar trend was found for ambivalent sexism, where the participants presenting higher levels of perceived severity tended to also show lower levels of both hostile and benevolent sexism. For empathy, we found a significant and positive relation between participants' PS-ADV scores and the subscales of the IRI perspective taking, fantasy, and empathic concern. This indicates that the participants with higher perceived severity levels tended to present higher levels on these dimensions. No relation was found between the PS-ADV scale and the personal distress subscale.

Measurement Invariance

The measurement invariance of the PS-ADV across gender was evaluated by means of a multigroup CFA in the second sample (Table 4). We first examined configural invariance as a base-line model and found that it showed excellent goodness of fit to data. This result implies that the same factorial model could be applied for girls and boys. We then tested metric invariance by fixing item loadings to the same value for girls and boys. We also found an excellent goodness of fit and no significant differences between configural and metric invariance in the LRT, $\Delta\chi^2_{(6)} = 10.43$, $p = .107$; $|\Delta CFI| = .007$. This, in turn, supports the notion that metric invariance could be held.

After establishing metric invariance, scalar invariance was assessed by constraining the item intercepts for girls and boys to the same value. The well model fitted the data. Once again, we did not find any significant differences between metric and scalar invariance, $\Delta\chi^2_{sb}(6) = 11.77, p = .067; |\Delta CFI| = .006$.

Table 3. Correlations between the PS-ADV and Other Constructs

	1	2	3	4	5	6	7
1. PS-ADV							
2. Victim-blaming	-.42***						
3. Hostile sexism	-.47***	.51***					
4. Benevolent sexism	-.31***	.35***	.62***				
5. Empathic Concern	.22***	-.12**	-.01	.10**			
6. Perspective Taking	.23***	-.11**	-.09**	.04	.60***		
7. Personal Distress	.07	.01	-.02	.10**	.26***	.29***	
8. Fantasy Scale	.22**	-.14***	-.13**	-.04	.36***	.41***	.42***

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

Table 4. Measurement Invariance Fit Indices

	$\chi^2 (df)$	CFI	$ \Delta CFI $	TLI	RMSEA (90% CI)
Configural	40.24 (42)	.983		.975	.054 (.000, .089)
Metric	51.16 (36)	.976	.007	.971	.0581 (.019, .089)
Scalar	61.76 (30)	.970	.006	.968	.060 (.027, .089)

Note. CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean-squared error by approximation.

Once scalar invariance was supported, we conducted a latent mean analysis to compare girls and boys' latent means. The model yielded an excellent goodness of fit ($CFI = .97$, $TLI = .97$, $RMSEA [90\%CI] = .065 [.035, .093]$), and showed that girls had higher perceived severity levels than boys ($Z [SE] = 0.733 [0.156]$, $p < .001$). In particular, a standardized mean difference of 0.733 indicated that 76.8% of the girls presented higher perceived severity levels than the average for boys.

Discussion

In this study, we set out to adapt and validate a widely used instrument for assessing the perceived severity of IPVAV in adults (PS-IPVAV; [Martín-Fernández et al., 2022](#)) to the adolescent population. The results obtained in latent structure and reliability terms showed that the instrument replicates the one-factor model of the original scale ([Martín-Fernández et al., 2022](#)) and has good internal consistency, which means that it accurately assesses the measured construct, i.e., the perceived severity of DV, in the adolescent population.

For the analysis of invariance across gender, the results of this study indicated that both girls and boys shared the same conceptualization of the perceived severity of DV. There were no differences in the structural parameters of items (i.e., loadings and thresholds) between boys and girls. This finding means that the interpretation of items was similar and, therefore, both groups were comparable because the same response pattern yielded identical results for boys and girls. Our results also revealed that boys tended to perceive DV scenarios as less severe than girls, which is consistent with previous research in the IPVAV context ([Dardis et al., 2017](#); [Martín-Fernández et al., 2022](#); [Villagrán et al., 2022](#)).

For validity evidence, we analyzed the relationship between adolescents' perceived severity of DV, victim-blaming attitudes, ambivalent sexism, and empathy. Our findings showed that perceived severity was related to these three constructs. For victim-blaming attitudes, we found a significant negative relation between perceived severity and victim-blaming attitudes, which indicates that the

adolescents who perceived DV scenarios as less severe were more likely to show higher levels of victim-blaming attitudes. Our results are consistent with previous research that has linked perceived severity with attitudes of victim-blaming in the IPVAV context ([Gracia et al., 2018](#); [Lelaurain et al., 2021](#); [Martín-Fernández, Gracia, & Lila, 2018](#); [Martín-Fernández et al., 2022](#); [Villagrán et al., 2020, 2023](#)).

On sexist attitudes, our results also showed a significant negative relation between perceived severity and ambivalent sexism. The adolescents who perceived lower DV severity in scenarios presented higher hostile and benevolent sexism levels. These results coincide with previous research, which has indicated that perceived severity is related to both hostile and benevolent sexism in adult populations ([Lelaurain et al., 2021](#); [Martín-Fernández et al., 2022](#); [Villagrán et al., 2023](#)). [Guerra-Marmolejo et al. \(2021\)](#) found a similar trend among adolescents, where sexist attitudes were related to the perception and acceptance of violence against women. This is also consistent with previous research that has linked ambivalent sexism and DV perpetration ([Dosil et al., 2020](#); [Erdem & Şahin, 2017](#); [Fernández-Antelo et al., 2020](#); [Guerra-Marmolejo et al., 2021](#); [Morelli et al., 2016](#); [Olçay & Yeşiltepe, 2023](#)).

Concerning empathy, our results showed that the adolescents with higher levels of perceived DV severity tended to also present higher empathy levels, especially for its cognitive aspects. Our results specifically indicated a positive relation between perceived severity of DV and the perspective taking and fantasy subscales of the IRI. The adolescents with high perceived severity of DV tended to empathize more with fictional characters, and also showed a greater ability to put themselves in the other person's place. We also found a significant positive relation between perceived severity and empathic concern that, in turn, indicated that the adolescents who perceived more severity in scenarios were better able to identify when others experience negative events. This result is congruent with previous findings showing a positive relation between empathy and perceived severity in adults ([Lila et al., 2013](#)), and between empathy and attitudes toward aggression in adolescents ([Martos Martínez et al., 2021](#)). This is also consistent with previous studies with adolescents, and indicates that the lower the empathy level, the higher the likelihood of engaging in violent behaviors ([Euler et al., 2017](#); [Hartmann et al., 2010](#); [Martos Martínez et al., 2021](#); [Vachon et al., 2014](#)). Although this relation between perceived severity and empathy seems promising for developing intervention strategies, further research is needed to explore the direct effect of empathy on perpetrating DV ([Dodaj et al., 2020](#); [Romero-Martínez et al., 2016](#)).

This study is not without some limitations. First, as the PS-ADV was developed with a sample of adolescents in the Spanish cultural setting, and we cannot generalize our findings to other cultural contexts. Further research is needed to examine the psychometric properties of the PS-ADV in other socio-cultural contexts and to examine how it relates to other relevant constructs ([Villagrán, Santirso, et al., 2023](#)). Second, the cross-sectional design of our study prevented us from controlling possible changes in participants' perceived severity over time. Third, DV does not occur in isolation and is often associated with other issues during adolescence that are not addressed in the present study. Adolescence has been identified as a period of greater psychosocial vulnerability or difficulty compared to childhood and adulthood ([Reyes et al., 2023](#); [Steinberg & Morris, 2001](#)). At a time of decreased parental influence and increased peer influence, adolescents interact with each other without adult supervision ([Alcaide et al., 2023](#); [Baumrind, 1991](#)). Psychosocial vulnerability in adolescence is reflected not only in increased risk for violent behavior (e.g., dating violence), but also in greater difficulties in school ([Steinberg & Morris, 2001](#); [Veiga et al., 2023](#)) and other maladaptive behaviors (e.g., early substance use) ([Martínez-Escudero et al., 2023](#); [Villarejo et al., 2023](#)). Previous research has confirmed that DV is associated with other serious psychosocial adjustment problems ([Campo-Tena, 2023](#); [Exner-Cortens, 2013](#)).

Our findings have important implications for policy and practice. To our knowledge, this is the first study that aims to validate a self-reported scale assessing the perceived severity of DV among adolescents. Previously, qualitative assessment measures have been used to assess perceived DV severity with adolescent samples (Black & Weisz, 2004; Bowen et al., 2013; Storer et al., 2020). Moreover, our findings extend knowledge on the association between perceived DV severity and victim-blaming attitudes, ambivalent sexism, and empathy. Changing adolescents' attitudes and beliefs about DV is an important intervention goal in DV prevention programs (Crooks et al., 2019). To this end, such programs often use intervention strategies to address the perceived severity of DV, such as discussion of romantic love myths and role-playing to promote healthy violence-free dating relationships. In line with this, previous systematic reviews and meta-analyses have included adolescents' attitudes toward DV among their measures to assess the effectiveness of interventions (De la Rue et al., 2014, 2017; Edwards & Hinsz, 2014; Fellmeth et al., 2015; Lee & Wong, 2020; Ting, 2009). However, the assessment of attitudes makes it difficult to compare different studies due to the diversity of the instruments used to measure attitudes toward DV. In addition, when measured, attitudes toward DV are usually assessed as a broad concept and specific measures are not contemplated, such as perceived severity and victim-blaming attitudes in adolescents. Further studies should be conducted to evaluate how these attitudes are related to other risk factors that may contribute to the complex multifaceted event of DV. Assessments of these attitudes may further help to identify adolescents at risk for DV, which could help to tailor interventions to the specific needs of these more vulnerable populations (Arrojo et al., 2023; Crooks et al., 2019; Ferreira et al., 2022; Piolanti & Foran, 2021; Reyes et al., 2020).

The development of the PS-ADV is an important step in the study of attitudes toward DV. This instrument may be useful in research to better understand the DV phenomenon, its impact on other relevant constructs, and to identify factors that increase or decrease the risk of DV. The PS-ADV is a short measure that is easy to implement and may be valuable for assessing perceived severity in the general population of adolescents in large-scale studies in which time of application and space are limited, such as demographic surveys (Gracia et al., 2018; Martín-Fernández et al., 2021, 2022). This instrument could also be used to test the effectiveness of programs and interventions that aim to prevent DV in both educational and community settings. The PS-ADV scale could also be used to monitor whether there has been an impact on adolescent attitudes following awareness campaigns and prevention policies (Gracia et al., 2023; Gracia et al., 2020), and could be useful for identifying adolescents at risk of DV and evaluating the effectiveness of interventions and prevention strategies that address this vulnerable population.

Conflict of Interest

The authors of this article declare no conflict of interest.

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Appendix

The Perceived Severity of Adolescent Dating Violence (PS-ADV) Scale

Below are seven scenarios that can occur in a boy-girl couple. On a scale from 0 to 10, please indicate how serious these scenarios seem to you (the higher the number, the more severe the scenario).

[A continuación, se describen siete situaciones que pueden ocurrir entre una pareja de chico y chica. Indica en una escala de 0 a 10 hasta qué punto esas situaciones te parecen graves (a mayor puntuación, mayor gravedad)].¹

ps1	A girl has reported her boyfriend for assaulting her, but the boy continues to threaten her. [Una chica ha denunciado a su novio por haberle agredido, pero el chico continúa amenazándola]
ps2	In an argument, a boy hits his girlfriend and later apologizes to her. [En una discusión, un chico pega a su novia y después le pide perdón]
ps3	A girl is frequently beaten by her boyfriend, sometimes causing small injuries and bruises, although she does not want to report these acts. [Una chica es golpeada frecuentemente por su novio, causándole a veces pequeñas lesiones y moratones, aunque no quiere denunciar los hechos]
ps4	A couple argues, the boy insults the girl and threatens to hit her. [Una pareja discute, el chico insulta a la chica y amenaza con pegarle]
ps5	A girl is constantly belittled and humiliated by her boyfriend. [Una chica es despreciada y humillada continuamente por su novio]
ps6	A girl is repeatedly threatened and insulted by her boyfriend, who sometimes pushes her or hits her. [Una chica es amenazada e insultada continuamente por su novio, quien a veces le llega a empujar o golpear]
ps7	A couple argues constantly, insulting and threatening each other, often coming to blows. [Una pareja discute continuamente, insultándose y amenazándose mutuamente, llegando a las manos con frecuencia]

Note. ¹In brackets, the original instructions and items in Spanish.