



Facultad de Psicología

From Social and Emotional Learning in Adolescence to
Emotional-Skill Training in Teachers

Desde la Educación Socio-Emocional en Adolescencia al
Entrenamiento en Habilidades Emocionales en Profesores

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TESIS DOCTORAL

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To my family

'It is only with the heart that one can see rightly;

what is essential is invisible to the eye.'

Antoine de Saint-Exupéry, *The Little Prince*

'How far do our feelings take their colour from the dive underground?

I mean, what is the reality of any feeling?'

Virginia Woolf

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Prologue

‘Sit back, relax and listen to your breath. Feel the air filling your lungs as you breathe in, lifting your chest and holding your breath for a second. Feel the air leaving your body through your mouth and nose, relaxing your muscles as you breathe out. Take another three deep breaths and as you do so, try to focus on this moment right here, right now. Ask yourself, how am I feeling today? What does my body feel like right now? Try to find a word that best describes your current emotional state. If it is a pleasant feeling, you might wish to hold on to this feeling a little longer. If it is an unpleasant feeling, think about what happened today that might be related to this emotion? Try to think of a way to either continue feeling this way, to intensify or to reduce the emotional arousal. Now, take another breath and shift your attention to the present task. As you are clearing your mind, get ready to read this dissertation and hopefully to enjoy the emotions that emerge.’

This is the first emotional exercise that we propose to students and teachers during our emotion-based intervention/training programs, which is called ‘Emotional Focusing’. The aim of this exercise is to focus on the present moment, connecting with emotions through the sensations of the body, in order to prepare the mind for the next task of the day. This exercise of clearing the lenses is especially helpful at the beginning of a class or session and before starting a new task or project.

Furthermore, this practice helps people to recognize feelings and emotions, to validate emotional experiences and to make sense out of them. This is the first step to emotional competence.

Resumen

Se presenta un resumen global de la tesis doctoral por compendio de publicaciones, que incluye una breve introducción, objetivos y método, los principales resultados y las conclusiones que justifican la aportación original de esta investigación.

Introducción

Tradicionalmente, la investigación en el ámbito escolar se había centrado principalmente en los procesos cognitivos y había ignorado en gran medida la importancia de los procesos emocionales en el contexto escolar. Los factores mentales, motivacionales y de rendimiento se consideraban más relevantes para la vida y el éxito escolar que las emociones, que se percibían como algo irracional, incontrolable y completamente opuesto al pensamiento racional. Por lo tanto, el estudio de las emociones ha sido descuidado en los modelos teóricos, la investigación y las intervenciones escolares. Afortunadamente, el *zeitgeist* (“espíritu de los tiempos”) del siglo XXI ha ofrecido una visión alternativa sobre la relación entre razón y emociones, enfatizando que las habilidades no-cognitivas son complementarias a las cognitivas (Fernández-Berrocal & Extremera, 2006; Mayer, Salovey, & Caruso, 2004).

Según este "nuevo espíritu" de la investigación en el contexto escolar, no es suficiente con educar a un niño para que crezca y se convierta en una persona cognitivamente inteligente y conocedora que esté bien instruida en las ciencias, las humanidades y las artes. Más bien, las escuelas también deben educar a los niños para que se vuelvan emocionalmente conscientes de sí mismos y de los demás, amables, empáticos, cuidadosos, responsables, pro-sociales y en control de su vida emocional – es decir, emocionalmente competentes (Elias & Weissberg, 2000). Por lo tanto, las capacidades emocionales y las habilidades cognitivas se interpretan mejor cuando se determinan mutuamente, en lugar de tratarlas como independientes (Pardeller, Frajo-

Apor, Kemmler, & Hofer, 2017). Este "nuevo espíritu" requiere que la educación tradicional basada en las capacidades cognitivas se complemente con un fuerte énfasis en el aprendizaje y desarrollo social y emocional. En los últimos años psicólogos, educadores e investigadores se han dado cuenta, cada vez más, que las emociones son una parte esencial de la vida escolar y que son cruciales para el funcionamiento psicológico y el bienestar tanto de los estudiantes como de los profesores (Keefer, Parker, & Saklofske, 2018).

En efecto, las competencias emocionales bien desarrolladas mejoran el ajuste psicológico, la autoestima, la adaptación al estrés escolar y el éxito académico de los estudiantes (e.g. Coelho, Marchante, & Sousa, 2015; Mathews, Koehn, Abtahi, & Kerns, 2016; Pérez-Escoda & Alegre, 2016). Muchos estudiantes presentan problemas de comportamiento, dificultades emocionales y relaciones disfuncionales con sus compañeros porque tienen problemas para describir y expresar sus sentimientos con precisión. Las conductas perturbadoras y agresivas como el bullying pueden atribuirse parcialmente a un déficit en las habilidades sociales y emocionales de los jóvenes (Zych, Ortega-Ruiz, & Marín-López, 2016). Por lo tanto, el desarrollo emocional es un componente esencial para las intervenciones escolares dirigidas a disminuir tanto la victimización como el desajuste psicológico (Beltrán-Catalán, Zych, Ortega-Ruiz, & Llorent, 2018; Garaigordobil, Martínez, & Machimbarrena, 2017).

La capacidad de razonar sobre los procesos emocionales - ser emocionalmente inteligente - es también una habilidad crítica para los profesores, ya que el trabajo educativo incluye mostrar atención, empatía y apoyo hacia los estudiantes, así como expresar emociones apropiadas durante las clases y las interacciones interpersonales con los estudiantes (Brackett & Katulak, 2007). Investigaciones previas han reconocido que las habilidades de los profesores para percibir, usar, entender y regular las emociones

con precisión están estrechamente asociadas con el desarrollo positivo de los estudiantes (Jennings & Greenberg, 2009). En cambio, los profesores que están estresados, agobiados por sus responsabilidades como instructores y educadores, tienen dificultades de manejar su clase lo que afecta al rendimiento académico de los estudiantes (Lavy & Eshet, 2018).

Los estudios continúan analizando las relaciones entre la inteligencia emocional y los factores personales relacionados con la salud y el bienestar psicológico. Evidentemente, la inteligencia emocional se asocia con un mayor bienestar subjetivo, satisfacción laboral y académica, mientras que la falta de inteligencia emocional se relaciona con síntomas emocionales y baja autoestima (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Steinhardt, Smith Jaggars, Faulk, & Gloria, 2011). Además, la capacidad de regulación emocional puede prevenir los síntomas de estrés de los estudiantes y profesores, probablemente debido a la sensación de control sobre las tareas escolares estresantes y al uso de estrategias constructivas para hacerles frente (Mérida-López, & Extremera, 2017). Desafortunadamente, la formación que reciben los profesores sobre la educación en emociones de los alumnos o sobre la gestión de sus propias respuestas emocionales internas y externas es casi insignificante (Molero, 2018; Poulou, 2017). En efecto, el estudio de las capacidades emocionales en las últimas tres décadas ha sido un catalizador importante que ha impulsado el creciente interés por las emociones en las escuelas y su aparición como un área de investigación prometedor (Keefer et al., 2018).

El marco teórico de esta tesis está representada por la aplicación práctica del modelo de "inteligencia" emocional basado en habilidades (Mayer & Salovey, 1997) y el modelo de desarrollo de las "competencias" emocionales (Saarni, 2000). La inteligencia emocional (IE) se ha definido tradicionalmente como un conjunto de

habilidades o rasgos bastante estables, incluyendo la percepción emocional, la facilitación emocional del pensamiento, la comprensión emocional y la regulación emocional (Mayer, Caruso, & Salovey, 2000). Los psicólogos han estudiado este constructo utilizando diferentes enfoques, considerando la IE como un rasgo o una habilidad (Mayer, Salovey, & Caruso, 2008), o incluso utilizando modelos mixtos (Bar-On, 2006). Aunque la IE como rasgo puede diferir un poco de la IE como habilidad (Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012), existe un consenso general de que las habilidades emocionales pueden aprenderse o mejorarse a través del entrenamiento a lo largo de la vida (Kotsou, Nelis, Grégoire, & Mikolajczak, 2011; Vesely, Saklofske, & Nordstokke, 2014).

Según Saarni (2000), el modelo de IE basado en habilidades se centra más en los adultos y puede no ser adecuado para explicar el desarrollo emocional de los niños más pequeños y de la adolescencia. En cambio, el modelo de desarrollo de las competencias emocionales (CE) es un enfoque más general y más amplio para el estudio de una variedad de habilidades emocionales, enfatizando que un niño desarrolla CE a través de la interacción dinámica de la socialización cultural y contextual (Buckley, Storino, & Saarni, 2003). La definición de Saarni engloba tres componentes principales de la CE para manejar situaciones relacionadas con las emociones: 1) identificar y comprender las propias emociones y las de los demás; 2) expresar y comunicar emociones; y 3) afrontar de manera adaptativa las respuestas emocionales negativas (Saarni, 2007). Estas competencias también pueden adquirirse a través de un proceso de aprendizaje utilizando métodos tradicionales de instrucción (Buckley & Saarni, 2014; Kumschick et al., 2014).

La presente tesis doctoral se sitúa en esta área de investigación al adoptar un enfoque basado en las emociones para el estudio del desarrollo afectivo de los

estudiantes y profesores y su relación con los factores de salud mental y de bienestar. Por un lado, se analizará el papel de las competencias emocionales en el contexto escolar y su posible impacto en el ajuste psicológico de los alumnos y en los problemas de salud mental de los profesores. Por otro lado, dado que la escuela es un ámbito primaria de la vida, representan un contexto ideal para el aprendizaje y la educación en habilidades sociales y emocionales que son claves para el crecimiento y el bienestar personal. La idea de introducir la educación socio-emocional en los contextos educativos se basa en el supuesto de que las habilidades emocionales conducen al rendimiento académico y bienestar de los estudiantes, además de transmitir recursos emocionales para profesores y educadores (Jennings & Greenberg, 2009). Por lo tanto, el desarrollo de las habilidades sociales y emocionales es un prerrequisito para que los estudiantes y profesores pongan en marcha dinámicas productivas y motivadoras en el aula (Jennings et al., 2017).

Los programas basados en la evidencia científica para la educación en habilidades sociales y emocionales en las escuelas, también conocidos como Educación Socio-Emocional (SEL, por sus siglas en inglés), han ganado fuerza en los últimos veinte años (Torrente, Rivers, & Brackett, 2016). Los programas de intervención SEL integran la educación en habilidades y destrezas emocionales, incluyendo autoconciencia, autocontrol, conciencia social, habilidades relacionales y toma de decisiones responsables, en el currículo académico tradicional (Collaborative for Social and Emotional Learning 'CASEL', 2015). De esta manera, los programas SEL ayudan a los estudiantes desde el nivel preescolar hasta el nivel de la escuela secundaria a construir una base socio-emocional saludable además de una base académica sólida (Nathanson, Rivers, Flynn, & Brackett, 2016). Uno de los factores clave del éxito es la formación de los profesores en competencias emocionales basadas en modelos teóricos psicológicos y

educativos (Vesely-Maillefer & Saklofske, 2018). Por último, integrar la educación socio-emocional en las escuelas puede beneficiar no sólo el desarrollo personal de los estudiantes y los maestros, sino también aliviar el bajo rendimiento, las tasas de abandono escolar, el aumento de los problemas de salud mental y de violencia/acoso escolar, haciendo que el enfoque sea esencial para la educación del siglo XXI (Hoffmann, Ivcevic, & Brackett, 2018).

Objetivos

A pesar de la extensa literatura sobre la educación y el desarrollo socio-emocional, han habido pocos estudios que combinen conjuntamente las perspectivas de los estudiantes y profesores. Además, la mayoría de las investigaciones que se centran en la educación emocional en el contexto español carecen de una base teórica y/o empírica y/o de un método estructurado basado en la evidencia científica.

Por estas razones, y dada la importancia de las competencias emocionales en el ámbito escolar, la presente investigación proporcionará un enfoque integrador para comprender no sólo las fortalezas y necesidades académicas de los estudiantes y profesores, sino también las socio-emocionales. Por lo tanto, el objetivo general de esta tesis doctoral es examinar el impacto de las habilidades y competencias emocionales en el funcionamiento psicológico, incluyendo el bienestar y la salud mental, tanto en la población estudiantil como en la docente.

Método y resultados

Dadas las características de una tesis por compendio de publicaciones, se han incluido seis estudios que proporcionan la estructura para esta investigación; y que se presentan a continuación.

Estudio 1: Schoeps, K., Tamarit, A., Montoya-Castilla, I., & Takšić, V. (in press). Factorial structure and validity of the Emotional Skills and Competences Questionnaire (ESCQ) in Spanish adolescents [Estructura factorial y validez de la Escala de habilidades y competencias emocionales (ESCQ) en adolescentes españoles]. *Behavioral Psychology / Psicología Conductual*.

Inicialmente, fue necesario adaptar y validar una medida fiable de las competencias emocionales en la población adolescente española. Por tanto, el objetivo del **estudio 1** fue analizar la estructura factorial y las propiedades psicométricas del Cuestionario de Habilidades y Competencias Emocionales (ESCQ), teniendo en cuenta las diferencias de género. Para ello, se examinó la consistencia interna y se realizaron análisis factoriales exploratorios y confirmatorios para demostrar la validez criterial. Los participantes fueron 1.300 estudiantes de 12 a 15 años de edad ($M = 13,47$, $DT = 1,09$) que completaron la versión adaptada del ESCQ. Además, se recogieron datos sobre inteligencia emocional (TMMS-24), satisfacción con la vida (SWLS), efectos positivos y negativos (SPANE) para los análisis de validez. Los resultados del estudio indicaron que la versión reducida ESCQ-21 tiene una buena consistencia interna, con índices de fiabilidad similares a los del instrumento original (Takšić, Mohorić, & Duran, 2009). Los análisis factoriales exploratorios y confirmatorios mostraron que el modelo de tres factores se ajusta mejor a los datos de la muestra: 1) percepción y comprensión emocional, 2) expresión y etiquetaje emocional y 3) manejo y regulación emocional. Las diferencias de género observadas en la versión española revelan que las mujeres obtienen puntuaciones más altas en la percepción y comprensión de las emociones, mientras que los hombres obtienen puntuaciones más altas en el manejo y regulación de las emociones (Schoeps et al., 2017). Los resultados proporcionaron

pruebas de la validez del constructo y del criterio. Así, los factores del ESCQ-21 se asocian positivamente con las dimensiones de TMMS-24, y predicen el bienestar subjetivo (SWLS y SPANE). Como conclusión, la nueva versión de la ESCQ reducida a 21 ítems es una herramienta de evaluación adecuada, que permite a los investigadores y educadores comprender mejor cómo las habilidades emocionales pueden afectar el bienestar subjetivo de los adolescentes.

Estudio 2: Schoeps, K., Tamarit, A., González, R., & Montoya-Castilla, I. (2019).

Emotional competence and self-esteem in adolescence: impact on psychological adjustment [Las competencias emocionales y la autoestima en la adolescencia: impacto sobre el ajuste psicológico]. *Revista de Psicología Clínica Con Niños Y Adolescentes*, 6(1), 51–56. doi: 10.21134/rpcna.2019.06.1.7

El objetivo del **estudio 2** fue determinar el impacto de las competencias emocionales y la autoestima en el ajuste psicológico de los adolescentes, centrándose en las diferencias de sexo y edad. Participaron 855 adolescentes españoles de entre 12 y 15 años ($M = 13,60$; $DT = 1,09$). Complementaron el Cuestionario de Habilidades y Competencias Emocionales (ESCQ), la Escala de Autoestima de Rosenberg (RSE) y el Cuestionario de Fortalezas y Dificultades (SDQ). Se realizaron análisis descriptivos, correlaciones de Pearson y regresión múltiple jerárquica. Los resultados indicaron diferencias significativas de sexo, pero no con respecto a la edad. Se observó que las niñas eran más competentes en la percepción y comprensión de las emociones que los niños, sin embargo, manifestaron más síntomas emocionales. Los niños obtuvieron niveles más altos de autoestima que las niñas, presentando más dificultades de comportamiento. El análisis de regresión confirmó que la capacidad de percibir, comprender y manejar la información emocional en combinación con altos niveles de

autoestima puede reducir los síntomas emocionales y los problemas de conducta, controlando el efecto del sexo y la edad. Estos resultados sugieren que los adolescentes emocionalmente competentes, se ajustan mejor a los cambios ambientales. Por el contrario, los adolescentes con menor capacidad para percibir y expresar lo que sienten también serían menos capaces de controlar sus impulsos y estados de ánimo negativos, lo que explicaría la presencia de más síntomas emocionales y problemas de conducta.

Además, se observó que la autoestima juega un papel predominante en la predicción del ajuste psicológico, especialmente en los síntomas emocionales. Por lo tanto, los jóvenes con alta autoestima se consideran capaces de desarrollar recursos ante acontecimientos estresantes, lo que, a su vez, facilita la adaptación a los cambios y adversidades de su entorno. Estos resultados ponen de manifiesto el papel de la autoestima como uno de los mecanismos que subyacen la relación entre las variables socio-emocionales y psicológicas relevantes para el desarrollo positivo de los jóvenes.

Estudio 3: Schoeps, K., Montoya-Castilla, I. & Raufelder, D. (in press). Does stress mediate the relationship between emotional intelligence and life satisfaction during adolescence? *Journal of School Health*. doi: 10.1111/josh.12746

El objetivo del **estudio 3** fue explorar si el estrés percibido media la interacción entre las habilidades emocionales y la satisfacción con la vida en la adolescencia. El estudio utiliza modelos de ecuaciones estructurales multigrupo con datos longitudinales de una muestra de adolescentes españoles ($N = 800$; $M_{T1} = 14,02$; $M_{T2} = 15,00$, $DT = 1,21$) en dos momentos temporales (T1 y T2).

Los resultados de los modelos de ecuaciones estructurales indicaron que el estrés percibido es un factor mediador que ayuda a explicar la relación entre la inteligencia

emocional y la satisfacción vital. Esto significa que aunque los estudiantes perciben las emociones con precisión y son capaces de expresarlas e identificarlas de manera adecuada, no están más satisfechos con su vida, si perciben elevados niveles de estrés al mismo tiempo. En la misma línea, los estudiantes con altas habilidades de manejo emocional están más satisfechos con su vida en general, aunque el efecto negativo del estrés percibido disminuye la influencia positiva en la satisfacción vital. Asimismo, los resultados del análisis multigrupo indicaron que los chicos y las chicas de diferentes edades estaban igualmente afectadas por el estrés percibido como un factor de riesgo con respecto al bienestar subjetivo, independientemente de las capacidades emocionales que pudieran haber desarrollado.

Los **estudios 2 y 3** han puesto de manifiesto que el desarrollo emocional es un factor de protección significativo que fomenta el ajuste psicológico y el bienestar de los jóvenes estudiantes. Además, dichos resultados contribuyen a comprender mejor los mecanismos que podrían intervenir en el impacto beneficioso de las competencias emocionales sobre el desarrollo positivo de los adolescentes. En base a estos resultados, diseñamos e implementamos un programa de intervención escolar para los estudiantes.

Estudio 4: Schoeps K., Villanueva L., Prado-Gascó V.J. & Montoya-Castilla I. (2018). Development of Emotional Skills in Adolescents to Prevent Cyberbullying and Improve Subjective Well-Being. *Frontiers in Psychology*. 9:2050, 1-12. doi: 10.3389/fpsyg.2018.02050.

En este sentido, el objetivo del **estudio 4** fue determinar el impacto de un programa de intervención socio-emocional, llamado PREDEMA, diseñado para adolescentes en el ámbito escolar (Montoya-Castilla, Postigo, & González, 2016). Participaron 148 estudiantes de 1º y 2º de la ESO con edades comprendidas entre los 12

y los 15 años ($M = 12,63$; $DT = 0,74$; 57% chicas). En el estudio se utilizó un diseño cuasi-experimental con datos longitudinales y asignaciones aleatorias a los grupos de intervención y control. El programa de intervención se basó en el modelo de inteligencia emocional de Mayer y Salovey (1997). Su objetivo fue desarrollar las habilidades emocionales de los adolescentes para mejorar la calidad de las relaciones interpersonales y reducir los conflictos entre iguales, influyendo positivamente en la convivencia y el bienestar. La intervención se llevó a cabo en once sesiones en horario escolar durante un período de tres meses. Los participantes completaron el cuestionario de competencias emocionales, la escala de cyberbullying y la escala de satisfacción con la vida en tres momentos diferentes: antes (T1), inmediatamente después (T2) y seis meses después de la intervención (T3).

Los resultados indicaron que el programa demostró ser eficaz en desarrollar las competencias emocionales de los estudiantes a corto y a largo plazo, reducir significativamente la incidencia del cyberbullying, así como en promover el bienestar subjetivo, específicamente la satisfacción con la vida. Así, los estudiantes que participaron en el programa, mejoraron su capacidad de percibir, entender y regular las emociones, así como también informaron de menos comportamientos amenazantes y humillantes a través del teléfono móvil e Internet, lo que a su vez mejoró su satisfacción con aspectos generales de sus vidas. Además, las competencias emocionales mediaban el impacto de la educación socio-emocional sobre la satisfacción de la vida. Es decir, a medida de que los adolescentes pudieron integrar sus nuevos conocimientos y habilidades emocionales, su bienestar subjetivo también aumentó, apreciando los recursos y estrategias que habían adquirido para mejorar la convivencia pacífica en el aula y mantener relaciones positivas con sus compañeros.

Dado el importante rol que tiene el profesor en los procesos de aprendizaje y el funcionamiento psicológico de los alumnos, promover la salud y el bienestar de los docentes es relevante no sólo por su propio bien, sino también por el desarrollo positivo y éxito académico de los estudiantes.

Estudio 5: Schoeps, K., Tamarit, A., & Montoya-Castilla, I. (in review). Impact of emotional intelligence on burnout among Spanish teachers: a mediation study.

International Journal of Educational Research.

Por lo tanto, el objetivo del siguiente **estudio 5** fue determinar la inteligencia emocional de los profesores en relación con sus problemas de salud mental. En concreto, el estudio se centró en el impacto de las habilidades emocionales sobre el síndrome de quemarse por el trabajo (burnout), uno de los principales problemas de salud de los docentes. Para ello se utilizaron análisis de modelos de ecuaciones estructurales con datos de autoinforme de 200 profesores, de entre 22 y 64 años de edad ($M = 44,97$; $DT = 9,31$; 73,50% mujeres); el diseño del estudio fue exploratorio y transversal. Los resultados mostraron efectos directos e indirectos significativos de la claridad del estado de ánimo y la reparación emocional sobre las cuatro dimensiones del burnout de los profesores, mientras que la atención emocional no tuvo ninguna influencia significativa sobre el síndrome de quemarse por el trabajo.

Así, el afecto positivo explica la relación entre la inteligencia emocional y la ilusión por el trabajo, mientras que el afecto negativo media la asociación entre las habilidades emocionales y el desgaste psíquico, las actitudes de indolencia y los sentimientos de culpabilidad. En otras palabras, los profesores que entienden bien sus sentimientos y son capaces de reparar los estados emocionales negativos, también están más motivados por realizar bien su trabajo en la escuela porque son capaces de

experimentar emociones agradables al mismo tiempo. Sin embargo, al experimentar afectos negativos esta relación desaparece, lo que podría conducir a una mayor vulnerabilidad de padecer problemas de salud en docentes con mucha carga de estrés. De manera similar, aunque los profesores conocen bien su estado emocional con precisión y son competentes en la reparación emocional, es posible que no sean capaces de prevenir el burnout cuando experimentan repetidamente sentimientos desagradables como el estrés.

Estudio 6: Schoeps, K., Tamarit, A., de la Barrera, U., & González, R. (in press). Effects of an emotional-skill training to prevent burnout syndrome in schoolteachers [Efectos de un entrenamiento en habilidades emocionales para prevenir el síndrome de burnout en profesores]. *Ansiedad y Estrés*.

Análogo al estudio de intervención realizada en la población de alumnos de secundaria, el **estudio 6** tenía como objetivo determinar la eficacia de un programa de entrenamiento basado en las emociones para que los docentes redujeran sus síntomas de burnout y mejoraran su bienestar subjetivo. De manera similar, este estudio fue diseñado como una intervención cuasi-experimental con asignación aleatoria a los grupos experimentales y de control. Se realizaron análisis de covarianza multivariados, seguidos de modelos de regresión jerárquica.

Los resultados indicaron que los profesores que participaron en el programa de intervención informaron de menos insensibilidad hacia los problemas escolares, menor agotamiento psicológico, emocional y físico, así como menos sentimientos de culpa en comparación con el grupo de control, a corto y a largo plazo. No hubo un cambio significativo en la ilusión por el trabajo, lo que indica que la satisfacción y autoeficacia profesional de los docentes se mantuvieron estables en ambos grupos. Además, el grupo

de intervención mostró una disminución significativa en síntomas la depresión a corto plazo y un cambio marginal en síntomas de ansiedad a largo plazo en comparación con el grupo control. Sin embargo, no se observaron cambios significativos en los síntomas de estrés en el grupo de intervención. Asimismo, la intervención fue efectiva para mejorar la autoestima y la satisfacción con la vida de los participantes, aunque podría exceder más tiempo y entrenamiento específica para mantener esos cambios a lo largo del tiempo.

Estos resultados enfatizan los beneficios de los programas de intervención basados en las emociones para reducir los niveles de estrés y los problemas psicológicos relacionados con el trabajo del profesor. Asimismo, dichos programas pueden ser beneficiosos para fortalecer la autoestima y la satisfacción con la vida de los docentes, probablemente debido al desarrollo de las competencias sociales, así como al apoyo social que es su principal fuente de equilibrio y bienestar emocional. Por estas razones, el entrenamiento en habilidades emocionales de los profesores tiene un papel importante en la prevención de problemas de salud mental y en la promoción de su bienestar psicológico.

Discusión

A la vista de los resultados obtenidos en los seis estudios, la presente investigación ha cumplido con su objetivo general de examinar el impacto de las habilidades y competencias emocionales sobre el funcionamiento psicológico, el bienestar y la salud mental, con un enfoque integrador que recoge las perspectivas tanto de la población estudiantil como la docente.

En efecto, la ESCQ-21 es una herramienta fiable y válida para medir como los adolescentes españoles perciben sus competencias emocionales. Además, tanto los estudiantes como los profesores se benefician de competencias emocionales bien

desarrolladas. Mientras que las competencias emocionales en los jóvenes estudiantes se asocian con el ajuste socio-emocional y el bienestar subjetivo, en los profesores las habilidades emocionales predicen los problemas de la salud mental y laboral. Se han identificado variables mediadoras, como la autoestima, el estrés percibido y la afectividad, que podrían explicar los mecanismos psicológicos que subyacen la relación entre el desarrollo emocional, la salud mental y el bienestar. Finalmente, los programas de intervención socio-emocional han demostrado su eficacia para una amplia gama de resultados positivos en estudiantes y profesores. Así, pueden considerarse herramientas valiosas para prevenir el acoso escolar entre compañeros y aliviar el burnout de los profesores.

Después de presentar los principales resultados de esta tesis, hay una serie de limitaciones que merecen ser consideradas. Entre las limitaciones de la presente investigación se destacan el uso exclusivo de medidas de autoinforme, el método de muestreo de conveniencia más que probabilísticos, y el uso de datos transversales más que longitudinales. Estas limitaciones afectan la validez externa de los resultados, lo que dificulta la generalización de los resultados (MacKinnon, 2008). Finalmente, los resultados pueden estar sesgados por el contexto cultural, el género y el carácter individual de los estudiantes y los profesores como condiciones que deben tenerse en cuenta al interpretar los resultados. Sin embargo, los programas de intervención propuestos en esta investigación pueden adaptarse a las necesidades específicas de cualquier participante para replicar los resultados positivos y aumentar las probabilidades de éxito.

A partir de estas limitaciones se proponen algunas recomendaciones para futuras investigaciones sobre la educación socio-emocional en el ámbito escolar. Se han propuesto diversos factores que juegan un papel mediador en la relación entre el

desarrollo de las competencias emocionales y el ajuste psicológico, la salud mental y el bienestar. Sería recomendable investigar con más profundidad como estos factores, tales como autoestima, apoyo social, empatía, estrés percibido, afecto positivo y negativo, fomentan o bien aminoran el efecto positivo de las habilidades emocionales (Augusto-Landa, López-Zafra, Berrios-Martos, & Pulido-Martos, 2012; Reina & Oliva, 2015; Kong, Zhao, & You, 2012; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015). Además, la realización de análisis multigrupo podría determinar si ciertas características de los participantes están relacionadas con los beneficios diferenciales del programa. Estos factores moderadores como la edad, el sexo, la escuela o el nivel educativo, así como el nivel socioeconómico, pueden influir en quienes reciben más o menos beneficios de la intervención (Cabello, Sorrel, Fernández-Pinto, Extremera, & Fernández-Berrocal, 2016; Simon, 2014). Además, sería recomendable que los estudios futuros utilizaran un enfoque inclusivo para el estudio de los beneficios de la competencia emocional para niños con desarrollo atípico – aquellos con trastornos de salud mental diagnosticado, niños superdotados o con antecedentes de maltrato infantil o acoso escolar (Montgomery, McCrimmon, Climie, & Ward, 2018). En relación con los estudios de intervención, la investigación futura debe abordar la variabilidad en las características del diseño y la implementación debido a las importantes implicaciones para la eficacia y el logro de los resultados de la intervención SEL (Dolev & Leshem, 2017; Wigelsworth et al., 2016).

Excediendo el enfoque centrado en la persona para explicar por qué los programas de intervención SEL promueven el funcionamiento psicológico saludable y el bienestar emocional, la investigación futura debería prestar más atención a los factores organizacionales y ambientales (Greenberg, Domitrovich, Weissberg y Durlak, 2017). En esta línea, futuros estudios de prevención e intervención deberían explorar el papel

de incluir a toda la comunidad escolar para ilustrar cómo una perspectiva ecológica más amplia puede mejorar nuestra comprensión de los efectos de los programas de intervención SEL (Nathanson et al., 2016).

Conclusiones

A pesar de las limitaciones, esta investigación ha ampliado los conocimientos científicos existentes sobre la relación entre las competencias emocionales y los diferentes aspectos del funcionamiento psicológico, incluyendo el bienestar subjetivo y la salud mental, tanto en la población estudiantil como en la docente. Además, esta investigación ha proporcionado evidencia adicional sobre la eficacia de los programas de educación emocional en las aulas.

En cuanto al enfoque integrador de esta investigación, las aportaciones específicas de los estudios presentados pueden agruparse de la siguiente manera: 1) la evaluación de instrumentos de las competencias emocionales, 2) el estudio de la relación entre las competencias emocionales, el ajuste socio-emocional, el bienestar subjetivo y la salud mental, así como los mecanismos mediadores y 3) la evaluación de la eficacia de las intervenciones sociales y emocionales en el ámbito escolar a corta y a largo plazo.

En concreto, como aportación a la medición de las competencias emocionales, la versión española de la ESCQ-21 se ha mostrado como una medida de autoinforme válida y fiable para los adolescentes. Esto abre nuevas oportunidades para que investigadores y profesionales, especialmente españoles, comparen sus resultados con los de estudios realizados en diferentes culturas y países, ampliando el conocimiento científico a nivel internacional. Además, la ESCQ-21 podría ser una herramienta útil para evaluar los efectos de los programas SEL, cuyo objetivo es mejorar las capacidades emocionales y sociales de los estudiantes adolescentes.

Segundo, esta investigación contribuye al estudio de mecanismos psicológicos que pueden explicar cómo las competencias emocionales fomentan el desarrollo positivo del individuo. En este sentido, se han propuesto factores mediadores, como la autoestima, el estrés percibido y la afectividad, que podrían explicar la estructura psicológica que subyace al vínculo entre el desarrollo emocional, la salud mental y el bienestar. Por un lado, los bajos niveles de autoestima y los altos niveles de estrés percibido parecen ser factores de riesgo significativos que podrían reducir el impacto beneficioso de las competencias emocionales sobre el ajuste socio-emocional y el bienestar. Por lo tanto, se debería prestar más atención a la evaluación y promoción del desarrollo saludable de los jóvenes. Por otro lado, la presente tesis contribuye a comprender mejor el papel de los afectos positivos y negativos como posible mecanismo que explicaría cómo las competencias emocionales pueden contribuir a un mayor ilusión por el trabajo y a reducir los síntomas de burnout en los profesores de escuela. Por estas razones, los resultados presentados sobre las habilidades emocionales de los profesores, junto con los resultados anteriores sobre el desarrollo emocional de los estudiantes, abalan la necesidad de programas de intervención basados en las emociones para mejorar los factores de salud mental y aumentar el bienestar subjetivo, teniendo en cuenta los factores mediadores y moderadores.

Finalmente, la presente tesis ha proporcionado evidencia adicional sobre la eficacia de los programas de educación emocional en las escuelas, para el desarrollo emocional de estudiantes y profesores con datos longitudinales. Estos resultados sobre los beneficios de las competencias emocionales tienen implicaciones importantes tanto para los estudiantes como para los profesores. Considerando que las competencias emocionales son un predictor de buen desempeño académico y profesional, ajuste

psicológico y bienestar, los programas aquí presentados pueden ser valiosos para la intervención de salud mental en contextos escolares.

En vista de la importancia de las emociones para el ámbito escolar, la presente investigación integra la perspectiva tanto del estudiante como del profesor en un modelo de funcionamiento emocional integrador en el contexto escolar. Aunque la mayoría de los estudios examinan las competencias emocionales a nivel individual, esta investigación abre el foco a un estudio ecológico más amplio de las emociones en el aula, donde profesores y estudiantes interactúan a nivel diario. Por lo tanto, para entender el desarrollo emocional de los adolescentes en el ámbito escolar, es esencial considerar el papel del profesor como facilitador y modelo emocional de sus alumnos.

Además, en la presente tesis doctoral se han señalado los posibles pasos siguientes para profundizar en las investigaciones sobre los beneficios de las competencias emocionales en el ámbito escolar, así como para proporcionar recomendaciones para la planificación e implementación de un programa de intervención socio-emocional con resultados efectivos y exitosos. Consideramos que la presente tesis por compendio de publicaciones aporta una contribución significativa al campo emergente de la educación socio-emocional y esperamos sea una inspiración para continuar investigando en esta área.

Abstract

The idea of introducing social and emotional learning in educational settings is based on the assumption that emotions are an essential element of school life. Emotional competencies are conducive to student learning and well-being, in addition to conveying emotional resources for teachers and educators. The development of such abilities is a prerequisite for students and teachers to engage in productive and enjoyable classroom dynamics. Indeed, well-developed emotional competence enhances students' psychological adjustment, self-esteem, adaptive coping with stress at school and academic success. However, engaging in disruptive behaviors and school violence (bullying) may be attributed to a deficit in students' social and emotional development. Similarly, being emotional intelligent is also a crucial skill for teachers, as educational work includes expressing empathy and support and displaying appropriate emotions during teaching, which enhances students' learning. Research has stressed the protective role of teachers' emotional competencies regarding mental health problems, such as depression, anxiety and work-related stress (burnout). The objective of the present research was to examine the impact of emotional competence on psychological adjustment, subjective well-being and mental health, in both student and teacher populations in a school context. Given the characteristics of a multi-paper thesis, six studies have been included that provide the scaffolding for this research. The studies 1-4 focused on the development of emotional competence in relation to psychological adjustment and subjective well-being in adolescent students. The studies 5-6 addressed the study of emotional intelligence in teachers in relation to mental health issues, specifically burnout. In view of the results obtained by the six studies, the ESCQ-21 has been found to be a reliable and valid tool for measuring emotional competence in Spanish adolescents. Furthermore, students as well as teachers benefit from well-developed emotional competencies. While emotional competence in adolescents was associated with social-

emotional adjustment and subjective well-being, in teachers emotional intelligence predicted mental health outcomes. A couple of mediators, such as self-esteem, perceived stress and affectivity have been suggested that might explain the psychological mechanisms that underlie the link between emotional development, mental health and well-being. Finally, socio-emotional intervention programs have been shown their effectiveness for a wide range of positive outcomes in students and teachers. For instance, they may be considered valuable tools for preventing bullying among peers and alleviating teacher burnout. Drawing from these findings, the dissertation makes a relevant contribution to the existing literature that stresses the benefits of developing emotional competence for psychological adjustment, mental health and well-being among students and teachers.

Chapter I. Introduction

1.1. Dissertation structure

The purpose of this introduction is to make the case and highlight the importance of social-emotional learning in the school setting, which is the core of the present dissertation. Given the characteristics of a multi-paper thesis, six studies have been included in the dissertation that provide the scaffolding for this research, which are presented at the end of this chapter.

As presented above, the first chapter offers a brief description of the theme and significance of the dissertation. The second chapter presents a broad overview of the theoretical and empirical background. This includes a description of the principal theories and models of emotional competencies, specifically the ability-model of emotional intelligence developed by Mayer & Salovey (1997) and the developmental model of emotional competence proposed by Saarni (1999). Moreover, this section provides a brief review of the difference between emotional intelligence and emotional competence, as well as their corresponding assessment tools. The next section focuses on emotional competence in adolescents and provides evidence from empirical research on the relation with psychological adjustment and subjective well-being. This section concludes with an overview of the findings from exciting SEL-programs in student populations. Similarly, the following section describes the benefits of well-developed emotional intelligence for teachers' mental health issues. Additionally, studies that have focused on emotional-skill training for educators are described. The third chapter presents the objectives and hypotheses of this dissertation and their corresponding studies, which are presented in chapter four. Ultimately, in chapter five the main results from the six studies are summarized and discussed, including their limitations. The chapter concludes with lessons learned from applications of emotional competence in the educational context, recommendations for future research and the final conclusions.

1.2. Presentation of dissertation significance: The case for social-emotional learning and development in the school setting

Until recently, research in the school setting has focused primarily on cognitive processes and largely ignored the importance of emotional processes for daily life at school. Mental, motivational and performance factors were considered more urgent for school life and success than emotions, which were perceived as rather irrational, uncontrollable and completely opposite to rational thought. Therefore, the study of emotions has been neglected in school-based theory, investigation and applications. Fortunately, the *zeitgeist* ('spirit of the times') of the twenty-first century has offered an alternative view on the interrelationships between reason and emotions, emphasizing that non-cognitive skills are complementary to cognitive abilities (Fernández-Berrocal & Extremera, 2006; Mayer et al., 2004).

According to this "new spirit" in education, it is not enough to educate a child to grow into a cognitively intelligent and knowledgeable person that is well-versed in the sciences, humanities, and the arts. Rather, schools should also educate children to become emotionally aware of themselves and others, kind, empathetic, caring, responsible, pro-social, and in-control of their emotional lives – thus, emotionally competent (Elias & Weissberg, 2000). Hence, emotional abilities and cognitive skills are best construed when being mutually determined, rather than treat as independent (Pardeller et al., 2017). This "new spirit" requires that the traditional education based on cognitive abilities be supplemented by a strong emphasis on social and emotional learning and development. More and more psychologists, educators and researchers have come to realize over the past few years that emotions are an essential part of school life and crucial for the psychological functioning and well-being of both students and teachers (Keefer et al., 2018).

Indeed, well-developed emotional competence enhances students' psychological adjustment, self-esteem, adaptive coping with stress at school and academic success (e.g. Coelho et al., 2015; Mathews et al., 2016; Pérez-Escoda & Alegre, 2016). Many students struggle with behavioral problems, emotional difficulties and peer relationships because they have trouble describing and expressing their feelings accurately. Engaging in disruptive and aggressive behaviors such as bullying may be partially attributed to a deficit in students' social and emotional development (Zych et al., 2016). Therefore, emotional competence is a potential target for school-based interventions aimed at diminishing the association between victimization and psychological maladjustment (Beltrán-Catalán et al., 2018; Garaigordobil et al., 2017).

The capacity to reason about emotional processes – being emotional intelligent – is also a crucial skill for teachers, as educational work includes expressing attention, empathy, and support for students and displaying appropriate emotions during teaching and interpersonal interactions with students (Brackett & Katulak, 2007). Previous research has acknowledged that teachers' ability to perceive, use, understand and regulate emotions accurately is closely associated with students' learning (Jennings & Greenberg, 2009). In contrast, teachers who are stressed out, struggling with their responsibilities as instructors and educators and are hardly capable of managing their classroom also affects students learning outcomes (Lavy & Eshet, 2018).

The research literature continues to report that emotional intelligence is related to a number of personal and performance life factors related to psychological health and well-being. Evidently, high emotional intelligence is associated with increased subjective well-being, job and academic satisfaction, while low emotional intelligence associates with internalizing symptoms and low self-esteem (Brackett et al., 2010; Steinhardt et al., 2011). In addition, high levels of emotional regulation prevent work-

related (burnout) or academic stress probably due to the feeling of control over stressful tasks at school and the use of constructive strategies to cope with them (Mérida-López & Extremera, 2017). Unfortunately, the training that teachers receive on developing emotional competence in students or managing their own internal and external emotional responses is almost insubstantial (Molero, 2018; Poulou, 2017). As a matter of fact, the study of emotional abilities over the past three decades has been a major catalyst driving the growing interest in emotions in schools and its emergence as a flourishing area of research (Keefer et al., 2018).

The theoretical foundation for this dissertation is represented by the practical application of the ability-based model of emotional ‘intelligence’ (Mayer & Salovey, 1997) and the developmental model of emotional ‘competence’ (Saarni, 2000). Emotional intelligence (EI) has been traditionally defined as a set of rather stable abilities or traits, including perceiving emotions, using emotions to facilitate thought, understanding emotions and emotional regulation (Mayer et al., 2000). Psychologists have studied the construct using different approaches, considering EI either as a trait or an ability (Mayer et al., 2008), or even using mixed models (Bar-On, 2006). Although trait EI may diverge somewhat from ability EI perspective (Qualter et al., 2012), there is a general consensus that emotional competencies can be learned or enhanced through training one’s whole life (Kotsou et al., 2011; Vesely et al., 2014).

The more adult-focused ability-model of EI may not be well-suited to explain the emotional development in younger children and adolescence, according to Saarni (2000). In contrast, the developmental model of emotional competence (EC) is a more general and broader approach to the study of a variety of emotional skills, emphasizing that a child develops EC through the dynamic interplay of the cultural and contextual socialization (Buckley et al., 2003). Saarni’s definition comprises of three major EC

components to handle emotion-related situations: 1) identifying and understating personal feelings and those of others; 2) expressing and communicating emotions; and 3) coping adaptively with negative emotional responses (Saarni, 2007). These competencies may be also acquired through a learning process by using traditional methods of instruction (Buckley & Saarni, 2014; Kumschick et al., 2014).

The present dissertation is embedded in this area of research by adopting an emotion-based approach to the study of students' and teachers' affective development in relation to health outcomes and well-being. On the one hand, the role of emotional competencies in school contexts will be analyzed, and their possible impact on students' psychological adjustment and teachers' mental health issues. On the other hand, given that school is a primary sphere of life, they represent an ideal setting for learning and teaching social and emotional skills that are of key importance for personal growth and well-being. The idea of introducing social and emotional learning in educational settings is based on the assumption that emotional skills are conducive to student learning and well-being, in addition to conveying emotional resources for teachers and educators (Jennings & Greenberg, 2009). Thus, the development of social and emotional abilities is a prerequisite for students and teachers to engage in productive and enjoyable classroom dynamics (Jennings et al., 2017).

Evidence-based approaches for teaching social and emotional skills in schools, also known as social and emotional learning (SEL), have gained strength over the last twenty years (Torrente et al., 2016). SEL-programs integrate the teaching of emotional abilities and skills, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, into the academic curriculum of reading, writing and arithmetic (Collaborative for Social and Emotional Learning 'CASEL', 2015). This way, SEL-programs help students from preschool to high school

levels to build a healthy social-emotional foundation in addition to an academic basis (Nathanson et al., 2016). One of the key success factors is including teachers' training in emotional competencies based on solid psychological and educational theory (Vesely-Maillefer & Saklofske, 2018). Finally, integrating social-emotional learning in schools can benefit not only student and teacher personal development but also alleviate underachievement, dropout rates, increasing mental health issues, and school violence and bullying, making the approach essential for twenty-first-century learning (Hoffmann et al., 2018).

Regardless of the extensive literature on social and emotional learning and development, there have been very few studies that combine both students' and teachers' perspectives. In addition, most investigations that focus on emotional education in the Spanish context lack a theoretical and/or empirical foundation and a structured method based on scientific evidence.

In view of the importance of emotional competencies in school settings, this research will provide an integrative approach for understanding not only students' and teachers' academic but also social-emotional strengths and needs. Therefore, the common purpose of the studies included in this doctoral dissertation is to examine the impact of emotional abilities and skills on different aspects of psychological functioning, including well-being and mental health, in both student and teacher population.

1.3. Outline of publications

Study 1: Schoeps, K., Tamarit, A., Montoya-Castilla, I., & Takšić, V. (in press). Factorial structure and validity of the Emotional Skills and Competences Questionnaire (ESCQ) in Spanish adolescents [Estructura factorial y validez de la Escala de habilidades y competencias emocionales (ESCQ) en adolescentes españoles]. *Behavioral Psychology / Psicología Conductual*.

Study 2: Schoeps, K., Tamarit, A., González, R., & Montoya-Castilla, I. (2019). Emotional competence and self-esteem in adolescence: impact on psychological adjustment [Las competencias emocionales y la autoestima en la adolescencia: impacto sobre el ajuste psicológico]. *Revista de Psicología Clínica Con Niños Y Adolescentes*, 6(1), 51–56. doi: 10.21134/rpcna.2019.06.1.7

Study 3: Schoeps, K., Montoya-Castilla, I. & Raufelder, D. (in press). Does stress mediate the relationship between emotional intelligence and life satisfaction during adolescence? *Journal of School Health*. doi: 10.1111/josh.12746

Study 4: Schoeps K., Villanueva L., Prado-Gascó V.J. & Montoya-Castilla I. (2018). Development of Emotional Skills in Adolescents to Prevent Cyberbullying and Improve Subjective Well-Being. *Frontiers in Psychology*. 9:2050, 1-12. doi: 10.3389/fpsyg.2018.02050.

Study 5: Schoeps, K., Tamarit, A., & Montoya-Castilla, I. (in review). Impact of emotional intelligence on burnout among Spanish teachers: a mediation study. *International Journal of Educational Research*.

Study 6: Schoeps, K., Tamarit, A., de la Barrera, U., & González, R. (in press). Effects of an emotional-skill training to prevent burnout syndrome in schoolteachers [Efectos de un entrenamiento en habilidades emocionales para prevenir el síndrome de burnout en profesores]. *Ansiedad y Estrés*.

Chapter II. Theoretical and Empirical Background

2. Theoretical and empirical background

This dissertation is based on a theoretical and empirical model, which is comprised of four main interrelated areas of research, which are described in more detail in this chapter (Figure 1). First, the ability-model of emotional intelligence developed by Mayer & Salovey (1997) and the developmental model of social-emotional competence proposed by Saarni (2000) provide the theoretical background for students' and teachers' social and emotional development. Second, empirical research has documented the relation between adolescents' social and emotional development and their self-report psychological adjustment, including behavioral problems, emotional difficulties, problems with peer-relationships (bullying) and self-esteem (Cobos-Sánchez, Fluja-Contreras, & Gómez-Becerra, 2017; Salguero, Palomera, & Fernández-Berrocal, 2012). Third, studies have reported the impact of such competences on subjective well-being, including life satisfaction, positive and negative affect (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). Fourth, perceived emotional intelligence in schoolteachers has been associated with aspects of mental health, such as work-related stress (burnout), symptoms of depression and anxiety (Fernández-Abascal & Martín-Díaz, 2015; Kotsou, Mikolajczak, Heeren, Grégoire, & Leys, 2018).

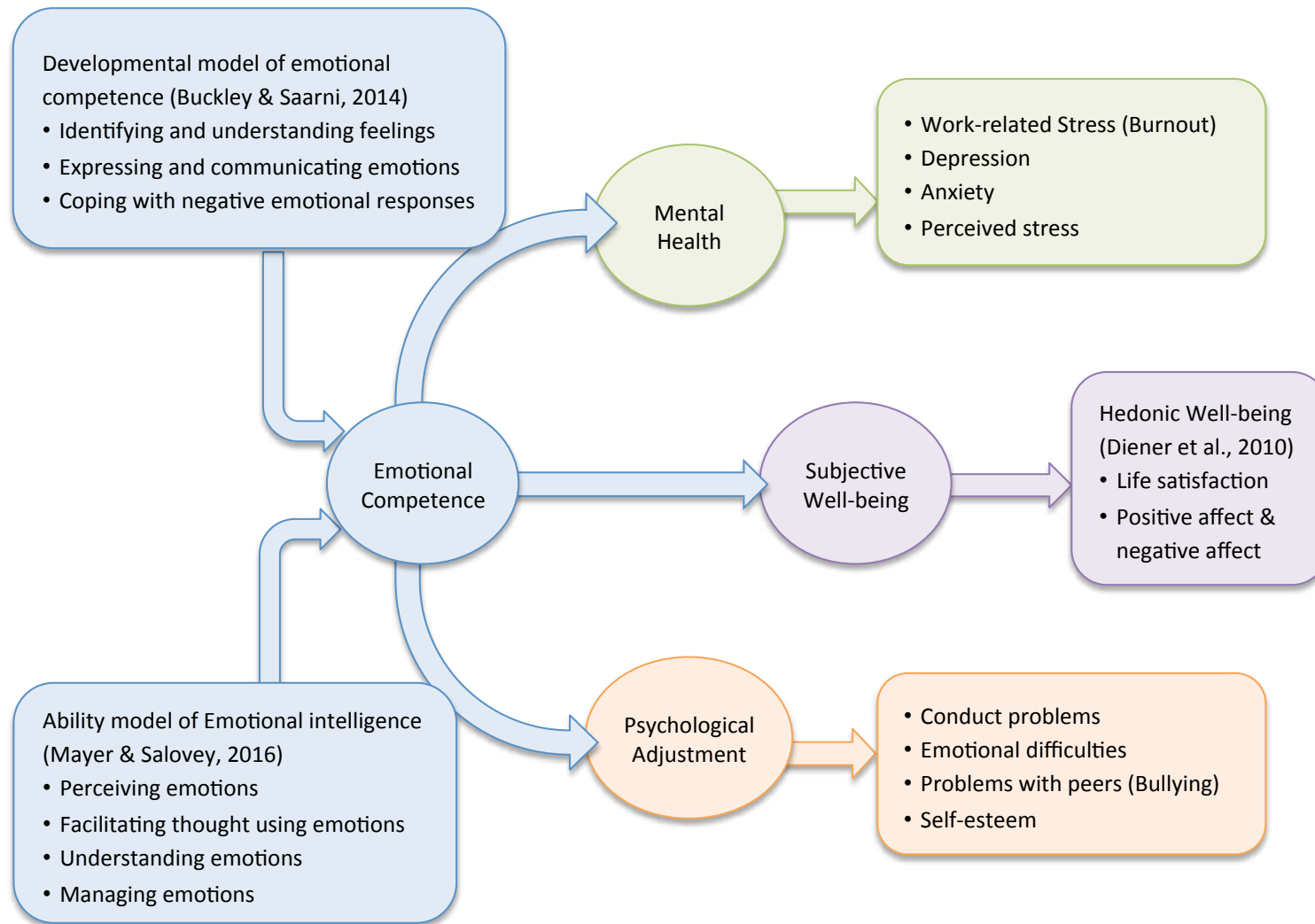


Figure 1. Theoretical and empirical model drawn from the literature review

2.1. Conceptualization and measurement of emotional competencies

Almost 30 years ago research interests moved towards the study of how cognition and emotional processes might be related to intelligent thinking and behavior. In this context Salovey and Mayer (1990) first introduced the concept of emotional intelligence (EI) to the scientific community. The publication of Daniel Goleman's (1995) book about emotional intelligence contributed to the popularization of EI during the 1990s. However, these initial definitions and claims about the importance of EI prompted critiques due to the lack of empirical evidence available at that time (Davies, Stankov, & Roberts, 1998).

The current study of EI is characterized by two conceptual approaches that derive from different methods of measurement: the trait and the ability approach (Mayer et al., 2008). The trait approach conceptualizes EI as a dispositional tendency, and therefore strongly related to personality traits or self-efficacy beliefs (Petrides, 2010). This approach also includes so-called "mixed" models, because they consider EI as a mixture of traits, competences, and abilities (Bar-on, 2006). Both, trait EI and the "mixed" models are usually measured with self-report questionnaires. In the wake of the ability approach, EI is defined as a cognitive ability based on the processing of emotion information, typically assessed with performance tests (Brackett & Salovey, 2006; Maul, 2012).

This present research is grounded in the ability-model of emotional intelligence developed by Mayer and Salovey (1997), which has received wide recognition and usage, serving as an example for other EI models and measures. This four-branch model comprises of a set of four hierarchically-linked abilities or branches: perceiving emotions, facilitating thought using emotions, understanding emotions, and managing emotions (Mayer, Salovey, & Caruso, 2000). The development of these abilities to

process emotional information is an important part of human functioning as it facilitates an adequate adjustment to one's environment (Extremera, Durán, & Rey, 2007). For instance, perceiving emotions involves identifying emotions in one's own emotions, as well as the recognition of the emotions of others. The latter enhances the estimation and understanding of others' intentions and subsequent behavior, making it easier to respond accordingly (Elfenbein, Foo, White, Tan, & Aik, 2007). Emotions can facilitate thought processes through the analysis of and reflection on emotional information. This processing in turn assists learning, concentration, and attention (Mayer, Roberts, & Barsade, 2008). Understanding the meaning of emotions in social contexts guides decision-making, problem-solving and reasoning (Fernández-Berrocal, Extremera, Lopes, & Ruiz-Aranda, 2014). Managing emotions effectively is the key to high-quality interpersonal relationships, due to the ability to maintain, shift and cater emotional responses, either positive or negative, to a given situation (Mayer, Caruso, & Salovey, 2016). Most importantly, these emotional abilities have been found to predict physical and mental health, psychological well-being, as well as academic and work success (Marikutty & Joseph, 2016). The ability model of emotional intelligence has been recently updated to revisit theoretical aspects and to enhance its usefulness, based on twenty-five years of research and accumulated evidence about emotional intelligence as a mental ability (Mayer et al., 2016).

The model of EI may not be well-suited to understanding emotional development in younger children and adolescents. Thus, the more adult-focused ability model is complementary to the developmental model of emotional competence developed by Carolyn Saarni (1999). From a developmental perspective, every individual will learn a variety of emotional competencies (EC) in the course of his or her lifespan through the influences of cultural and contextual socialization (Saarni, 2000). We adopted Saarni's

definition of EC for the study of students' emotional skills, as the concept of EC can be applied more accurately to the approach to learning emotions in an educational settings (Denham, Bassett, & Wyatt, 2010). Saarni's thesis on the development of emotional competence adds depth and richness to the understanding of emotional processes and highlights the contextual influence on the way in which children generate emotions and give them meaning (Denham & Bassett, 2018).

The developmental model of emotional competence proposed by Saarni (1999) conceptualizes EC as a set of eight skills: 1) awareness of one's emotional state; 2) understanding of the emotions of others; 3) use an emotion lexicon; 4) capacity for empathy and sympathy; 5) management of emotional expressiveness; 6) effective emotion regulation and adaptive coping; 7) awareness of the structure or nature of relationships; and 8) capacity for emotional self-efficacy (Saarni, 2007). These eight skills can be summarized in three major components of EC for handling emotion-related situations: 1) identifying and understating one's own feelings and those of others; 2) expressing and communicating emotions; and 3) adaptive coping with negative emotional responses (Buckley & Saarni, 2014).

These emotional skills are developed progressively from infancy to adolescence reflecting the developmental process (Saarni, 2007). As a preschooler (3-6 years) the ability for effective regulation of impulses and emotional responses, such as suppressing outrage of anger might be insufficient due to the immature brain (Denham et al., 2003). Similarly, the capacity of emotional recognition may be limited by lack of emotional vocabulary for identifying and labeling one's own and others' emotions (Eisenberg, Sadovsky, & Spinrad, 2005). While preschool children tend to cope through direct action, for instance asking for help from parents and teachers, older children are able to employ more cognitive regulation strategies, such as problem- solving and self-

distraction (Colle & Del Giudice, 2011). As they age, schoolchildren (6-12 years) acquire the regulation skills of an adult. However, their repertoire of strategies is strongly contextualized and more time is necessary for applying flexibly coping and appropriately matching the strategy to the external challenge. Starting in adolescence (12 years), they develop the capacity for metacognitive coping, as the child develops mental representations of the self and the world in order to predict future emotional responses to hypothetic situations (Lau & Wu, 2012; Mathews et al., 2016).

The development of these emotional skills throughout childhood and adolescence – including expressing healthy emotions regulating them, and understanding the emotions of oneself and others – should together facilitate successful school experiences, including peer-relationships and well-being (Denham et al., 2010; Lau & Wu, 2012; Root & Denham, 2010; Sánchez, Ortega, & Menesini, 2012). Moreover, several studies have shown age and gender-related differences in emotional competences controlling for instrument-related bias (Putnick & Bornstein, 2016). Females typically present a greater capacity to perceive and understand emotions (Schoeps, Tamarit, & Montoya-Castilla, 2017), whereas expression and emotional management do not vary among genders (Costa & Faria, 2016); in both genders, it increases with age (Esnaola, Revuelta, Ros, & Sarasa, 2017).

In regard to assessment of EI, the Trait-Meta-Mood-Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) was the first tool developed to assess individual differences in perceived EI, including what is called emotional meta-knowledge. The TMMS comprises of three dimensions, a) attention to feelings, b) mood clarity and 3) emotional repair, which can help to explain differences in people's beliefs and attitudes that are relatively stable over time (Salguero, Fernández-Berrocal, Balluerka, & Aritzeta, 2010). It is still one of the most frequently used self-report

questionnaires today (Gutiérrez-Cobo, Cabello, & Fernández-Berrocal, 2017). The TMMS has been widely used in a wide range of adult populations in different cultural contexts (Martins, Ramalho, & Morin, 2010; Sánchez-Álvarez et al., 2016; Vergara, Alonso-Alberca, San-Juan, Aldás, & Vozmediano, 2015), due to its adequate psychometric properties and evidence of its three-factor structure in its original and adapted versions (Martín-Albo, Núñez, & León, 2010; Salguero et al., 2010). For these reasons, we chose the shortened Spanish version of the TMMS (TMMS-24; Fernandez-Berrocal, Extremera, & Ramos, 2004) for the study of emotional abilities in teacher populations.

Traditionally, the adult version of an existing questionnaire has been adapted for measuring the perception of emotional abilities and skills in children and/or adolescence populations (Ferrándiz, Hernández, Bermejo, Ferrando, & Sáinz, 2012; Salguero et al., 2010). Hence, several adaptations of commonly used self-report measurement fail to provide proper psychometric properties when applied in this particular developmental period, such as the Bar-On Emotional Quotient Inventory (Bar-On EQ-I; Kun et al., 2012).

In order to overcome these limitations, Takšić et al. decided to design a self-report measurement of such competence from scratch following a rigorous construction procedure (Takšić et al., 2009). The original instrument was developed in a Croatian context and was later validated in other cultural contexts mainly in adult populations (Faria et al., 2006; Faria & Lima-Santos, 2012). Given that until now it has never been validated in the Spanish context for children and adolescents through SEM models, one of the objectives of the present thesis will be to adapt and validate the instrument for the purpose of this study. The availability of a valid and reliable tool for measuring how

adolescents perceive their emotional competence could be useful for a number of reasons.

First of all, it would increase the number of available instruments for measuring perceived EC in adolescence, which has been considered an important research question (Ciarrochi, Chan, & Bajgar, 2001), and could serve to complement other measures, such as the adapted version of the TMMS for adolescents (Salguero et al. 2010). Secondly, it would permit the analysis of the development of emotional abilities throughout the ages, taking into account differences between girls and boys (Schoeps, Tamarit, & Montoya-Castilla, 2017). Thirdly, the dimensions of EC can help to explain differences in adolescents' psychological adjustment and well-being and determine the importance of how youth perceive their emotional competence at this developmental stage (Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, 2018).

2.2. Research on emotional competence in adolescents

The benefits of emotional competencies have been documented in literature with special attention to adolescents' psychological adjustment and subjective well-being (Reina & Oliva, 2015; Lau & Wu, 2012; Salguero et al., 2012).

2.2.1. Relationship between emotional competence and adjustment

Psychological adjustment refers to a young person's ability to adapt adequately to his or her environment, considering emotional, behavioral and social aspects (Goodman, 2001). An inappropriate adjustment to the immediate social context increases risk behavior, such as substance abuse, aggression, violence or delinquency (Donahue, Goranson, McClure, & Van Male, 2014). Furthermore, psychological maladjustment increases the probability of presenting emotional problems (e.g. feelings of distress, fears and worries) and somatic complaints (e.g. headache and stomach pain) (Ordóñez, Maganto, & González, 2015). Indicators of social maladjustment have been identified as a consequence of problematic peer-relationships, including bullying or peer victimization (Romera, Gómez-Ortiz, & Ortega-Ruiz, 2016).

In relation to the measurement of psychological adjustment, the Strength and Difficulties Questionnaire (SDQ; Goodman, 2001) was used in this dissertation as a screening behavioral and emotional problems, which additionally allowed for the self-assessment of social relationship problems. The SDQ is a brief, easy-to-use tool that has shown appropriate psychometric properties when applied in child and adolescent populations (Ortuño-Sierra, Chocarro, Fonseca-Pedrero, Riba, & Muñiz, 2015).

While children begin entering adolescence, the consequences of psychological problems tend to propagate, affecting a wide range of developmental domains and social environments in which the adolescent is involved, as well as increasing the risk of long-term mental health issues (Goldbeck, Schmitz, Besier, Herschbach, & Henrich,

2007). Therefore, adolescence emerges as a period of high-risk psychological maladjustment where physical, neurological, psychological, and social changes lead to young people experiencing more frequent and more intense emotional distress than younger children or older adults (Arnett, 2008). In order to implement effective and evidence-based prevention and interventions the identification of protection and risk factors for psychological adjustment during adolescence has become an important research goal and many studies have been conducted on this topic (Martins et al., 2010; Taylor, Oberle, Durlak, & Weissberg, 2017; Trentacosta & Fine, 2010).

Research on the potential for plasticity in human development has offered a different approach to positive youth development (Lerner, Almerigi, Theokas, & Lerner, 2005). Instead of focusing and trying to prevent adolescents' problems, this new paradigm considers the strengths, competences, and resources that youth needs to maximize healthy development and well-being (Curran & Wexler, 2017; Waters, 2012). Indeed, young brains are easily shaped through experience, due to the human brain's ability to mold itself. The neural plasticity of the teen brain means that the adolescent may learn things faster and their memories are more robust. Thus, it is the perfect timing for remediation, and for providing special programs to help with learning and emotional problems (Ogden & Hagen, 2019).

But even if teenage brains are more plastic and flexible, they are also more vulnerable and inefficient when it comes to attention, self-discipline and interfering emotions. It is well-known that proper psychological functioning is influenced by several protecting factors, among them self-esteem, self-efficacy and adaptive coping (Dahlbeck & Lightsey, 2008). Studies on self-esteem suggest that the way in which individuals perceive themselves varies depending on their emotional capacities, which in turn predicts social, emotional and academic adjustment (Liu, Wang, Zhou, & Li,

2014). In addition, the development of social and emotional skills is also considered a key factor in promoting better academic adjustment, less tension and stress, and better peer relationships, as well as higher self-confidence and perceived personal competence (Resurrección, Salguero, & Ruiz-Aranda, 2014; Salguero et al., 2012). Specifically, emotional skills provide resources that empower adolescents by identifying and being aware of their feelings, as well as regulating emotional reactions in themselves and in others (Peña-Sarrionandi, Mikolajczak, & Gross, 2015). Similarly, emotional skills enhance adolescents' self-esteem and self-efficacy when faced with difficult moments and consequently foster their psychological development (Anto & Jayan, 2016; Chui & Wong, 2016; Cobos-Sánchez et al., 2017).

Despite these general findings, most studies have been conducted in adult populations by measuring perceived emotional intelligence (García-Sancho, Salguero, & Fernández-Berrocal, 2014). In contrast, research has seldom focused on the impact of adolescents' social and emotional competence on psychological adjustment. The few investigations conducted in this population have shown significant relations with psychological adjustment. In particular, high attention to feelings and low mood clarity and emotional repair are related to higher levels of somatic complains, depressive symptoms and perceived stress, in addition to and more frequent risk behavior (Calero, Barreyro, Formoso, & Consejo, 2019; Prado-Gascó, Villanueva, & Górriz, 2018; Gomez-Baya, Mendoza, & Paino, 2016).

Therefore, adolescents who pay too much attention to these unpleasant feelings when in a bad mood and have trouble identifying how they are feeling or how to improve their emotional state, may have problems adopting strategies for managing emotional responses properly and coping with emotional distress. This combination can evoke feelings of anxiety and concern, in which young people constantly ruminate

about their miserable mood state, ruminating, thereby perpetuating rather than lightening their negative mood and preventing them from using more adequate strategies to cope with stress (Gomez-Baya et al., 2016). Additionally, the mediating role of negative self-esteem as a cause of psychological maladjustments, such as anxiety, depression and problematic behavior, has been recognized in recent studies (Thompson, Wojciak, & Cooley, 2016). These authors explain this association in terms of the negative self-attribution, in other words when young people blame themselves for their unpleasant mood states and feelings, which may cause them great emotional distress.

Hence, effective promotion of social and emotional competencies might be a useful for facilitating emotional, behavioral and social adjustment (Gil-Olarte Márquez, Palomera Martín, & Brackett, 2006) and optimizing human development, suggesting that emotional education is a universal prevention tool that reduces dysfunctional behaviors (Bisquerra, 2012). Additionally, it is necessary to improve adolescents' self-esteem and provide social opportunities through which they can experience positive relationships with others, feel socially competent, be valued by the group and learn about peaceful coexistence in the classroom. In doing so, young people can improve their social interactions with peers, which in turn can become a protective factor for overall psychological adjustment (Ju & Lee, 2018; Romera et al., 2016).

2.2.2. Impact of emotional competence on subjective well-being

Besides the benefits of emotional development on psychological adjustment, it is also associated with subjective well-being (Extremera & Rey, 2016; Sánchez-Álvarez et al., 2016) and mental health (Davis & Humphrey, 2012; Mikołajczak et al., 2015; Poulou, 2014).

Traditional research in Psychology has focused on the risk factors that may have a negative impact on mental health (Brooks, Harris, Thrall, & Woods, 2002). In the field of Positive Psychology, studies have shown that the development of well-being also prevents the onset of psychopathology (Huebner, Suldo, Smith, & McKnight, 2004) and is related to optimal levels of personal, social and emotional functioning (Diener & Chan, 2011; Martela & Ryan, 2016; Oberle, Schonert-Reichl, & Zumbo, 2011).

Given the importance of well-being for a variety of aspects in human life, researchers have developed various theories and models under the umbrella of two distinctive well-being perspectives: hedonic and eudaimonic well-being (Ryan & Deci, 2001; Ryff & Singer, 2008). Hedonic well-being refers to the experience of happiness, seeking feelings of pleasure while avoiding feelings of pain. In contrast, eudaimonic well-being entails the fulfillment or realization of one's full potential (Ryan & Deci, 2000). In this study we adopt the definition of hedonic or subjective well-being (SWB) (Diener, 1984), operationalized as the experience of positive affect (PA) over negative affect (NA). In addition to these affective dimensions of SWB, life satisfaction is often considered a cognitive component of SWB (Pavot & Diener, 1993, 2008). However, the strong relationships between positive–negative affect and life satisfaction has been documented, research supports the affective and cognitive aspects of SWB (Diener et al., 2010).

In relation to the assessment of SWB, Diener and colleagues (1985) designed different scales for the measurement of the cognitive and affective component. The Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) was designed to measure cognitive aspects of SWB and the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010) measures the subjective feeling of well-being. Both multi-item scales are commonly used due to their excellent psychometric

properties (Diener et al., 2010; Pavot & Diener, 2008) and they have been validated in a wide range of cultural contexts and populations, such as adolescents (Atienza, Pons, Balaguer, & García-Merita, 2000), university students and adults (Silva & Caetano, 2013), as well as elderly people (Sancho, Galiana, Gutierrez, Francisco, & Tomás, 2014).

Researchers have recently turned their attention to the study of SWB in children and adolescents. For instance, the UNICEF overview of *Child Well-being in Rich Countries* (UNICEF Office of Research, 2013) revealed severe problems of deprivation and psychological maladjustment in addition to increasing risk behavior among teenagers over the last 20 years, threatening their subjective well-being and mental health. Overall, in 29 countries with the world's most advanced economies there has been a widespread improvement in most indicators of adolescents' well-being. However, Spain has slipped down the rankings from 5th to 19th place with alarming findings for Spanish youth well-being.

Parents and teachers are concerned about the rising number of young people between 12 to 16 with lower life satisfaction and less feelings of well-being because they are at risk for a variety of psychological and social problems such as depression and maladaptive relationships with others (Goldbeck et al., 2007). Indeed, adolescent's well-being determines a wide range of later-life outcomes (Proctor, Linley, & Maltby, 2009). For instance, these outcomes involve impaired youth development and lower levels of school achievement (Ibrahim, Fadhlina, & Abedin, 2015); further reduced cognitive and social skills and lower job productivity, resulting in higher rates of unemployment and dependence on welfare (Duffy, Bott, Allan, & Torrey, 2013). Furthermore, lower well-being is associated with higher risk of antisocial behavior, involvement in crime, as well as drug and alcohol abuse (Ouytsel, Ponnet, & Walrave,

2017), finally causing increased health care costs and higher incidence of mental illness (Ogden & Hagen, 2019). Therefore, it is a social, moral and political obligation to protect and promote the well-being of children through adolescence.

In this regard, emotional competences have been taken into consideration in both research and intervention due to its promising relation to well-being and mental health outcomes (Zeidner, Matthews, & Roberts, 2012). The development of adolescents' emotional skills is related to a wide range of positive outcomes across the academic, social, psychological and professional spheres has been well-documented (Di Fabio & Kenny, 2016; Marikutty & Joseph, 2016; Salisch, Zeman, Luepschen, & Kanevski, 2014; Sánchez-Álvarez et al., 2016). For instance, emotional competencies are also associated with personal and social resources, such as self-esteem, resilience, and social support among others that enhance their overall life satisfaction (Prado-Gascó et al., 2018; Kong, Gong, Sajjad, Yang, & Zhao, 2019; Wilson & Saklofske, 2018).

The conceptual models and theories that we described earlier, may explain the mechanisms through which emotional competence influences subjective well-being. A review of the existing literature entails that the regulating negative emotional responses effectively, fosters adaptive coping with social challenges, social stress and interpersonal conflicts; understanding emotions of self and others promotes the development of supportive social network; expressing and communicating healthy emotions aids decreasing negative and increasing positive affects; which in turn leads greater satisfaction with life in general (Sánchez-Álvarez et al., 2015; Szczygieł & Mikolajczak, 2017; Zeidner et al., 2012).

However, research exploring the pathways from emotional competency to well-being and health has been principally conducted in adult population. There is a need to better understand 'resilience' processes in adolescents in the presence of chronic and

environmental stress protecting their well-being and mental health (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007) because current literature provides inconsistent evidence with regard to the role of gender (Froh, Yurkewicz, & Kashdan, 2009). Thus, some studies acknowledged that when adolescents are faced with stress due to negative life events, emotional competence promotes resistance by activating emotional and cognitive regulation processes (Laborde, Brüll, Weber, & Anders, 2011). Contrary to these findings, emotional ability does not protect from and in fact predicts increased negative emotionality in the presence of high levels of stress (Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012). Hence, when adolescents are exposed to daily hassles, high levels of emotional competence (perceiving emotions) increases risk for mental health problems and decreases subjective well-being (Zeidner et al., 2012). Consequently, coping with stress as a modifier of adolescents' well-being is important to take into consideration when designing interventions to foster emotional competencies in youth (Thomas, Cassady, & Heller, 2017; Zeidner, Matthews, & Shemesh, 2016).

2.2.3. Social-Emotional Learning programs (SEL)

Considering the implications of social and emotional development for students' academic, behavioral, social-emotional, and health outcomes, a variety of intervention programs have been designed and implemented in schools all over the world, including Spain. Probably the most recognized trademark for emotional education, is the social and emotional learning (SEL) approach, which has been implemented in hundreds of classrooms and school curricula and it is supported by empirical evidence based on a common conceptual framework (Collaborative for Social and Emotional Learning 'CASEL', 2015).

The term reflects the key role that both social and emotional skills play in the academic environment and their importance for students' positive development (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). Implementing SEL-programs is a high-impact, low-cost way to improve social and academic skills, life quality, mental health and well-being (Durlak & Weissberg, 2011), in addition to preventing school violence and bullying (Hong & Espelage, 2012), among other benefits. The fact that social-emotional competencies predict academic performance justifies its importance for school settings where the focus primarily lies on academic achievements (Petrides, Frederickson, & Furnham, 2014). As such a school-based approach, SEL-programs enhance the social and emotional knowledge and abilities of the whole school community, including students and teachers of all educational levels (Coelho et al., 2015). The approach involves the idea that incorporating these competencies into the academic curriculum and providing training and support for all school members would promote peaceful school and classroom coexistence (Taylor et al., 2017; Torrente et al., 2016).

Particularly, a number of school-based SEL-programs have address interpersonal conflict by teaching adaptive regulation skills and developing socio-emotional competence (Del Rey, Mora-Merchán, Casas, Ortega-Ruiz, & Elipe, 2018; Della Cioppa, O'Neil, & Craig, 2015; Extremera, Quintana-Orts, Mérida-López, & Rey, 2018). Many of these social-emotional intervention programs target common risk factors that have been associated with bullying and school violence in cross-sectional and longitudinal studies (Smith, Salmivalli, & Cowie, 2012), including emotional symptoms such as depression and anxiety (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), aggressive behavior (Stoltz et al., 2013), conflict in the classroom (Machado, Rinaldi, de Moraes, Levy, & Menezes, 2015) including bullying (Yeager,

Fong, Lee, & Espelage, 2015) and sexual harassment perpetration (Espelage, Rose, & Polanin, 2015). Additionally, well-implemented SEL programs produce a wide range of other desired outcomes (Brackett, Rivers, & Salovey, 2011), including improved psychological adjustment (Sklad, Dieskstra, de Ritter, Ben, & Gravesteijn, 2012), coexistence and a supportive environment in the classroom (Geng, 2016), self-esteem and self-control (Coelho, Sousa, & Figueira, 2016), and student well-being (Taylor et al., 2017).

Of course, not all SEL-programs are created equal, and the success highly depends on the quality of implementation (Humphrey, Curran, Morris, Farrell, & Woods, 2007). We will present a selection of school-based programs that have demonstrated efficacy in reducing peer violence and/or improved classroom climate and school coexistence by promoting social-emotional learning skills (Clarke, Morreale, Field, Hussein, & Barry, 2015).

The *Promoting Alternative Thinking Strategies (PATHS)* is a curriculum developed in the USA (Greenberg & Kusché, 1993) and later implemented in other cultural contexts, such as Switzerland (Malti, Ribeaud, & Eisner, 2011), the Netherlands (Goossens et al., 2012), UK (Berry et al., 2016) and Croatia (Mihic, Novak, Basic, & Nix, 2016). It consists of a series of age-specific classroom modules designed to teach children to manage their behavior, understand their emotions, and to collaborate with each other. The PATHS program is based on the developmental model ABCD (affective, behavioral, cognitive, dynamic), which integrates the development of emotion and cognitive understanding to flourishing social and emotional competence (Kelly, Longbottom, Potts, & Williamson, 2004). The PATHS curriculum has found to be effective in reducing aggressive solutions to problems and increasing prosocial behaviors (Greenberg et al., 2017).

The *Cross-Age Mentoring Program* (CAMP; Karcher, Davis, & Powell, 2002) is a school and community-based program that was designed for children with adolescent mentors. The purpose of CAMP is to promote social-emotional and cognitive development in students as a way to foster on connectedness and perspective taking – two cornerstones of a social-emotional intervention for bullying (Karcher, 2005, 2009). Although CAMP has not been empirically validated as a bullying prevention, this evidence-based program meets most of the standards matching with other SEL programs (Matthews, Zeidner, & Roberts, 2012).

The *Social and Emotional Aspects of Learning* (SEAL) program developed in England (Department for Children Schools and Families, 2007) was designed to be multicomponent, comprising four elements: 1) whole-school approach to create a positive school climate, 2) teaching of social and emotional skills in classroom contexts, 3) teaching approaches that support the learning of such skills, and 4) professional development for school staff. The impact of the intervention on both the academic success of students and their emotional adjustment in school, including aggressive behavior has been well documented (Wigelsworth et al., 2016).

Positive Action (PA; Flay & Allred, 2010) is a school-based program that focuses on character and social-emotional skill development among children and adolescents. The premise of the program is to promote positive actions, on an intellectual, physical and emotional level, and enhance academic performance. Results of the PA program showed significant reductions in aggressive behavior, substance use, and bullying (Li et al., 2011).

The RULER is an example of an evidence-based whole-school or district approach to SEL grounded in the ability-based model of EI (Mayer & Salovey, 1997). The objective is to integrate the learning and teaching of five key RULER skills –

Recognizing, Understanding, Labeling, Expressing, and Regulating emotions – from pre-school to high school. In order to achieve this, the program involves school leadership, teachers, all staff, and the students themselves. The program has shown to improved academic performance, increased positive social behavior, improved academic behaviors, and improved school climate (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013), as well as decreased aggressive behavior (Castillo-Gualda, Cabello, Herrero, Rodríguez-Carvajal, & Fernández-Berrocal, 2018).

In Spain, Garaigordobil and Peña-Sarrionandia (2015) designed a program of emotional intelligence for adolescents to prevent school violence. The program was distributed into five modules: 1) self-awareness, 2) emotion regulation, 3) mood, 4) communication, and 5) empathy. The activities of the program placed emphasis on the development of assertiveness, peaceful conflict-resolution strategies, and empathy. Therefore, the importance of avoiding violence was transmitted to adolescents, by teaching them how to channel their feelings of anger, improve their anger control, and express emotions appropriately (Garaigordobil, 2017).

More studies have been conducted in Spain with satisfactory results when implementing emotional intelligence programs (Giménez-Dasí & Quintanilla, 2009; Muñoz de Morales & Bisquerra, 2013; Ruiz-Aranda, Salguero, Cabello, Palomera, & Fernández-Berrocal, 2012). However, further investigations are needed to explore the elements that help improve both classroom coexistence and well-being.

In the present dissertation, we analyze the effectiveness of the PREDEMA program that shares with previous programs the main objective of improving adolescents' social-emotional development. The PREDEMA is a novel and original school-based intervention program designed by the research group EMINA (Emotional and Education in Children and Adolescence) for high-school students, taking a

developmental approach. In terms of complexity, PREDEMA provides a multi-component structure which is based on the dialogical paradigm oriented to meaningful learning (Plaza, 2010) and the emotional ability model of emotional intelligence (Mayer et al., 2016). The class teacher is the principal implementer and agent of change, who receives a specific training before implementing the curriculum in the classroom. Teachers are provided with a manual that contains lessons and send-home activities that cover topics such as identifying and labeling feelings, controlling impulses, reducing stress, and understanding other people's perspectives (for more details see Montoya-Castilla et al., 2016).

Given the novel character of PREDEMA, rigorous studies are necessary to evaluate the effectiveness of the intervention program in the Spanish context. For this reason, one of the objectives of this dissertation will be to determine long-term effects using path analysis, helping us to understand the process of change.

2.3. Research on emotional intelligence in schoolteachers

A growing number of research has recognized that emotional intelligence in schoolteachers is associated with aspects of mental health, such as work-related stress (burnout), symptoms of depression and anxiety (Fernández-Abascal & Martín-Díaz, 2015; Kotsou et al., 2018)

2.3.1. Association between emotional intelligence and burnout

Traditionally, school-based research has primarily focused on children and adolescents' outcomes (Greenberg et al., 2003; Wilson & Lipsey, 2007). However, it is well known and supported by the literature that the teacher plays a crucial role in students' academic achievement and psychological thriving (Stronge, Ward, Tucker, & Hindman, 2007). At the same time, teaching today is one of the most stressful and challenging professions, given the fact that up to 50% of teachers quitting their job within the first 5 years of service (Chang, 2009; Steinhardt et al., 2011). Teaching has changed from “giving lectures to passive learns” to “dynamic and interactive classrooms” that involves more that core academic contents (reading, writing, and arithmetic) and implies focusing also on teaching students personal, social and emotional skills, amongst others. Such professional demands and the resulting personal cost affect teacher's mental and physical health (Vesely, Saklofske, & Leschied, 2013).

The primary health concern among school teachers is work-related stress, also known as burnout syndrome (Friedman, 1996). The complexity of the construct has been studied over the last 30 years placing the individual stress experience within the school context of teachers' relation to their work (Friedman, 2002; Kyriacou, 2001; Maslach, Schaufeli, & Leiter, 2001), as it diminishes psychological and physical endurance, emotional stability and job satisfaction (Esteras, Chorot, & Sandín, 2014; Federici & Skaalvik, 2012; Papastylianou, Kaila, & Polychronopoulos, 2009). Most

authors agree that burnout refers to progressive emotional, physical and psychological exhaustion, which negatively impacts teachers' performance and efficiency (Mäkikangas & Kinnunen, 2016), and might lead to job insecurity (Glambek, Skogstad, & Einarsen, 2018).

This is the result of more than one cause or condition but the combination of multiple stressors, such as pedagogical requirements of the students-teacher relationships, effective classroom management, students' misbehavior or lack of motivation, the responsibility for children's learning, and external demands from parents (Greenberg, Brown, & Abenavoli, 2016; Katz, Harris, Abenavoli, Greenberg, & Jennings, 2018)

Occupational stressors, such as long hours, low salaries, lack of resources, pressures from the educational bureaucracy and the scarce professional recognition are also potential burnout sources, especially when combined (Mulholland, McKinlay, & Sproule, 2013). Hence, there are considerable demands, pressures, and strains that teachers struggle with every day, which cumulatively may have the potential to negatively influence teachers' capacity as effective educators and their mental health and well-being (Mäkikangas & Kinnunen, 2016; Skaalvik & Skaalvik, 2017).

To assess these work-related stress symptoms, the Spanish Burnout Inventory (SBI; Gil-Monte, 2011) was used. The self-report questionnaire is based on a theoretical model which is supported by psychometric guarantees of reliability and validity (Gil-Monte & Zuñiga Caballero, 2010). Although some of the dimensions are similar to those of the more classical Maslach Burnout Inventory (MBI; (Maslach & Jackson, 1981), the SBI incorporates the appraisal of guilt and physical aspects of exhaustion in addition to psychological complains (Gil-Monte & Zuñiga Caballero, 2010). The SBI has been used in a number of research on teacher burnout (e.g. Gómez, Guerrero, &

González-Rico, 2014; Unda, Sandoval, & Gil-Monte, 2008), indicating good psychometric properties also when applied in languages other than Spanish (Bosle & Gil-Monte, 2010; Figueiredo-Ferraz, Gil-Monte, & Grau-Alberola, 2013; Gil-Monte, Viotti, & Converso, 2017; Misiołek, Gil-Monte, & Misiołek, 2017).

Furthermore, teachers and educators deal with stress through coping strategies, but they might fail in the long-term, therefore their vulnerability to emotional problems increases, such as depression and anxiety (Bauer et al., 2006; Joseph, Jin, Newman, & O'Boyle, 2015). Moreover, exposure to a pile-up of work stressors have been associated with alcohol abuse, unexplained physical symptoms, chronic fatigue, and medical conditions, such as heart disease (Avanzi et al., 2018). Research shows that teachers who are less healthy and highly stressed, have a negatively impact on the classroom climate, students' well-being, and their own capacity to be effective in their teaching roles (Lavy & Eshet, 2018).

Drawing from these findings, there is an obvious need to provide further support for teachers on both professionally and also personally level. Given the importance of effective teachers in relation to desirable student outcomes, the psychological health and well-being of teachers is essential for their own and for the success of students, the schools and the whole education system (Greenberg et al., 2016; Nathanson et al., 2016). At this point we turn our attention to the development of emotional skills as a potential protective factor of the psychological health and professional demands of teachers.

An increasing number of studies of personal resources such as emotional intelligence have increased exponentially, evidencing the beneficial effects on emotional disorders such as depression and anxiety and overall physical and mental health, including burnout syndrome (Extremera, Fernández-Berrocal, & Durán, 2003;

Martins et al., 2010; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Moreover, studies reported that attention to feelings was the most highly predictive factor of emotional, physical and psychological exhaustion, whereas clarity and mood repair predicted psychological well-being (Augusto-Landa et al., 2012; Brackett et al., 2010; Rey, Extremera, & Pena, 2016). In addition, in a systematic review of literature on EI and teacher burnout revealed the importance of low levels of attention to feelings and high levels of mood clarity for preventing work-related stress (Mérida-López & Extremera, 2017). Therefore, it seems that teachers with high EI feel that they have more control over stressful tasks in the classroom, use more constructive thought patterns to cope with stress, and adapt more easily to work-related stressors. Furthermore, teachers with high EI are more likely to consider stressful situations as a challenge than a threat, which might explain why EI are associated with higher psychological adjustment and well-being (Szczygiel & Mikolajczak, 2017).

Based on the conceptualization of emotional intelligence provided earlier, emotional intelligent teachers should indeed be able to mobilize appropriate coping processes which, in turn, affects adaptive outcomes. Emotional competencies may be a part of one's affective repository to manage emotion-laden situations and interpersonal conflict, such as stressful experiences in the classroom (Mayer, et al. 2004). According to Zeidner, Matthews and Roberts (2008) there are different pathways through which emotional intelligence may help to cope with stress effectively: 1) by anticipating and avoiding stressful encounters; 2) by adopting more constructive perceptions and situational appraisals; 3) by managing and repairing of emotions effectively; 3) by providing richer coping resources; and 4) using effective and flexible coping strategies. All these explanations may help to understand the strong link between emotions and coping.

Research on the relations between emotional abilities, effective coping and adaptive outcomes has focused on two different but related issues (Zeidner et al., 2016). The first issue involves determining how emotional dimensions are associated with established coping strategies, including dispositional or situational strategies. A recent meta-analysis reports that emotional competence shows a significant positive relationship to problem-focused coping and a consistent negative association with emotion-focused coping (Peña-Sarrionandia et al., 2015). However, the strength and direction of the relationships vary depending on the ways in which emotional intelligence is operationalized (trait EI vs. ability EI), as well as the type of coping strategy measured (problem-focused, emotion-focused, or avoidant (O'Connor, Nguyen, & Anglim, 2017). The other issue involves ascertaining whether stress or coping mediates or moderates the association between emotional competence and adaptive outcomes (Zeidner & Matthews, 2018).

In addition, the growing literature points to the potential of teachers' EI in relation to promoting resiliency, satisfaction with life, and flourishing (Vergara et al., 2015; Vesely et al., 2013) while correlating negatively with a large number of risks including neuroticism, anxiety, depression, and stress (Petrides et al., 2016). The idea of emotional-skill training would thus appear to be a conceivable in view of reducing the impact of stressors and supporting teachers' psychological health and well-being (Vesely-Maillefer & Saklofske, 2018).

2.3.2. Effects of emotional-skill training in teachers

Teachers with high levels of work-related stress and an increasing numbers of burnout cases among teachers call for new and innovative programs to improve their stress management and mental health issues, which in turn plays a central role for effective teaching and student academic success (Stronge et al., 2007). A growing body

of research shows that developing teachers' emotional competence through specific skill training would positively impact a variety of psychological outcomes, leading directly to improved health and well-being (Ahola, Toppinen-Tanner, & Seppänen, 2017; Lavy & Eshet, 2018).

Socially and emotionally competent teachers have the capacity to develop healthy student-teacher relationship based on respect and support. Their lessons are designed to foster student's strengths and abilities rather than to punish them for their mistakes and difficulties that promote their intrinsic motivation. These teachers establish and implement behavioral guidelines in order to achieve peaceful coexistence in the classroom facilitating cooperation among students, coaching students through conflict situations and acting as an emotional role model for respectful and appropriate communication and exhibitions of prosocial behavior (Jennings & Greenberg, 2009). As teachers engage in social and emotional learning in their classrooms, students' level of conflict and disruptive behavior decreases (Brackett & Katulak, 2007; Sutton, Mudrey-Camino, & Knight, 2009). The classroom climate changes due to proper expressions of emotion, respectful communication and problem solving in combination with supportive and responsive attention to individual differences and students' needs (Korpershoek, Harms, & Boer, 2016).

On the contrary, when teachers fail to effectively manage the social and emotional challenges within classroom, students show lower levels of academic motivation and performance (Durlak & Weissberg, 2011). In addition, the deteriorated classroom climate, marked by increased students' disruptive behavior, may trigger emotional and physical exhaustion as teachers try to manage them (Mulholland et al., 2013). These conditions might contribute to a self-sustaining circle of classroom disruption where

teachers respond excessively punitive to students misbehavior rather than teaching them self-regulation strategies (Lavy & Eshet, 2018).

Burned-out teachers are at risk of developing a negative attitude towards their job and their students, as well as feelings of guilt and indifference, and so may drop out of the teaching job. Teachers who manage to stay usually cope with these stressors by maintaining a rigid classroom climate characterized by hostile and strict measures working bitterly at a suboptimal level of performance until retirement (Brackett et al., 2010). In either case, burnout is a serious concern that can have harmful effects on teachers, as well as on students, especially those who are at risk of mental health problems (Heinemann & Heinemann, 2017).

The primary goal of many professional development programs for teachers has been improving specific content knowledge or strengthening pedagogical and instructional skills (e.g. use of TICs in the classroom). Nevertheless, recent studies suggest the psychological health and of teachers is equally important, leading to the design and implementation of many intervention programs aimed at alleviating teacher burnout and enhancing emotional well-being (Castillo-Gualda, García, Pena, Galán, & Brackett, 2017; Vesely et al., 2014). Novel intervention components were integrated into professional teacher training targeting coping, classroom management, and/or stress management (Ahola et al., 2017), which overlap with components of emotion-based training programs that have been found to be effective (Dolev & Leshem, 2017; Kotsou et al., 2018).

During the last decade, a wide range of training programs aimed at develop emotional skills in adult population, including teachers, educators and school staff (Hallam, 2009; Hen & Sharabi-Nov, 2014; Pérez-Escoda, Filella, Alegre, & Bisquerra, 2012; Vesely et al., 2014). A recent systematic review of 46 published studies confirm

that emotional competencies that were assumed to be relatively stable in adulthood can be trained through a well-designed, and even relatively short, intervention. In addition, 90% of the training programs have been found to be effective to influencing essential spheres of people's lives: well-being, psychological and physical health, relationship quality, and work/academic success (Kotsou et al., 2018). However, these promising findings of the positive impact of emotional-skill training on variety of outcomes are not without limitations. For instance, it appears that many studies lack a clear theoretical or methodological research design due to the absence of control groups, a lack of follow-up to measure longer-term changes, the primary use of self-report measures to assess emotional competence, and missing theory and/or evidence-based training modules (Vesely-Maillefer & Saklofske, 2018).

Furthermore, the initial debate around plasticity of emotional intelligence has changed from the question about whether emotional skills can be taught to the more recent focus on how should these learned skills be measured in intervention and prevention programs. The disadvantages of self-report measures are social desirability, over/underestimation of one's emotional competency, emphasis on what the person thinks, feels, or says they do rather than what the person actually does (Zeidner et al., 2008). In contrast, performance-based measures of emotional competence do not necessarily indicate the actual performance in a naturalistic setting but merely represent knowledge about how to problem-solve in emotional contexts (Keefer, Holden, & Parker, 2013). Intervention researchers recommend to investigate the mechanisms through which emotional skills are learned and to ask what is necessary to include in training that will result in skill acquisition and application (Dolev & Leshem, 2017). Therefore, in addition to changes in emotional competence, program evaluation studies should also include measurements of the changes in the ultimate outcomes the EI

training was designed to address, such as burnout and well-being (Schoeps, Postigo, & Montoya-Castilla, 2018). Drawing from these recommendations, one of the objectives of this dissertation will be to adopt the PREDEMA intervention program for teacher populations and test the effectiveness in burnout and well-being outcomes.

Chapter III. Objectives and Hypotheses

3.1. General objective

Drawing from the reviewed literature, emotions are an essential element of school life and crucial for the psychological functioning and well-being of both students and teachers. This dissertation provides a broad spectrum of different approaches to the study of emotional competence throughout a) assessing perceived emotional competence; b) examining of the relationship between emotional competencies and self-report psychological outcomes; and c) evaluating the effectiveness of emotion-based intervention programs in order to promote positive psychological outcomes in adolescent student and teacher populations.

However previous studies have investigated the benefits of emotional competence for students and teachers separately, this dissertation will provide further evidence by combining both perspectives into an integrative model of emotional functioning in the school setting. Therefore, the **General Objective** of the present research will be to examine the impact of emotional competence on different aspects of psychological functioning, including socio-emotional adjustment, subjective well-being and mental health, in both student and teacher populations in a school context.

3.2. Specific objectives and hypotheses

The general objective is divided into two specific objectives, one for student and one for teacher populations. The **specific objective 1** will be to determine the development of emotional competence in relation to self-report measures of psychological adjustment and subjective well-being in adolescent students. The **specific objective 2** will be to study the perceived emotional intelligence in schoolteachers in relation to mental health issues, specifically burnout. The two specific objectives include a total of six **hypotheses** that will be addressed by the corresponding **studies**, which are presented below (for an outline see Figure 2).

SPECIFIC OBJECTIVE 1:

To determine the development of **emotional competence** in relation to self-report measures of **psychological adjustment** and **subjective well-being** in adolescent students.

Thus, before we could proceed with the study of emotional competence in students, it will be necessary to adapt and validate a reliable measurement of perceived emotional competence in Spanish adolescent population. Therefore, the first **hypothesis 1.1.** corresponds to **study 1** entitled ‘Factorial structure and validity of the Emotional Skills and Competences Questionnaire (ESCQ) in Spanish adolescents:

- **H1.1:** The Spanish version of the ESCQ-21 will replicate the original 3-factor structure and provide appropriate psychometric properties.

Next, we will examine the relationship between students’ emotional competence, self-esteem and socio-emotional adjustment in the second **hypothesis 1.2,** which will be addressed by **study 2** entitled ‘Emotional competence and self-esteem in adolescence: impact on psychological adjustment’:

- **H1.2:** High levels of perceived emotional competence and self-esteem will be associated with less self-report psychological maladjustment, specifically emotional and behavioral problems.

Furthermore, we will study the link between students’ emotional competence, perceived stress and life satisfaction, proposing a third **hypothesis 1.3** that will be carried out represented by **study 3** entitled ‘Does stress mediate the association between emotional intelligence and life satisfaction during adolescence?’:

- **H1.3:** Perceived stress would function as mediator in the associations between perceived emotional competence and life satisfaction, thereby potential sex and age-specific differences might be expected.

In view of the benefits of emotional competence on psychological functioning, we will test the school-based social and emotional learning (SEL) program PREDEMA in adolescent student. The corresponding **hypothesis 1.4** will be resolved in **study 4** entitled ‘Development of emotional skills in adolescents to prevent cyberbullying and improve subjective well-Being’:

- **H1.4:** Social-emotional intervention program PREDEMA would improve participants’ perception of emotional competence, decrease cyberbullying and enhance subjective well-being, specifically life satisfaction.

SPECIFIC OBJECTIVE 2:

To study the perception of **emotional intelligence** in schoolteachers in relation to **mental health** issues, specifically **burnout**.

Given the important role the class teacher plays in relation the students’ learning and psychological outcomes, psychological health and well-being of schoolteachers are essential for their own and for the success of students. Hence, we will analyze the link between teachers’ perception of emotional competences, positive and negative affect and burnout syndrome. The **hypothesis 2.1** will be addressed by **study 5** entitled ‘Impact of emotional intelligence on burnout among Spanish teachers: a mediation study’:

- **H2.1:** Social Affectivity would mediate the interplay between perceived emotional intelligence and teacher burnout.

In view of the promising findings from previous intervention studies targeting teachers' work-related stress, we will assess the efficacy of an emotional-skill training program to reduce burnout and improve psychological well-being in schoolteachers. Finally, the **hypothesis 2.2** will be determined in **study 6** entitled 'Effects of an emotional-skill training to prevent burnout syndrome in schoolteachers':

- **H2.2:** Emotional-skill training would alleviate teachers' mental health problems (e.g. burnout) and foster subjective well-being (e.g. life satisfaction).

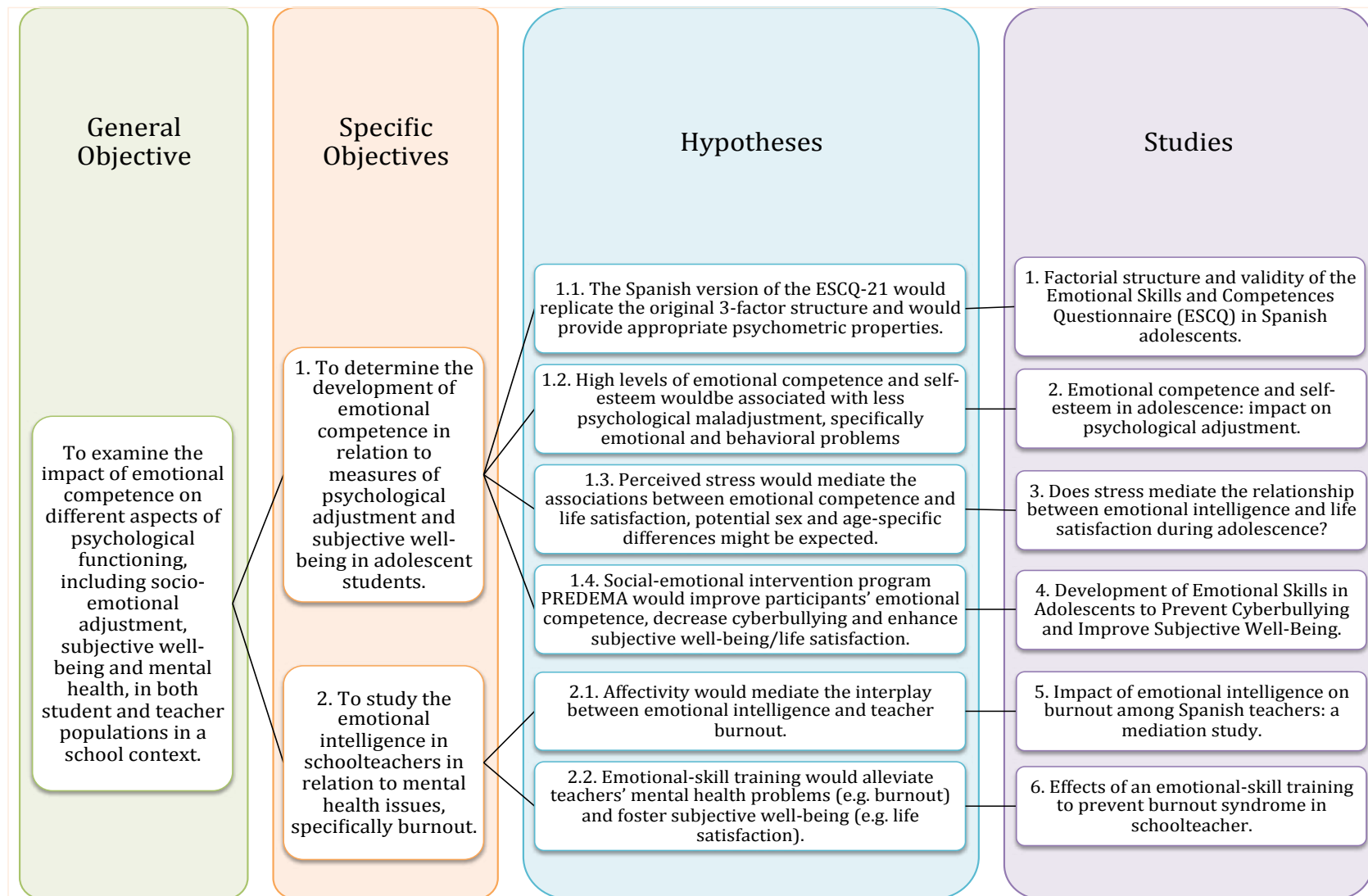


Figure 2. Outline of dissertation general and specific objectives with their corresponding hypotheses and studies

**Chapter IV: Studies on emotional
competencies in students and teachers**

Study 1. Factorial structure and validity of the Emotional Skills and Competences Questionnaire (ESCQ) in Spanish adolescents

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Abstract

A growing body of research focuses on the concept and assessment of emotional competence due to the positive impact on positive youth development such as well-being. The *Emotional Skills and Competencies Questionnaire* (ESCQ) has shown good psychometric properties in a cross-cultural setting. This study provides further evidence of the factorial structure of ESCQ using a new short version in a large sample of Spanish adolescents. The participants were 1300 students, 12 to 15 years of age ($M = 13.47$, $SD = 1.09$) who completed the adapted version of the ESCQ. Data on emotional intelligence (TMMS-24), satisfaction with life (SWLS), positive and negative affect (SPANE) were collected. Factor analysis confirmed the trifactorial structure of the reduced version (ESCQ-21), presenting adequate reliability indexes for each factor. Results provided evidence for construct validity and criterion validity. The ESCQ-21 factors were positively associated with the dimensions of TMMS-24, and predict subjective well-being (SWLS and SPANE). They further suggest that the new version of the ESCQ reduced to 21 items is an adequate evaluation tool, which allows researchers and educators to understand better how emotional skills may affect adolescent's subjective well-being.

Keywords: emotional competence, subjective well-being, self-report measure, Spanish version, adolescence.

Resumen

Un creciente cuerpo de investigación se centra en el concepto y la evaluación de las competencias emocionales debido al impacto positivo en el desarrollo de los jóvenes como el bienestar. El Cuestionario de Habilidades y Competencias Emocionales (ESCQ) ha mostrado buenas propiedades psicométricas en un entorno intercultural. En el presente estudio se demuestra la estructura factorial del ESCQ mediante una nueva versión reducida del ESCQ en una amplia muestra de adolescentes españoles. Participaron 1300 adolescentes entre 12-15 años ($M=13.47$, $DT=1.09$) que completaron la versión adaptada del ESCQ. Se recogieron datos sobre inteligencia emocional (TMMS-24), satisfacción con la vida (SWLS), efectos positivos y negativos (SPANE). Los análisis factoriales confirmaron la estructura trifactorial de la versión reducida (ESCQ-21), presentando coeficientes de fiabilidad adecuados para cada factor. Se obtuvieron evidencias de validez de constructo y referida al criterio. Los factores del ESCQ-21 se asocian positivamente con las dimensiones del TMMS y predicen el bienestar subjetivo (SPANE y SWLS). Además, sugieren que la nueva versión de la ESCQ reducida a 21 ítems es un instrumento de evaluación adecuado, que permite a los investigadores y educadores entender mejor cómo las habilidades emocionales pueden afectar el bienestar subjetivo de los adolescentes.

Palabras clave: competencia emocional, bienestar subjetivo, instrumento del auto-informe, versión española, adolescencia.

Research on emotional competence (EC) in adolescence is still relevant given the influence it has on positive youth development (Esnaola, Revuelta, Ros, & Sarasa, 2017). Meta-analysis studies indicate that the development of emotional skills may lead to subjective well-being and mental health, as well as good academic performance (Martins, Ramalho, & Morin, 2010; Perera & DiGiacomo, 2013; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). For this reason, the interest in conceptualizing and measuring EC has been growing in recent years. There is an on-going debate in literature about the distinction between EC and emotional intelligence (EI), as both are closely related but conceptually different. Furthermore, a considerable number of assessment tools have been developed for both constructs (Lau & Wu, 2012). Thus, in this study, we will define both concepts and briefly convey the conceptual differences between them. The main purpose of this research is to provide evidence of the factorial structure and validity of the Emotional Skills and Competencies Questionnaire (ESCQ), which has shown good psychometric properties to assess EC in a cross-cultural setting (Faria, et al., 2006).

Emotional competence an emotional intelligence

Between the two, emotional “intelligence” is the more popular term in psychological research and has been traditionally defined as the ability to perceive, express, understand and manage emotions accurately (Mayer & Salovey, 1997). Psychologists have studied the construct from different approaches, considering EI either as a trait or an ability (Qualter et al., 2012), or even using a mixed model (Bar-On, 2006). The ability model of emotional intelligence emphasizes the stable quality of emotional abilities in the individual (Mayer, Salovey, & Caruso, 2004).

However, the notion of emotional “competence” is gaining more attention, especially in Developmental and Educational Psychology, as it refers to a group of

generic emotion-related skills (Garner, 2010). Saarni's (2000) definition of EC focuses on the emotional skills that are developed in the immediate social context responding to personal needs and demands from their environment. The eight skills proposed by Saarni can be summarized in three major components of emotional competence to handle emotion-related situations: 1) identifying and understating personal feelings and those of others; 2) expressing and communicating emotions; and 3) coping adaptively with negative emotional responses (Buckley & Saarni, 2014b).

The main difference between EC and EI is the approach of learning emotions and how to handle them (Buckley et al., 2003). EC emphasizes the skills, which a child develops through cultural and contextual socialization or may be acquired through a learning process. In contrast, EI is considered an innate ability or personality trait, which a child is born with. In this study we are using Saarni's definition of EC as the concept applies better to the educational setting, where skills and abilities are developed, rather than underlying a general intelligence that is inherited or in-born. Thus, individuals that are emotionally competent are reacting to their emotional environment with skills, while emotionally intelligent individual are responding with traits residing within themselves (Lau & Wu, 2012).

Emotional competence and well-being

The developmental outcomes of EI among adolescents have been studied broadly in the national and international context, while the study of the impact of EC has been neglected. For instance, research has shown the direct impact of EI on bullying and victimization behaviours (Beltrán-Catalán et al., 2018; Peachey, Wenos, & Baller, 2017), self-esteem (Extremera et al., 2018), subjective well-being (Sánchez-Álvarez et al., 2016; Serrano & Andreu, 2016), satisfaction with life (Reina & Oliva, 2015; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015), positive and negative

affects (Di Fabio & Kenny, 2016; Megías, Gómez-Leal, Gutiérrez-Cobo, Cabello, & Fernández-Berrocal, 2018), as well as academic performance (Fernández-Berrocal, Ruiz-Aranda, Martín-Salguero, & Extremera, 2018), in both adolescent's (Fernández-Berrocal & Extremera, 2016) and adult's (Mérida-López, Extremera, & Rey, 2017; Petrides et al., 2016) populations.

Fewer studies have focused on the influence of EC on adolescents' developmental and well-being. There is some evidence that emotional competence enhances self-esteem (Reina & Oliva, 2015), social awareness (Coelho et al., 2015), well-being (Ciarrochi & Scott, 2006), mental health (Mathews et al., 2016) and life-satisfaction (López-Cassá, Pérez-Escoda, & Alegre, 2018). An intervention study showed that the development of emotional competence effectively accounted for better peer relationships in the classroom by reducing cyberbullying behaviour and improving the subjective well-being of adolescents in a Spanish school setting (Schoeps, Villanueva, & Prado-Gascó, 2018). In addition, further studies have shown age and gender-related differences in emotional competences. Females typically present a greater capacity to perceive and understand emotions (Schoeps, Tamarit, & Montoya-Castilla, 2017; Takšić, Mohorić, & Duran, 2009), whereas expression and emotional management do not vary among genders (Costa & Faria, 2016); in both genders, it increases with age (Esnaola et al., 2017).

Assessment of emotional competence

Regarding the assessment of EC, measurements originally developed for EI have been commonly used, assuming that these instruments are compatible for studying EC. For instance, the Trait-Meta-Mood-Scale (TMMS), developed by Salovey, Mayer, Goldman, Turvey and Palfai (1995) has been the measurement of choice for psychologists to study emotional abilities and skills in a variety of populations in

different cultural contexts (Martins et al., 2010; Sánchez-Álvarez et al., 2016; Vergara, Alonso-Alberca, San-Juan, Aldás, & Vozmediano, 2015). Few measures available to assess EC in adolescents and their psychometric properties is frequently criticized (Stewart-Brown & Edmunds, 2007). One of them is the Emotional Skills and Competence Questionnaire (ESCQ; Takšić et al., 2009), which was originally validated in a sample of students 14 to 19 years old in the Croatian context and was later validated in other cultural contexts mainly in adult populations (Faria et al., 2006; Faria & Lima-Santos, 2012). One study of the psychometric characteristics of adults was conducted using the Spanish version (Faria et al., 2006). However, the existence of an adaptation with rigorous validation in a young Spanish population is not known. Thus, adapting and validating a reliable measurement of EC, would make an important contribution to theory and developmental process, as well as a useful tool for educators and professionals assessing the impact of social emotional prevention and intervention in the classroom and in clinical settings (Mayer, Caruso, & Salovey, 2016).

The present study

This reviewed literature highlights the importance of EC for the development of adolescent's well-being and positive mental health (Esnaola et al., 2017). The ESCQ provides a reliable measure of emotional skills, unlike other assessment tools developed for EI, due to its specificity and the behavioural approach of the items. For this reason, the study of the validity of ESCQ – including construct and criterion validity – makes a meaningful contribution to this field of research. The aim of the present study was to analyse the factorial structure of the ESCQ and provide further evidence for validity in Spanish adolescents. Therefore, the internal consistency was examined and exploratory and confirmatory factor analyses were performed to provide evidence of criterion validity. Based on previous studies, EC is expected to correlate positively with EI

(convergent validity), and to explain part of the variance of life satisfaction and positive and negative affects of adolescents (incremental and predictive validity) (Di Fabio & Kenny, 2016; Gomez-Baya, Mendoza, Paino, & De Matos, 2017); gender differences are expected, with higher scores in females (Schoeps et al., 2017).

Method

Participants and data collection

For this study, a convenience sample of 1300 students was chosen. The participants were adolescents, 12 to 15 years of age ($M = 13.47$, $SD = 1.09$), equally distributed according to gender and age (53.50% girls, $n = 321$ for 12 year olds, $n = 341$ for 13 year olds, $n = 342$ for 14 year olds, $n = 296$ for 15 year olds). In addition, 46.39% of the participants were enrolled in public secondary schools and 53.61% in four private schools with catholic affiliation; all ten education centers were located in the Valencian Community, Spain.

Measures

Emotional Competence

The *Emotional Skills and Competencies Questionnaire* (ESCQ; Takšić et al., 2009), adapted to Spanish by Extremera and Fernández-Berrocal (Faria et al., 2006), is composed of 45 items, grouped into three subscales, with six alternative responses. The subscales are Perceive and Understand emotion (PU); Express and Label emotion (EL); Manage and Regulate emotion (MR). The reliability of the subscales has been adequate in previous studies ($\alpha = .74 - .86$) (Faria et al., 2006).

The *Trait Meta-Mood Scale* (TMMS; Salovey et al., 1995) was adapted to Spanish by Fernández-Berrocal and Extremera (2004). The scale evaluates people's meta-knowledge about their emotional abilities and is composed of 24 items, with five alternative responses. The three subscales are Emotional Attention, Emotional Clarity

and Emotional Repair. The internal consistency is good ($\alpha = .86-.90$) (Velasco, Fernández, Páez, & Campos, 2006).

Subjective well-being

The *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), as well as its Spanish version (Atienza et al., 2000), consists of five items, with seven response alternatives, which score vital circumstances. The internal consistency in the present study was excellent ($\alpha = .85$), as has been confirmed by previous studies (Pavot & Diener, 2008).

The *Scale of Positive and Negative Experience* (SPANE), created by Diener and colleagues (Diener et al., 2010) and adapted to Spanish by Silva and Caetano (2013), is a 12-item scale that assesses desirable (positive affects, six items) and undesirable (negative affects, six items) feelings on a Likert scale from 1 (never) to 5 (always). The balance score was computed by subtracting negative affects from positive affects. The scale has good psychometric properties, with Cronbach's α ranging from .81 to .89 (Diener, 2010).

Procedure

In this study, we used a cross-sectional design to adapt and validate the ESCQ scale. Before data collection, parents of participating students gave their written consent and were informed about the purpose of the investigation. Participation in the study was voluntary and anonymous. All students from 7th to 10th grade were invited to participate in the study, although those without signed parent consent didn't complete the assessment. The data were collected in groups during school hours in the classrooms and took approximately 50 minutes. The order of the questionnaires was randomly altered in two different versions of the survey. The researchers received permission

from the ethics committee of the University of Valencia as well as from the management teams of the educational centers.

The adapted version of the ESCQ hasn't been published neither did the authors of the study described the followed procedure. Therefore, we considered it necessary to carry out a rigorous adaptation of the ESCQ questionnaire, following the guidelines of the International Test Commission (ITC) (Muñiz, Suárez-Álvarez, Pedrosa, Fonseca-Pedrero, & García-Cueto, 2014). The first step was to carry out independent translations by Spanish and English speakers, which were then reviewed by an expert group composed of four qualified people with knowledge of languages and Spanish (1) and Anglo-Saxon (2) culture, of the evolutionary stage of adolescents (3) and of the evaluation processes themselves (4). The consensus version was completed by a pilot sample of 350 adolescents, with the purpose of detecting content or format problems, verifying that the students understood the language, recording the time it took to respond, and noting common uncertainties. Finally, the final version was administered to 1300 adolescents in the presence of the same two psychologists who had been previously trained in the test procedure.

Statistical analysis and sample size

The psychometric properties of the 45 items of the original scale were analyzed with the complete sample using SPSS V.22 (Allen, Bennett, & Heritage, 2014). For purposes of cross-validation, the sample was randomly divided into two subsamples. Sub-sample 1 ($n = 650$) and sub-sample 2 ($n = 650$) were statistically independent with composition equivalent by age (one-way ANOVA, $p = .22$) and gender (χ^2 sample independence test, $p = .12$). With the first subsample, exploratory factor analysis (EFA) was carried out with the FACTOR 9.2 program (Lloret-Segura, Ferreres-Traver, Hernández-Baeza, & Tomás-Marco, 2014), and with the second sample, confirmatory

factor analysis (CFA) was performed using MPlus 7.0 (Muthén & Muthén, 2017). Numbers of latent and observed variables were taken into consideration to estimate the necessary sample size to detect a large effect size ($d=0.50$) with a power of 0.80 and an alpha or probability level of 0.01. A-priori sample size calculator for structural equation models (Soper, 2018) indicates a minimum sample size of 116 participants given the structural complexity of the model; the sample size of the present study is much higher ($N = 1300$). The fit of the model was estimated using four indices recommended by Hu and Bentler (1999): *Chi-Square Test of Model Fit* (χ^2), *Comparative Fit Index* (CFI), *Tucker Lewis Index* (TLI), and *Root Mean Square Error of Approximation* (RMSEA), which is an operationalization of the estimated effect size dimension of model fit, specifically in the context of structural equation models (Kelley & Preacher, 2012). After obtaining the appropriate adjustments in the CFA, the reliability indexes of the new structure (FACTOR) were recalculated. The convergent validity was verified to provide empirical evidence on the validity of the construct, and the incremental validity was verified as a method of checking the validity in reference to the criterion. For this, the association with the TMMS-24 was analyzed through Pearson's correlation coefficients (SPSS), and a predictive model of SWLS and SPANE was constructed using hierarchical multiple regressions analysis (Álvarez-García, Núñez, Barreiro-Collazo, & García, 2017). Correlation and regression coefficients are used here as an indicator of the effect size to quantify the strength of the relation with the criterion variable (Kelley & Preacher, 2012). Finally, a multi-group analysis of structural equation models (multi-group SEM) was carried out in four steps to verify factorial invariance which allows for latent mean comparison (Brown, 2006). All results were reported following the recommendations of the APA Working Group on Quantitative Research Reporting Standards (Appelbaum et al., 2018).

RESULTS

Reliability analysis

The reliability of the questionnaire's original structure was calculated by the mean, standard deviation, item-total correlation and Cronbach's α of each item as well as the reliability coefficients of each scale. The total reliability of the scale is high (Cronbach's $\alpha = .94$), and the coefficients Average Variance Extracted (AVE) and Composite Reliability Coefficient (CRC) of the subscales present adequate values (Cronbach's $\alpha = .90$; AVE = .46; CRC = .93 for PU, Cronbach's $\alpha = .89$, AVC = .48, CRC = .93 for EL, and Cronbach's $\alpha = .83$, AVE = .34, CRC = .89 for MR). Cronbach's α greater than .70, AVE levels above .50 and CRC above .70 are considered adequate (Valentini & Damásio, 2016).

Table 1

Exploratory (EFA) and Confirmatory (CFA) Factor Analysis of the original scale ESCQ

	EFA			CFA
	F1	F2	F3	
<i>F1: Perceive and Understanding emotions (PU)</i>				
3.	.596	.016	.000	.579
6.	.577	.018	.084	.634
9.	.530	.137	.032	.623
12.	.582	-.022	.116	.638
15.	.288	.240	.016	.450
18.	.651	.051	.002	.664
21.	.805	.015	-.055	.694
24.	.622	-.049	.088	.621
27.	.458	.039	.041	.463
30.	.633	.064	-.024	.638
33.	.581	-.068	.075	.609
36.	.602	.005	.054	.618
39.	.665	-.002	-.000	.672
42.	.715	-.095	-.020	.631
44.	.324	.386	-.030	.548

Study 1

F2: Express and Label emotion (EL)

2.	-.041	.101	.649	.661
5.	.151	.012	.167	.273
8.	.249	.249	.132	.478
11.	.249	.249	.132	.771
14.	.043	.019	.729	.718
17.	-.111	.084	.735	.747
20.	.064	-.011	.725	.762
23.	.100	-.058	.745	.691
26.	-.019	.103	.649	.382
29.	.326	.148	.075	.475
32.	.316	.123	.209	.485
35.	.246	.150	.252	.342
38.	.281	.070	.117	.782
41.	-.027	-.084	.873	.734

F3: Manage and Regulate emotion (MR)

1.	-.109	.531	.084	.524
4.	-.036	.506	.015	.499
7.	.223	.302	.031	.507
10.	.196	.483	-.056	.535
13.	.170	-.065	.124	.222
16.	.191	.162	.005	.335
19.	.198	.411	.021	.599
22.	.238	.233	-.054	.377
25.	.123	.441	-.002	.492
28.	.263	.280	.114	.528
31.	.360	.227	.040	.516
34.	-.039	.690	.098	.639
37.	-.029	.360	.187	.513
40.	.013	.256	.220	.417
43.	.015	.665	-.001	.613
45.	.199	.151	.244	.485

Note: EFA = Exploratory Factor Analysis, CFA = Confirmatory Factor Analysis. Items and dimensions are displayed according to the Spanish version ESCQ-45 (Faria et al., 2006)

Factorial structure of ESCQ

The factorial validity was verified through the exploratory and confirmatory analyses of the original ESCQ scale (Table 1). The Kaiser-Meyer-Olkin index (KMO = .93) and Bartlett's sphericity test ($\chi^2 = 4765.70$; $df = 210$; $p < .001$) were adequate (Gómez-Ortiz, Romera, Ortega-Ruiz, Cabello, & Fernández-Berrocal, 2016). Exploratory factorial analysis (EFA) was performed with the FACTOR program using the Unweighted Least-Squares (ULS) method, parallel analysis and direct oblimin rotation (Lloret-Segura, 2014) in the first subsample. The EFA fixed to three factors showed adequate adjustment indexes (RMSEA = .03; GFI = .994) (MacCallum & Austin, 2000). Confirmatory factorial analysis (CFA) with the second subsample did not present a good fit ($\chi^2 (df) = 5164.742 (945)$; RMSEA (CI) = .083 (.081-.085); CFI = .47; TLI = .45). Smaller RMSEA values indicate a better estimated effect size dimension of the model fit, with values $\leq .08$ considered adequate, while higher IFC and TLI values indicate a better model fit, with values $\geq .09$ considered adequate (Hu & Bentler, 1999).

The items that had the worst item-total correlation and factorial saturations below .40 were eliminated; therefore, items 2, 5, 7, 8, 13, 15, 16, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 40, 42, 44 and 45 were eliminated. The final structure (Figure 1), composed of 21 items, had good model fit indices ($\chi^2 (df) = 552.165 (186)$; RMSEA (CI) = .055 (.05-.06); CFI = .93; TLI = .92) and good internal consistency, which is reflected in Cronbach's α coefficients ranging from .79 to .90., AVE levels between .40 and .58 and CRC levels between .82 and .90 (Table 2).

Table 2

Item and dimension reliability: mean (\bar{X}), standard deviation (SD), item-total correlation (r_{jx}), Cronbach's Alpha without the item ($\alpha-x$), Cronbach's Alpha of the dimensions (α), composite reliability coefficients (CRC) and average variance extracted (AVE).

		\bar{X}	SD	r_{jx}
<i>Perceive and Understanding emotions ($\alpha = .84$ AVE= .44 CRC=.85)</i>				
1. (3)	When I meet an acquaintance, I immediately notice his/her mood.	4.40	1.22	.47
4. (6)	When I see how someone feels, I usually know what has happened to him	4.20	1.16	.50
7. (9)	I am able to tell the difference if my friend is sad or disappointed.	4.81	1.13	.50
10. (12)	I am able to detect my friend's mood changes.	4.73	1.07	.50
13. (18)	If I observe a person in the presence of others, I can determine precisely her or his/her emotions.	4.19	1.14	.55
16. (21)	I do not have difficulty to notice when somebody feels helpless.	4.68	1.04	.53
19. (39)	I notice when somebody feels down.	4.51	1.11	.49
<i>Express and Label emotion ($\alpha = .90$ AVE= .58 CRC= .90)</i>				
2. (11)	I am capable to list the emotions that I am currently experiencing.	3.94	1.37	.64
5. (14)	I am able to express my emotions well	4.12	1.39	.59
8. (17)	I am able to express how I feel.	4.22	1.38	.64
11. (20)	I am capable to describe my present emotional state.	4.28	1.33	.65
14. (23)	I can say that I know a lot about my emotional state.	4.42	1.31	.61
17. (38)	I can easily name most of my feelings.	3.97	1.36	.65
20. (41)	I can recognize most of my feelings.	4.22	1.28	.63
<i>Manage and Regulate emotion ($\alpha = .79$ AVE=.40 CRC=.82)</i>				
3. (1)	I am able to maintain a good mood even if something bad happens.	4.33	1.25	.47
6. (4)	I can maintain a good mood, even when the people around me are in a bad mood.	4.43	1.24	.42
9. (10)	When somebody praises me, I work with more enthusiasm.	5.02	1.14	.45
12. (19)	When I am in a good mood, every problem seems soluble.	4.70	1.12	.51
15. (34)	I try to control unpleasant emotions, and strengthen positive ones.	4.41	1.28	.56
18. (37)	There is nothing wrong with how I usually feel.	4.21	1.32	.44
21. (43)	I try to keep up a good mood	4.96	1.13	.51

Note: CRC acceptable $\geq .70$; AVE acceptable $\geq .40$. Items and dimensions are displayed according to the Spanish version ESCQ-21 (Appendix). Item numbers of the Spanish version ESCQ-45 are shown in parentheses (Faria et al., 2016).

Validity analysis

With regard to convergent validity, the square root of the AVE was calculated, with values higher than the correlation between pairs of factors or dimensions (Table 3), indicating adequate indexes (Hussy, Schreier, & Echterhoff, 2013). The trifactorial structure of the ESCQ-21 shows that factor loads were high and significant (see Figure 1); that is, scale factors strongly correlate with the latent variable to be evaluated, emotional competence (Hair, Black, Babin, & Anderson, 2010).

Pearson’s correlations were conducted to compare the ESCQ-21 with another instrument (TMMS) measuring emotional intelligence. The correlation coefficients account for a medium-large effect size (r between .37 and .61), indicating that the dimensions of both instruments measure similar but different concepts (Table 3).

Table 3
Correlations among ESCQ-21 dimensions (intercorrelations), correlations with TMMS scales, and AVE values in the total sample

	1	2	3	4	5	6	7	8
1. PU	(.67)							
2. EL	.45**	(.76)						
3. RM	.50**	.54**	(.63)					
4. AT	.33**	.29**	.19**	-				
5. CL	.37**	.61**	.42**	.37**	-			
6. RE	.30**	.41**	.61**	.26**	.47**	-		
7. SWLS	.23**	.40**	.50**	.07*	.35**	.42**	-	
8. BA	.15**	.36**	.50**	-.02	.32**	.43**	.49**	-
7. Age	-.04	-.09**	-.13**	.07*	-.06*	-.13**	-.16**	-.17**

Nota: PU: Perceive and Understanding emotions; EL: Express and Label emotion; MR: Manage and Regulate emotion; AT: Attention; CL: Clarity; RE: Repair; SWLS: Satisfaction With Life Scale; BA: Balance. AVE square root on the diagonal.

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

A hierarchical multiple regression analysis was performed to study the association of ESCQ with subjective well-being. In the first step, demographic variables were entered in order to control the impact of gender and age. In the second step, the three subscale of TMMS-24 were entered, followed by a block of the three emotional competencies (ESCQ-21) in the last step. The results of the regression analysis were very similar for both of the measurements of subjective well-being (SWLS and SPANE). In the third step, emotional competence triggered a significant increase for both models controlled for the other variables, showing a significant and unique contribution of emotional competence in explaining the criteria. Regression coefficients (SWLS: $R^2 = .32$) and (SPANE: $R^2 = .33$) indicated a significant effect on the linear relation between EC and the criterion variable, while holding the demographic variables and EI constant (Table 4).

Table 4
Hierarchical multiple regression for variables predicting subjective well-being

Predictor	Subjective Wellbeing							
	Satisfaction with life				Balance			
	ΔR^2	ΔF	β	t	ΔR^2	ΔF	β	t
Step 1	.03	18.13***			.05	33.61***		
Sex			.05	1.57			.15***	5.39***
Age			-.17	-5.81***			-.17***	-6.16***
Step 2	.20	98.52***			.20	111.08***		
AT			-.09	-3.05**			-.17***	-6.21***
CL			.25	7.90***			.20***	7.02***
RE			.32	10.57***			.36***	12.78***
Step 3	.08	45.42***			.08	51.43***		
PU			-.06	-1.85			-.10***	-3.53***
EL			.13	3.59**			.11***	3.39**
MR			.34	9.31***			.35***	10.32***
Total	.32	64.79***			.33	77.80***		

Note. AT: Attention; CL: Clarity; RE: Repair; PU = PU: Perceive and Understanding emotions; EL: Express and Label emotion; MR: Manage and Regulate emotion.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Sex differences

The multi-group factorial invariance in the ESCQ-21 scales was calculated in four steps (Brown, 2006): 1) perform the CFA separately for females and for males, with the basic configuration of the model; 2) analyze the invariance in the groups separately (Model 0); 3) analyze the equivalence of factorial loadings (Model 1); and 4) check the equivalence of intercepts (Model 2). The results (Table 5) confirm the partial scalar invariance of the ESCQ-21, which allows for latent group mean comparisons (Brown, 2006). Comparisons between the latent means of both genders indicate that females score significantly higher in PU ($\beta = -0.43$, $p < .01$) and lower in MR ($\beta = .013$, $p = .04$) than males.

Table 5

Analysis of factorial multigroup invariance across sexes.

	χ^2 (df)	SB $\Delta\chi^2$ [CFI]	Δ df [RMSEA]	p ($>\chi^2$)
Configural (model 0)	712.01 (372)	[.96]	[.03]	
Loadings (model 1)	778.16 (393)	69.82	21	< .001
Loadings (model 1b)	739.15 (390)	25.98	20	.17
Intercepts (model 2)	772.08 (408)	32.54	18	< .01
Intercepts (model 2b)	759.85 (406)	17.41	16	.36

Note: SB $\Delta\chi^2$ = Satorra-Bentler scaled chi-square, df = degrees of freedom. CFI = Comparative fit index, configural invariance only. RMSEA = Root-mean-square error of approximation, configural invariance only.

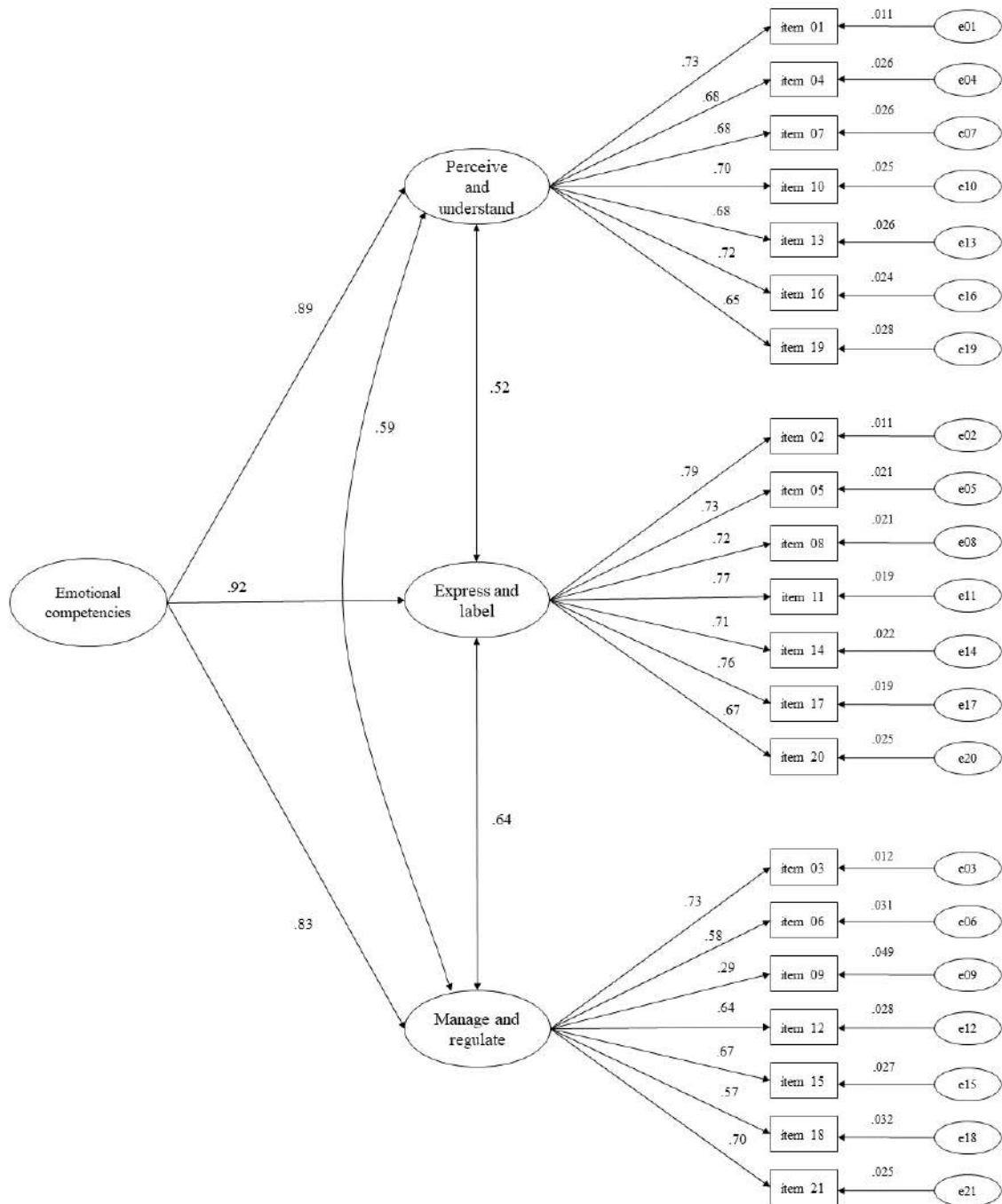


Figure 1: Factorial structure of the Spanish version of the ESCQ-21.

Factor loadings are standardized. PU: Perceive and Understanding emotions; EL: Express and Label emotion; MR: Manage and Regulate emotion. Items and dimensions are displayed according to the Spanish version ESCQ-21 (Appendix). Each subscale score is the sum of the corresponding item scores.

Discussion

Given the importance of emotional skills and competence for children and adolescent's personal development and their positive influence on subjective well-being and mental health (Esnaola et al., 2017; López-Cassá et al., 2018; Sánchez-Álvarez et al., 2016), the aim of this research was to provide further evidence about the reliability and validity of the *Emotional Skills and Competencies Questionnaire* (ESCQ, Takšić et al., 2009) in Spanish adolescents. The ESCQ-21 has good internal consistency, with reliability indexes similar to those of the original scale. The exploratory and confirmatory factorial analyses show that the three-factor model best fits the sample data: 1) Perceive and Understand emotion (PU) 2) Express and label emotion (EL), and 3) Manage and Regulate emotion (MR). These results correspond to previous studies that propose a trifactorial structure of the original scale (Faria, et al., 2006; Faria & Lima-Santos, 2012; Takšić et al., 2009). Therefore, the abbreviated 21-item questionnaire adapted for the Spanish population has successfully replicated the original structure. The ESCQ-21 model shows good model fit indices because the factorial loads were high and significant and similar to or even higher than those observed in previous validation studies in other cultural contexts (Faria et al., 2006; Faria & Lima-Santos, 2012).

The results indicate that the ESCQ-21 meets the criteria for convergent, predictive and incremental validity: 1) ESCQ-21 was positively related to EI; 2) predicted subjective well-being; 3) showed a significant and unique contribution for manage and regulate emotions. The convergent validity of the ESCQ-21 was analyzed to provide evidence of construct validity. First, the 21 items correlate significantly and highly with the latent variable they intend to evaluate. The intercorrelations between the three scales of the ESCQ-21 have adequate values (Hussy et al., 2013). Second, the results confirm

the relationship between the emotional competence constructs (ESCQ) and EI (TMMS-24), demonstrating that the dimensions of both scales measure similar concepts. These results provide evidence that the ESCQ-21 is a valid measure of emotional abilities.

The incremental validity of the instrument was determined by establishing causal relationships between emotional competences (ESCQ) and the affective and cognitive components of subjective well-being evaluated by SPANE and SWLS. Although all dimensions of the ESCQ-21 are significant predictors of subjective well-being, the competence to manage and regulate emotions is the dimension that best predicts affect and life satisfaction. The competence to perceive and understand emotions has an inverse relationship with subjective well-being (Di Fabio & Kenny, 2016; Gomez-Baya et al., 2017). These findings are consistent with a recent review that suggests a greater effect of emotional management on cognitive and affective well-being than the other emotional abilities (Fernández-Berrocal & Extremera, 2016).

Finally, factorial invariance analyses indicate that the structure of the ESCQ-21 shows scalar invariance across gender groups. That is, it is certain that the contents of the items represent the same concepts for both females and males, ruling out the possibility that differences obtained are instrument-related. The gender differences observed in the Spanish version are similar to those of the original scale (Takšić et al., 2009c). The results coincide with previous studies that have shown that females score better in perception and comprehension of emotions, while males score better in managing and regulating emotions (Schoeps et al., 2017).

Strengths and limitations

We highlight the original and novel character of this study by offering a psychometric investigation of a new version of the ESCQ reduced to 21 items that was adapted and validated for use in an adolescent Spanish population. The ESCQ-21

presents good reliability and validity indexes, using a large sample that guarantees a large effect size and power of the statistical results. Therefore, it can be considered an adequate evaluation tool for emotional competences. The brevity of the scale also facilitates its application and correction in both school and clinical context.

However, future research should continue the study of reliability by analysing the temporal stability of the data using a longitudinal design. In addition, it would be interesting to study into depth the relationship of ESCQ-21 with other constructs variables related to adolescent's subjective well-being and mental health such as depressive symptoms and perceived stress (Gomez-Baya et al., 2017; Serrano & Andreu, 2016). Thus, both clinical professionals as well as teaching staff would be able to identify students with difficulties to cope with day-to-day problems and teenage patients who are more vulnerable to develop emotional and relational problems (Extremera et al., 2018).

Conclusions

In summary, the ESCQ-21 is a valid and reliable self-report measurement of how Spanish adolescents perceive and identify, understand and label, manage and regulate emotional stimuli. Thus, this questionnaire can serve as a suitable tool for researchers and professionals from different disciplines to evaluate emotional abilities and compare their results with those of studies conducted in different cultures and countries, expanding scientific knowledge internationally. Furthermore, the ESCQ-21 could be useful to assess the effects of social and emotional learning programs, which aim to improve student's emotional and social abilities.

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*Annex***Cuestionario de Habilidades y Competencias Emocionales (ESCQ-21)**

Instrucciones:

Por favor, lea cada una de las afirmaciones que se presentan a continuación y responda de forma inmediata sin emplear mucho tiempo en cada respuesta. No hay respuestas correctas ni incorrectas, simplemente señala la respuesta que más se aproxime a tu preferencia, usando la siguiente escala.

1	2	3	4	5	6
Nunca	Raramente	Pocas veces	Algunas veces	Frecuentemente	Siempre

<i>ESCQ-21</i>							
1.	Cuando me encuentro alguien conocido, me doy cuenta inmediatamente de su estado de ánimo.	1	2	3	4	5	6
2.	Soy capaz de enumerar las emociones que estoy experimentando ahora mismo.	1	2	3	4	5	6
3.	Soy capaz de mantener el buen humor aunque pase algo malo.	1	2	3	4	5	6
4.	Cuando veo cómo se siente alguien, normalmente sé lo que le ha pasado.	1	2	3	4	5	6
5.	Soy capaz de expresar bien mis emociones.	1	2	3	4	5	6
6.	Puedo mantener el buen humor, aunque las personas de mi alrededor estén de mal humor.	1	2	3	4	5	6
7.	Soy capaz de diferenciar si mi amigo/a está triste o decepcionado/a.	1	2	3	4	5	6
8.	Soy capaz de expresar cómo me siento.	1	2	3	4	5	6
9.	Cuando alguien me alaba, puedo actuar con más entusiasmo.	1	2	3	4	5	6
10.	Soy capaz de detectar los cambios de humor en mis amigos/as.	1	2	3	4	5	6
11.	Soy capaz de describir mi estado emocional actual.	1	2	3	4	5	6
12.	Cuando estoy de buen humor, todos los problemas parecen tener solución.	1	2	3	4	5	6
13.	Al observar a una persona cuando está con otras, puedo determinar de forma precisa sus emociones.	1	2	3	4	5	6
14.	Puedo afirmar que conozco bien mi estado emocional actual.	1	2	3	4	5	6
15.	Intento controlar mis emociones desagradables, y potenciar las positivas.	1	2	3	4	5	6
16.	Tengo facilidad para darme cuenta si una persona se siente incapaz.	1	2	3	4	5	6
17.	Puedo nombrar fácilmente la mayoría de mis sentimientos.	1	2	3	4	5	6
18.	No hay nada malo en cómo me siento normalmente.	1	2	3	4	5	6
19.	Percibo cuando alguien se siente desanimado.	1	2	3	4	5	6
20.	Puedo reconocer la mayoría de mis sentimientos.	1	2	3	4	5	6
21.	Intento mantener el buen humor.	1	2	3	4	5	6

Study 2. Emotional competence and self-esteem in adolescence: Impact on psychological adjustment.

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Resumen

La habilidad de procesar y manejar los sentimientos propios y los de los demás para atender y resolver los conflictos emocionales forma parte de las competencias emocionales. El desarrollo de estas habilidades durante la adolescencia influye positivamente en su funcionamiento personal, social y escolar. El objetivo fue estudiar el impacto de las competencias emocionales y la autoestima en el ajuste psicológico de los adolescentes, teniendo en cuenta las diferencias de sexo y de edad. Participaron 855 adolescentes españoles entre 12 y 15 años ($M = 13.60$, $DT = 1.09$), procedentes de la Comunidad Valenciana. Se evaluaron mediante el Cuestionario de Competencias y Habilidades Emocionales (ESCQ), la Escala de Autoestima de Rosenberg (RSE) y el Cuestionario de Fortalezas y Dificultades (SDQ). Se realizaron análisis descriptivos, correlaciones y regresión múltiple jerárquica. Los resultados indicaron diferencias significativas de sexo, pero no con respecto a la edad. Se observó que las chicas percibían y comprendían mejor las emociones que los chicos, sin embargo, presentaron mayores problemas emocionales. Los chicos obtuvieron un nivel de autoestima más alto que las chicas, mostrando más problemas conductuales. El análisis de regresión señaló que las competencias emocionales y la autoestima se relacionan con menos problemas emocionales y conductuales. Nuestros resultados ponen de manifiesto el rol predominante de la autoestima para predecir el ajuste psicológico de los adolescentes, especialmente los síntomas emocionales.

Palabras clave: competencias emocionales; autoestima; síntomas emocionales; problemas de conducta; adolescencia.

Abstract

Emotional competence and self-esteem in adolescence: impact on psychological adjustment. The ability to process and manage one's own feelings and those of others in order to attend and solve emotional problems is part of the emotional competences. The development of these skills during adolescence influences positively their personal, social and school functioning. The aim was to study the impact of emotional competence and self-esteem on adolescents' psychological adjustment, focusing on potential sex and age differences. Participants were 855 Spanish adolescents aged between 12 and 15 years ($M = 13.60$; $DT = 1.09$), from de Valencian Community. The Emotional Skills and Competencies Questionnaire (ESCQ), the Rosenberg Self-esteem Scale (RSE) and the Strength and Difficulties Questionnaire (SDQ) were assessed. Descriptive statistics, correlation and hierarchical multiple regression were performed. The results indicated significant sex differences, but not regarding age. Girls were observed to be more competent in perceiving and understanding emotions than boys, however they reported more emotional symptoms. Boys obtained higher levels of self-esteem than girls, presenting more behavioural difficulties. Regression analysis showed that emotional competence and self-esteem are associated with less emotional symptoms and less conduct problems. Our findings reveal the predominant role of self-esteem in predicting adolescents' psychological adjustment, especially emotional symptoms.

Keywords: emotional competence; self-esteem; emotional symptoms; behavioural problems; adolescence.

La investigación sobre la adolescencia ha centrado su atención en los determinantes del ajuste psicológico a nivel emocional y conductual, por su importancia en el desarrollo personal (Dahlbeck & Lightsey, 2008; Meilstrup et al., 2015; Plenty, Östberg, Almquist, Augustine, & Modin, 2014). En esta etapa evolutiva se producen profundos cambios físicos, cognitivos y sociales que ponen a prueba sus recursos psicológicos (Fonseca-Pedrero, Paino, Lemos-Giráldez, & Muñiz, 2011; Goldbeck et al., 2007). Se considera que las habilidades emocionales ayudan a tener aptitudes relacionales que promueven un adecuado ajuste y desarrollo en los adolescentes (Cobos-Sánchez, Fluja-Contreras, & Gómez-Becerra, 2017; Resurrección, Salguero, & Ruiz-Aranda, 2014). Concretamente, proporcionan recursos que protegen al adolescente a través de identificar y tener conciencia de sus sentimientos, así como regular sus reacciones emocionales en sí mismo y en el otro (Buckley & Saarni, 2014; Mayer, Caruso, & Salovey, 2016). Asimismo, las habilidades emocionales aumentan la autoestima de los adolescentes al tener recursos para enfrentarse a las dificultades, y en consecuencia ayuda en su desarrollo psicológico (Anto & Jayan, 2016; Cheung, Cheung, & Hue, 2015).

En este sentido, las competencias emocionales que derivan del concepto de inteligencia emocional de Mayer y Salovey (1997), proporcionan el marco teórico jerarquizado en cuatro ramas: 1) la percepción y expresión de emociones, 2) la facilitación emocional del pensamiento, 3) la comprensión, y 4) la regulación de las emociones para resolver problemas y guiar la conducta (Mayer, Caruso, & Salovey, 2016). Estas habilidades emocionales pueden ser desarrolladas y entrenadas durante la infancia y la adolescencia, integrando experiencias previas que guiarán su comportamiento futuro (Saarni, 2010). Se han observado diferencias de sexo en relación a las competencias emocionales en niños y adolescentes (Keefer et al., 2013).

Concretamente, se ha señalado que las mujeres perciben y comprenden las emociones mejor que los varones, mientras que la expresión y manejo de emociones no varía en función del sexo (Esnaola, Revuelta, Ros, & Sarasa, 2017).

Otro de los recursos personales importantes en la adolescencia es la autoestima, entendida como el conjunto de pensamientos y sentimientos que un individuo tiene acerca de su propio valor (Rosenberg, 1965). La autoestima del adolescente refleja la confianza en sí mismo, siendo ésta muy propensa a los cambios internos y externos durante esta etapa evolutiva (Erol & Orth, 2011). Así, los jóvenes con alta autoestima muestran una mejor adaptación a eventos vitales estresantes (Kocayörük & Şimşek, 2016; Liu, Wang, Zhou, & Li 2014; Thompson, Wojciak, & Cooley, 2016). Por el contrario, una baja autoestima puede conllevar un riesgo para la salud mental y el bienestar emocional de los adolescentes (Keane & Loades, 2016; von Soest, Wichstrøm, & Kvaem, 2016). En referencia a las diferencias de sexo y edad, los varones tienden a presentar mayor autoestima que las mujeres y ésta aumenta, en ambos sexos, con la edad (Bleidorn et al., 2016; Peris, Maganto, & Garaigordobil, 2016).

Se ha puesto de manifiesto la importancia de la autoestima y su relación positiva con el ajuste psicológico y el bienestar durante la adolescencia (Dahlbeck & Lightsey, 2008; Moksnes & Espnes, 2013; Orgilés, Samper, Fernández-Martínez, & Espada, 2017). El ajuste psicológico en la adolescencia hace referencia a la capacidad del joven para adaptarse de forma adecuada a su entorno, considerando aspectos emocionales, cognitivos y sociales (Goodman, 2001b). Un ajuste inapropiado al contexto social aumenta la probabilidad de presentar problemas emocionales (por ejemplo miedos y preocupaciones) y quejas somáticas (por ejemplo dolor de cabeza y de estómago) (Ordóñez, Maganto, & González, 2015). Además, un desajuste psicológico incrementa el riesgo de problemas conductuales, como agresividad o delincuencia (Donahue,

Goranson, McClure, & Van Male, 2014). Se ha señalado que los varones presentan más problemas de conducta que las mujeres (Carlo et al., 2014), y ellas tienden a mostrar más síntomas emocionales (Kökönyei et al., 2015). Así, los jóvenes antes de entrar en la pubertad (preadolescentes) presentan mejor ajuste que los adolescentes (Ansary, McMahon, & Luthar, 2017; Ortuño-Sierra, Fonseca-Pedrero, Paíno, & Aritio-Solana, 2014).

Atendiendo a lo expuesto, las habilidades emocionales predicen la autoestima (Cheung et al., 2015; Reina & Oliva, 2015), y ambos constructos tienen un gran impacto sobre el ajuste psicológico (Barry, Loflin, & Doucette, 2015; Delhom, Gutierrez, Mayordomo, & Melendez, 2017; Keane & Loades, 2016; Ordóñez-López, González-Barrón, & Montoya-Castilla, 2016). Sin embargo, no parece haber acuerdo en cómo esta relación varía según el sexo y la edad, ni en cómo se relacionan estos constructos.

El objetivo del presente trabajo fue estudiar el impacto de las competencias emocionales y la autoestima sobre los problemas emocionales y conductuales de los adolescentes, teniendo en cuenta las diferencias de sexo y edad. La disminución de la autoestima desde la preadolescencia a la adolescencia presenta su punto más bajo a los 16 años, siendo menor en las chicas (Bleidorn et al., 2016). La baja autoestima, en esta etapa evolutiva, es un predictor del desajuste psicológico en los adolescentes (Keane & Loades, 2016). En base a la literatura científica, se formulan tres hipótesis: (1) las mujeres tendrán mayor capacidad de percepción y comprensión de las emociones y mayor frecuencia de síntomas emocionales que los varones; (2) los preadolescentes de 12-13 años, tendrán menos autoestima, pero estarán mejor adaptados a su entorno que los adolescentes de 14-15 años; y (3) las competencias emocionales y la autoestima se asociarán con menos problemas emocionales y conductuales.

Método

Participantes

Los participantes fueron 855 adolescentes (52.5 % mujeres) de seis colegios de enseñanza secundaria obligatoria (primero de E.S.O: 27.80 %; segundo: 27.80 %; tercero: 28.10 % y cuarto: 16.3 %) de la provincia de Valencia, España. Los estudiantes tenían entre 12 y 15 años ($M = 13.60$; $DT = 1.09$; preadolescentes de 12-13 años: 45.79 %; adolescentes de 14-15 años: 54.21 %). La distribución de las variables sociodemográficas fue estadísticamente independiente con una composición equivalente por sexo y curso ($\chi^2(gl) = 2.18(3)$, $p = .54$) y también por sexo y grupos de edad ($\chi^2(gl) = 3.29(1)$, $p = .07$). Con respecto al contexto familiar de los participantes, la mayoría de sus padres tienen un nivel educativo medio-alto (padre: 29.60% estudios primarios; 31.70% bachiller o equivalente; 21.50% universitarios; 5% sin estudios; madre: 27.20% estudios primarios; 27.90% bachiller o equivalente; 29% universitarios; 4% sin estudios). La estructura familiar de los adolescentes varía en función del número de hermanos (9% hijo/a único/a; 15% uno; 65% dos; 17.4% tres o más) y de la convivencia con ambos progenitores en casa (77.70%), cuando la ausencia de uno de los dos (22.30%) se debe a causas diversas (19.10% divorcio de los padres; 1,70% fallecimiento del padre o la madre; 19% otras causas).

Instrumentos

Los instrumentos utilizados en esta investigación cuentan con garantías psicométricas de fiabilidad y validez y están validados para muestra española. Los valores de fiabilidad reportados se basan en la muestra actual.

Variables demográficas. Se recogieron las siguientes variables sociodemográficas: sexo, edad, nivel educativo y colegio.

Competencias emocionales. El Emotional Skills and Competencies Questionnaire (ECSQ; Takšić et al., 2009c) se utilizó para evaluar las competencias emocionales de los adolescentes. La versión española del cuestionario (Faria et al., 2006) se compone de 45 ítems, puntuados en una escala Likert de 6 puntos, de 1 “Nunca” a 6 “Siempre”. La escala está formada por tres diferentes subescalas: Percepción y comprensión (15 ítems), Expresar y etiquetar (14 ítems) y Manejo y regulación (16 ítems). La fiabilidad de las tres escalas es adecuada (Percepción y comprensión $\alpha = .89$; Expresar y etiquetar $\alpha = .88$; Manejo y regulación $\alpha = .82$).

Autoestima. La autoestima fue evaluada mediante el Rosenberg Self-esteem Scale (RSE; Rosenberg, 1965), en su versión española (Morejón, García-Bóveda, & Jiménez, 2004), que consta de 10 ítems puntuados de 0 a 4 puntos. El índice de fiabilidad de la escala fue adecuado ($\alpha = .83$).

Ajuste psicológico. El Strength and Difficulties Questionnaire (SDQ; Goodman, 2001) evalúa constructos emocionales y conductuales. La versión española del SDQ (Fonseca-Pedrero et al., 2011) fue utilizada para evaluar los problemas emocionales y conductuales de los adolescentes. Se trata de una escala de 5 factores, puntuados de 0 “No es verdad” a 2 “Verdaderamente sí”. En este estudio se utiliza la escala global de Dificultades ($\alpha = .67$), así como las subescalas de Síntomas emocionales ($\alpha = .67$) y Problemas de conducta ($\alpha = .54$). El valor crítico del alfa de Cronbach es $\alpha > .50$ (León & Montero, 2015) por lo que la fiabilidad de la escala se considera aceptable. En la versión de autoinforme del SDQ, una puntuación superior a 20 en la escala global de Dificultades indica la presencia de malestar y/o presencia de síntomas patológicas, una puntuación entre 16-19 se considera en el límite, y una puntuación por debajo de 15 un estado normal con ausencia de dificultades (<http://www.sdqinfo.com>).

Procedimiento

Los datos fueron recogidos según los estándares de la Declaración de Helsinki (World Medical Association, 2013), con permiso del Departamento de Educación, Cultura y Deporte de la Comunidad Valenciana y de la Comisión Ética de la Universitat de València, en España. Además, puesto que los participantes eran menores, se requirió el consentimiento de los padres para participar en el estudio. Los directores y profesores de los colegios fueron previamente informados sobre el objetivo de la investigación, el procedimiento de recogida de datos y su confidencialidad. Los instrumentos fueron administrados en grupos durante el horario lectivo en invierno de 2016. En cada sesión, dos miembros del equipo de investigación estaban presentes para aclarar todas las dudas. Los estudiantes completaron los cuestionarios con papel y bolígrafo, y fueron informados de que su participación era anónima y voluntaria.

Análisis estadísticos

Todos los análisis estadísticos se realizaron con el programa SPSS (versión 24.0). Se realizaron estadísticos descriptivos (frecuencias, medias y desviaciones típicas), así como análisis multivariado de la varianza (MANOVA) para estudiar las diferencias de sexo y edad. En el MANOVA se utilizó el *lambda* de Wilkins (λ) para la estimación de las posibles diferencias significativas y el *eta* cuadrado parcial (η^2) para el cálculo del tamaño del efecto. Por otro lado, se realizaron correlaciones de Pearson (r) para evaluar las asociaciones bivariadas entre las competencias emocionales, la autoestima, el ajuste psicológico (problemas emocionales y conductuales), el sexo y la edad. También se llevó a cabo un análisis de regresión múltiple jerárquica para examinar la relación entre las competencias emocionales y los problemas emocionales y conductuales, controlando el efecto de las variables demográficas y la autoestima. Para ello se calcularon los coeficientes de determinación (R^2) y los coeficientes

estandarizados (β), así como el coeficiente de correlación semiparcial (sr^2) que informa sobre el porcentaje de varianza explicada de cada variable predictora una vez controlado el efecto del resto de variables (Harrell, 2015).

Resultados

Estadísticos descriptivos

La puntuación media de la escala global de dificultades para toda la muestra fue de 11.16 ($DT = 5.18$). Entre los chicos, la media de la escala global del SDQ fue de 10.97 ($DT = 4.77$), mientras que la media de las chicas fue más alta, 11.32 ($DT = 5.48$). Atendiendo a la edad, el grupo de 12-13 años obtuvo una media del total de dificultades de 10.85 ($DT = 5.57$), mientras que la media del grupo de 14-15 años fue más alta, 11.43 ($DT = 4.83$). Los puntos de corte estimados en adolescentes españoles mostraron que un 80.05 % de los adolescentes obtuvo una puntuación normal ≤ 16 , un 13.12 % se situó en la banda límite entre las puntuaciones entre 16 y 19, mientras que el 6.82 % de los adolescentes se ubicaron por encima de la puntuación anormal ≥ 20 , siendo la puntuación máxima 29.

Diferencias de sexo y edad

Los resultados del MANOVA indicaron diferencias significativas en función del sexo ($\lambda = .91$, $F_{(6, 840)} = 12.31$, $p \leq .001$; $\eta^2 = .09$) pero no en función de los grupos de edad ($\lambda = .98$, $F_{(12, 1700)} = 1.09$, $p = .37$; $\eta^2 = .01$). Sin embargo, el análisis multivariado señaló una interacción estadísticamente significativa del sexo con la edad en las variables estudiadas ($\lambda = .97$, $F_{(12, 1700)} = 2.07$, $p = .02$; $\eta^2 = .02$). Además, el análisis univariado (Tabla 1) indicó que las mujeres presentan mayor percepción y comprensión de emociones ($F_{(1, 850)} = 27.69$; $p \leq .01$; $\eta^2 = .01$) y más síntomas emocionales ($F_{(1, 850)} = 48.61$; $p \leq .01$; $\eta^2 = .04$), mientras que los varones presentan mayor autoestima ($F_{(1, 850)} = 15.73$; $p \leq .01$; $\eta^2 = .02$) y problemas de conducta ($F_{(1, 850)} = 20.21$; $p \leq .01$; $\eta^2 = .02$).

Tabla 1. Estadísticos descriptivos y diferencias de sexo para la edad y las variables estudiadas

	Mujeres	Varones	$F (gl)$	p	η^2 parcial
	$M (DT)$	$M (DT)$			
Edad	13.61 (1.08)	13.59 (1.12)	.05 (1)	.82	.02
PC	4.62 (.62)	4.35 (.80)	27.69 (1)	.00	.01
EE	4.20 (.83)	4.24 (.80)	.41 (1)	.53	.00
MR	4.63 (.62)	4.57 (.68)	1.4 (1)	.24	.00
A	3.92 (5.59)	3.23 (4.67)	15.73 (1)	.00	.02
SE	3.70 (2.40)	2.64 (1.98)	48.61(1)	.00	.04
PCon	1.78 (1.51)	2.30 (1.81)	20.21 (1)	.00	.02

M = Media; DT = Desviación típica; F = índice F ; gl = grados de libertad; p = valor de significación; η^2 parcial = tamaño de efecto; PC = Percepción y comprensión; EE = Expresar y etiquetar; MR = Manejo y regulación; A = Autoestima; SE = Síntomas emocionales; PCon = Problemas de conducta; $N_{Mujeres} = 449$; $N_{Varones} = 406$.

Relación entre variables

Las correlaciones y el análisis de fiabilidad (Tabla 2) indicaron que las competencias emocionales tienen una relación positiva con la autoestima ($r_{Percepción} = .23$; $p < .01$; $r_{Expresión} = .41$; $p < .01$; $r_{Manejo} = .42$; $p < .01$) y negativa con los síntomas emocionales ($r_{Percepción} = -.01$; $p < .01$; $r_{Expresión} = -.23$; $p < .01$; $r_{Manejo} = -.24$; $p < .01$) y problemas de conducta ($r_{Percepción} = -.18$; $p < .01$; $r_{Expresión} = -.15$; $p < .01$; $r_{Manejo} = -.26$; $p < .01$).

Tabla 2. Estadísticos descriptivos, coeficientes de fiabilidad y correlaciones entre género, edad y las variables estudiadas

	1	2	3	4	5	6	7
1. PC	-						
2. EE	.59**	-					
3. MR	.65**	.68**	-				
4. A	.23**	.41**	.42**	-			
5. SE	-.01	-.23**	-.24**	-.48**	-		
6. PCon	-.18**	-.15**	-.26**	-.27**	.19**	-	
7. Edad	-.05	-.03	-.07	-.02	.07	.06	-
<i>M</i>	4.49	4.22	4.60	3.15	3.20	2.02	.50
<i>DT</i>	0.72	0.82	0.65	5.22	2.27	1.68	1.09
α	.89	.88	.82	.83	.67	.54	-

* $p < .05$, ** $p < .01$; *M* = Media; *DT* = Desviación típica; α = alpha de Cronbach; PC = Percepción y comprensión; EE = Expresar y etiquetar; MR = Manejo y regulación; A = Autoestima; SE = Síntomas emocionales; PCon = Problemas de conducta.

Predicción del ajuste psicológico

En cuanto a los análisis de predicción se realizaron regresiones múltiples jerárquicas en tres bloques para cada dimensión del ajuste psicológico. En el primer bloque, se incluyeron las variables demográficas para identificar el impacto del sexo y la edad. En el segundo bloque, se introdujo la autoestima, seguida de las tres competencias emocionales, introducidas en el tercer bloque. Los resultados del análisis de regresión fueron muy similares para las dos medidas del ajuste psicológico (Tabla 3).

Tabla 3. Regresión múltiple jerárquica para las variables predictoras del ajuste psicológico

	R^2	F	β	p	ΔR^2	sr^2
Síntomas emocionales						
Paso 1	.07	22.33**			.07	
Sexo			-.16	< .001		.06
Edad			.06	.08		<.001
Paso 2	.28	83.90**			.21	
Autoestima			-.44	< .001		.19
Paso 3	.30	46.09**			.02	
MR			-.15	.003		.08
PC			.19	< .001		.02
EE			-.03	.48		< .001
Problemas de conducta						
Paso 1	.02	7.05*			.02	
Sexo			.17	< .001		.03
Edad			.04	.25		< .001
Paso 2	.12	29.21**			.10	
Autoestima			-.27	< .001		.08
Paso 3	.14	16.52**			.02	
MR			-.17	.003		.02
PC			.003	.95		.01
EE			.08	.15		< .001

* $p < .05$, ** $p < .01$; R^2 = coeficiente de determinación; F = índice F correspondiente a R^2 ; β = beta estandarizada; p = valor de significación correspondiente a β ; ΔR^2 = cambio en R^2 ; sr^2 = coeficiente de correlación semiparcial; MR = Manejo y regulación; PC = Percepción y comprensión; EE = Expresar y etiquetar.

El sexo se asocia de forma significativa con el ajuste psicológico; las mujeres puntúan más alto en síntomas emocionales ($R^2 = .07$; $F = 22.33$; $\beta = -.16$; $p < .001$; $sr^2 = .06$) y los varones en problemas de conducta ($R^2 = .02$; $F = 7.05$; $\beta = .17$; $p < .001$; $sr^2 = .03$). En el segundo bloque, la autoestima mostró una asociación significativa y negativa con síntomas emocionales ($\Delta R^2 = .21$; $F = 83.09$; $\beta = -.44$; $p < .001$; $sr^2 = .19$) y problemas de conducta ($\Delta R^2 = .10$; $F = 29.21$; $\beta = -.27$; $p < .001$; $sr^2 = .08$). En otras palabras, los adolescentes con alta autoestima experimentarían menos dificultades emocionales y conductuales. En el tercer bloque, las competencias emocionales mejoraron de forma escasa los modelos de predicción (controlando las demás variables), mostrando una relación significativa con el ajuste psicológico (SE: $\Delta R^2 = .02$; $F = 46.01$; $p < .01$; PCon: $\Delta R^2 = .02$; $F = 16.52$; $p < .01$). En concreto, los síntomas emocionales se relacionan significativamente de forma positiva con percepción y comprensión ($\beta = .19$; $p < .001$; $sr^2 = .02$), y de forma negativa con el manejo y regulación ($\beta = -.15$; $p = .003$; $sr^2 = .08$). En este sentido parece observarse que los adolescentes con una capacidad para percibir y gestionar las emociones presentarían menos síntomas emocionales. En cuanto a los problemas de conducta, la competencia emocional de manejo y regulación ($\beta = -.17$; $p < .01$; $sr^2 = .02$) se asocia negativamente con los problemas conductuales. Los adolescentes que presentan mejor gestión de las emociones, y mayor autoestima, presentan menos problemas de comportamiento. El primer modelo de predicción explicó un 30% de la varianza de los síntomas emocionales, mientras que el segundo predijo un 14% de la varianza de los problemas de conducta.

Discusión

El presente estudio tuvo como objetivo estudiar la relación entre las competencias emocionales, la autoestima y el ajuste psicológico de los adolescentes. Los resultados señalan que la valoración de uno mismo junto con la habilidad de percibir, comprender los estímulos emocionales y con manejar los impulsos para regular los estados emocionales, ayudan a reducir los síntomas emocionales y las conductas disfuncionales, controlando el efecto de las variables demográficas.

En relación con la primera hipótesis, no se han observado diferencias entre varones y mujeres en las competencias emocionales, excepto en percepción y comprensión de emociones, donde destacan las mujeres. Las mujeres presentan más síntomas emocionales, tales como preocupación, miedo y/o un estado de ánimo decaído, mientras que los varones tienen más problemas de conducta, como por ejemplo comportamiento agresivo y/o antisocial. Estos resultados están en la línea con las investigaciones que indican que las mujeres suelen presentar un mejor desarrollo emocional que los varones (Keefer et al., 2013), mientras que ellos muestran una mayor autoestima (Bleidorn et al., 2016), dando lugar a diferentes formas de adaptarse a los cambios físicos y psicológicos de la pubertad (Carlo et al., 2014; Kökönyei et al., 2015).

Respecto a la edad, no se observaron diferencias entre los preadolescentes de 12-13 años y los adolescentes de 14-15 años, por lo que no se confirma la segunda hipótesis. Esta discrepancia con estudios previos (Ansary et al., 2017; Bleidorn et al., 2016; Esnaola et al., 2017; Ortuño-Sierra et al., 2014) podría deberse al pequeño rango de edad, por lo que se aconseja incluir en futuras investigaciones adolescentes de más edad, por ejemplo, de 16 y 17 años (von Soest et al., 2016).

La tercera hipótesis planteaba que las competencias emocionales se relacionan positivamente con la autoestima (Cheung et al., 2015; Reina & Oliva, 2015) y

negativamente con los problemas emocionales y conductuales (Ordóñez et al., 2015; Resurrección et al., 2014). Los resultados indicaron que los adolescentes con buenas competencias emocionales también presentaron una mayor autoestima y un ajuste psicológico adecuado en cuanto a sus emociones y comportamiento. Por último, la asociación entre las competencias emocionales y la autoestima es moderada, asumiendo que dichos constructos podrían describir procesos emocionales y cognitivos distintos (Cheung et al., 2015). Precisamente, las competencias emocionales incluyen los procesos a través de los cuáles se perciben, codifican y regulan las respuestas emocionales, mientras que la autoestima está asociada a los procesos de valoración y estimación propia.

Los resultados del análisis de predicción ponen de manifiesto que la autoestima es un buen predictor de los problemas emocionales y conductuales en la adolescencia, mostrando valores predictivos por encima de las competencias emocionales. Estos resultados relativizan la importancia de las competencias emocionales para predecir las dificultades emocionales y conductuales. No obstante, se observó como la habilidad para manejar y regular emociones explicó una pequeña parte de la varianza de ambas dimensiones del ajuste psicológico, controlando el efecto de las variables demográficas y de la autoestima. Por lo que, desarrollar estrategias de regulación de las emociones puede mejorar el ajuste psicológico, como se señala en la literatura (Donahue et al., 2014). En este sentido, los adolescentes que gestionen adecuadamente sus propios impulsos emocionales también experimentarán un mayor control de las fuentes de estrés de su entorno, reduciendo el efecto de sus emociones negativas de manera adaptativa y potenciando las positivas (Mayer et al., 2016). Así, los adolescentes con mayor percepción emocional expresarían sus miedos y preocupaciones con mayor frecuencia,

lo que explicaría la presencia de más síntomas emocionales (Cobos-Sánchez et al., 2017).

Sin embargo, la autoestima parece tener un papel predominante en la predicción del ajuste psicológico, especialmente en los síntomas emocionales. En este sentido, la autoestima parece ser la variable que mejor explica la variabilidad en los problemas emocionales y conductuales de los adolescentes, dejando las competencias emocionales en segundo plano. Esto podría indicar que los jóvenes con una elevada valoración de sí mismos se consideran capaces de desarrollar recursos ante eventos estresantes, que permiten adaptarse a los cambios y las adversidades, teniendo un impacto positivo en la salud mental (Anto & Jayan, 2016). Estos resultados están en la línea con estudios recientes que han identificado la autoestima como variable mediadora que explica el impacto que tienen otras variables socio-emocionales relevantes en el desarrollo adolescente (resiliencia, apego y relaciones con pares) sobre su ajuste psicológico (Kocayörük & Şimşek, 2016; Liu et al., 2014; Thompson et al., 2016). En futuras investigaciones, se debería realizar análisis para estudiar el posible efecto mediador de la autoestima en la relación entre las competencias emocionales y el ajuste psicológico en la adolescencia.

Entre las limitaciones cabe señalar el rango de edad (de 12 a 15 años) y el uso de autoinformes. Sin embargo, creemos que este tipo de medida fue apropiada para este estudio, pues las variables son evaluadas mediante estados internos. Además, se destacan la problemática de los índices de fiabilidades del Cuestionario de Fortalezas y Dificultades (SDQ), aun así, sigue siendo uno de los instrumentos más utilizados para los problemas de salud mental en población adolescente (Ortuño-Sierra et al., 2014). Por último, futuros estudios deberían incluir la participación de los padres y profesores para enriquecer las medidas y proporcionar una visión amplia y holística del ajuste

psicológico y emocional de los adolescentes. También se recomienda ampliar el rango de edad y realizar estudios longitudinales para comprender cómo estas variables se desarrollan con la edad.

A pesar de estas limitaciones, el estudio evidencia los beneficios del desarrollo de las habilidades emocionales y de la autoestima para prevenir un desajuste psicológico del adolescente. Cabe destacar dos aportaciones importantes: por un lado, se pone de manifiesto la relación de las competencias emocionales, la autoestima y el ajuste psicológico; y por otro, se observa que dicha asociación es más fuerte con los síntomas emocionales que los problemas conductuales.

Se considera que las aportaciones de la presente investigación son de carácter teórico y práctico. Con respecto a la aportación teórica, se profundiza el estudio de las competencias emocionales en la adolescencia y su impacto sobre la autoestima y el ajuste psicológico, con incidencia principalmente en los síntomas emocionales, y en menor medida en la conducta agresiva. Y en relación a la contribución práctica, alentamos el diseño y la aplicación de programas de intervención para mejorar el ajuste psicológico, centrandó la atención en las competencias emocionales y, sobre todo, en la autoestima.

Conflicto de intereses

Los autores de este estudio declaran que no hay ningún conflicto de intereses.

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Study 3: Does stress mediate the association between emotional intelligence and life satisfaction during adolescence?

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ABSTRACT

BACKGROUND: Based on Mayer and Salovey's (1997) model of emotional intelligence, this study examined whether perceived stress mediate the interplay of emotional intelligence and life satisfaction for girls and boys during early and middle adolescence.

METHODS: Using multigroup structural equation modeling with questionnaire data from a sample of Spanish adolescent students ($N = 800$; $M_{AgeT1} = 14.02$, $M_{AgeT2} = 15.00$, $SD = 1.21$) in two waves ($T1 = \text{March } 2015$; $T2 = \text{December } 2015$).

RESULTS: Results of multigroup structural equation modeling indicated no group differences between boys and girls in early adolescence (7th and 8th grade) and middle adolescence (9th and 10th grade), as stress function as mediator between emotional intelligence and life satisfaction for all groups. However, latent mean comparison indicated that girls not only perceive and understand emotions better than boys, but they also perceive higher amounts of stress at an older age.

CONCLUSIONES: Results indicate the potential risk of perceived stress that might drop the protective effect of emotional intelligence on life satisfaction. These findings have implications for future research and educational practice considering combined prevention programs for adolescent's health and well-being.

Keywords: adolescence, emotional intelligence, perceived stress, life satisfaction,
health and well-being

Children and adolescents' well-being is a major concern of parents, teachers and society. Thus, the work of parent-teacher associations, non-profit organizations and governmental organizations is committed to young people and their need for education, security, health and life quality. The fact that older children or adolescents experience lower levels of subjective well-being than younger ones is a serious worry.^{1,2}

Adolescents between 12 to 16 years are undergoing the transition from childhood to adulthood, a period for which psychological, physical and social changes are characteristically.³ Most teenagers emerge from this developmental phase without behavior problems and emotional distress previously attributed to this period of "storm and stress".⁴ However the neurobiological and cognitive changes of puberty can impact adolescents' social-emotional well-being and may increase the amount of perceived stress.⁵ For instance, the increase of suicide ideation and depression between the age of 15 and 19 demonstrates adolescents' psychological struggle.^{6,7}

Socio-emotional abilities as new personal resources are increasingly in the focus of theoretical and empirical research, because they are related to health and well-being outcomes.^{8,9} There are several models of emotional intelligence providing different theoretical frameworks and methods of measurement.¹⁰ Mayer and Salovey¹⁰ first used the term and stated it in four interrelated abilities: perceive and understand emotions, express and label emotions, facilitate thought through emotions, and managing emotions, both in the oneself and in others. Psychologists have been paying attention to the complexity of the construct and describing it in terms of multiple skills and competence,^{12,13} emphasizing the possibility to learn and improve emotional abilities in young people and adults.¹⁴ The development of emotional intelligence reaches its critical phase in middle childhood when children start to understand complex emotions and to use emotion regulation strategies.¹⁵ By adolescence, young people adapt their

emotional expressions to the variations in social contexts and learn how to develop socially desirable coping strategies in a emotion-specific manner.¹⁶ Emotional research point in the direction of female advantage in emotional intelligence, showing that girls are generally better in the recognition and labeling of emotional expressions than boys.^{17,18}

According to Diener¹⁹ life satisfaction is the cognitive component of subjective well-being and refers to the result of the evaluation that people make about their lives, about the past and the present. Emotional intelligence has been generally related to both components of well-being, cognitive and affective, although those findings have been sometimes controversial.⁸ On the one hand, empirical evidence indicated a stronger relationship between emotional skills and life satisfaction.²⁰ On the other hand, some research showed that the affective component of well-being is closer related to emotional intelligence than to the cognitive one.²¹ Individuals who perceive, understand and manage their own emotions might solve emotional problems better, and, hence experience greater subjective well-being in general.²²

While most of the above mentioned research about emotional intelligence and well-being was conducted with adult population, only few empirical studies have focused on the developmental period of adolescence. However, recent findings suggest that emotional intelligence is important for effective emotional development and social skills acquisition in young people.²³ Thus, adolescents with better emotional skills and abilities generally experience more life satisfaction and less perceived stress.^{24,25}

Another unresolved issue is the degree to which the benefits of emotional intelligence on well-being are dependent on effective coping with stressful events and, therefore, the perception of lower anxiety and stress.²⁶ Traditionally, Golemann²⁶ claimed “keeping our distressing emotions in check is the key to emotional well-being”

(p. 56). Beyond this, emotionally intelligent individuals cope better with stress because they developed basic emotional skills, accumulated abundant emotional knowledge, and therefore are more successful in emotional regulation.²⁸ Current research indicates that high emotional intelligence is associated with less perceived stress^{29,30} and yet it is an important predictor of perceived stress in young people.^{31,32}

The review of relevant literature reveals that there is limited or inconsistent data on sex and age differences in health and well-being outcomes during adolescents. While some studies reported lower life satisfaction for girls than for boys,^{1,33} most research indicated no differences in subjective well-being across sex.³⁴⁻³⁶ With regard to age differences, life satisfaction decreases during adolescents reaching its nadir at the age of 16.^{37,38} Furthermore, girls experience higher amounts of perceived interpersonal stress and emotional distress than do boys.⁵ Moreover, some evidence suggests that these sex differences become more salient during adolescence.³⁹

The aim of the current study was to fill this gap by studying whether emotional intelligence might influence life satisfaction during adolescence and if this association relationship is mediated by perceived stress, concentrating on potential sex and age-specific effects. Following the modus operandi recommended by Baron and Kenny³⁸, we met all preconditions of a mediation analysis: the existing research suggests that the predictor variables (emotional skills and competence) are significantly related to the outcome variable (life satisfaction), and the mediating variable (perceived stress) is significantly related to both the outcome and the predictor variable. Based on existing research, the following hypotheses were tested: (1) Boys might experience more life satisfaction than girls, whereas girls might report more stress and higher emotional intelligence, as well as younger adolescents might be more satisfied with their lives, less stressed and less emotional intelligent than the older ones. (2) Perceived stress function

as mediator in the associations between emotional competence and life satisfaction, thereby potential sex and age-specific differences might be expected.

METHODS

Participants

Questionnaire survey data of 800 students from five public and three private secondary schools located in the Valencian Community (Spain) were collected in March 2015 (T1) and in December 2015 (T2). Initially, the 800 students were in 7th to 10th grade of compulsory secondary education (ESO) ($M_{age} = 14.02$, $SD = 1.21$, T1) and on T2 they were one class ahead ($M_{age} = 15.00$, $SD = 1.21$). This study is focused on sex and age-specific differences due to the fact that subjective well-being including life satisfaction decreases from early to middle adolescence reaching its nadir at the age of 16, (Ronen et al., 2016) presenting girls lower life satisfaction than boys. (Moksnes & Espnes, 2013) The development of emotional skills and competence at this age is generally hypothesized to be a good predictor of one's sense of subjective well-being. (Koydemir & Schütz, 2012) Four subsamples were distinguished in order to examine potential sex and age-specific differences: girls from 7th to 8th grade ($N = 248$, $M_{age} = 12.76$, $SD = 0.76$), girls from 9th to 10th grade ($N = 208$, $M_{age} = 14.63$, $SD = 0.66$), boys from 7th to 8th grade ($N = 178$, $M_{age} = 12.83$, $SD = 0.84$) and boys from 9th to 10th grade ($N = 166$, $M_{age} = 14.74$, $SD = 0.66$).

Instruments

The instruments used in this study are well-established self-report measures, validated for Spanish adolescent students. The reported reliability values are based on the current sample.

Perceived stress. To assess student's perceived stress, a Spanish adaptation⁴¹ of the short version of the perceived stress scale (PSS)⁴² was used, which consisted of a

four-item scale ($\alpha_{T1}=0.66$). The critical value of Chronbach's is $\alpha > .50$, so the instrument still is considered reliable⁴³. Participants rated using a 4-point Likert scale (1='never'; 4='very often') how often they felt and behaved in a certain way during the last month (eg "During the last month, how often have you felt that you were unable to control the important things in your life?").

Emotional Skills and Competence. Adolescents' emotional skills and competence were measured with the questionnaire developed by Taksic, Mohoric and Duran (ESCQ)¹¹ based on the Mayer y Salovey's model emotional intelligence.¹¹ The questionnaire is a 45-item self-report measure comprised by three subscales with 6-point Likert scales (1='never'; 6='always'): (1) the perceive and understand emotions scale (15 items; $\alpha_{T1}=0.89$) measures the ability to appraise and understand emotions accurately (eg, "I am able to tell the difference if my friend is sad or disappointed"), (2) the express and label emotions scale (14 items; $\alpha_{T1}=0.89$) measures the ability to describe and express emotions (eg, "I can easily name most of my feelings"), and (3) the manage and regulate emotions scale (16 items; $\alpha_{T1}=0.82$) measures the ability to regulate emotions to facilitate emotional and intellectual growth (eg, "I can maintain a good mood, even when the people around me are in a bad mood"). There are a series of adaption and validation studies carried out in several cultural contexts, including a Spanish sample.⁴⁴

Life Satisfaction. The perception of student's life satisfaction was assessed with the satisfaction with life scale (SWLS)⁴⁵, adapted for Spanish population by Atienza, Pons and Balaguer⁴⁶. The instrument is a 5-item-scale ($\alpha_{T2} = 0.88$)

. Participants were invited to evaluate their overall life satisfaction (eg, "The conditions of my life are excellent") on a 7-point Likert scale (1='do not agree'; 7='totally agree').

Procedure

We followed the ethical code of the Helsinki Declaration during all procedures.⁴⁷ Previous to our study, we received the permission from the Department of Education, Culture and Sport of Valencia, as well as from parents of participating students. We explicitly informed school staff, parents and students about the aim and the confidentiality of our study, and that their participation was on volunteer basis. Paper and pen data was collected in groups during regular school time in the classrooms and took approximately one hour each time.

Data Analysis

Comparing Groups on Latent Variables: Multigroup CFA (MGCFA). All statistical analyses were computed with Mplus software version 7.0⁴⁸ using maximum likelihood estimation (MLR). Initially, in preparation of the latent mean comparison and the MGSEM, we used a four-step approach to examine the equivalence of all measurements and structural parameters for girls and boys from 7th to 8th grade and from 9th to 10th grade.⁴⁹ [Brown⁴⁹ argues that multi-group SEM unlike other statistic methods allows to examine all forms of measurement invariance and population heterogeneity across groups.] We then tested for equal factor structures (form invariance), equal factor loadings (metric invariance) and equal intercepts (scalar invariance), which become progressively restrictive starting with the least restricted form (equal form). Afterwards, we used nested χ^2 methods to evaluate consecutive models following stepwise constraints, which become progressively more restrictive. Furthermore, group means were compared when the factor loadings and intercepts were constant in order to test partial invariance, which allows for latent mean comparison.

Multi-group Structural Equation Modeling: Indirect Effects. In order to test our hypotheses regarding sex and age-specific mediation, we conducted multi-group

structural equation models (MGSEM) in three separated models, accounting for possible suppression effects that might emerge due to high intercorrelation among the subscales of the ESCQ.⁵⁰ For bias reduction, confidence intervals around the estimates have been constructed to assess the indirect effects of mediators.^{51,52} We conducted a stepwise multigroup analysis to evaluate potential differences among girls and boys from 7th to 8th grade and from 9th to 10th grade in the SEM. In the first step, we adopt a less restricted model, implying equal factor loadings, free thresholds, and free regression coefficients between the four groups. In a second step, we conceptualized a more restricted model, implying equal factor loadings, equal thresholds, and equal regression coefficients across sex and age groups. The χ^2 difference test was used to compare means of the less restricted and the more restricted model.⁵³

RESULTS

Bivariate Correlations and descriptive statistics

Sex and age-specific descriptive statistics and bivariate correlations between the variables are presented in Table 1.

Comparing Groups on Latent Variables: Multigroup CFA (MGCFA)

We conducted group mean comparisons for sex and age on the following latent variables: emotional intelligence (perceive and understand emotions, express and label emotions, manage and regulate emotions), perceived stress and life satisfaction. In order to test multigroup invariance we used a four-step approach: (1) construct the CFA model for each group solely (Table 2); (2) verify equal form (model A); (3) verify equal factor loadings (model B); (4) verify equal form of indicator intercepts (model C). See Table 2 for step 1, and Table 3 for steps 2–4. These results allow for latent group mean comparisons. (Brown, 2006)

Table 1. Means, Standard Deviations, and Intercorrelations between Emotional Intelligence, Perceived Stress and Life Satisfaction.

Measure	2	3	4	5	Range	M (SD)	Skewness (SD)	Kurtosis (SD)
Girls from 7th to 8th grade								
1. PU T1	.56 ^{***}	.65 ^{***}	-.24 ^{**}	.18 [*]	1-6	4.44 (0.72)	-.34 (.17)	.28 (.33)
2. EL T1	-	.77 ^{***}	-.54 ^{***}	.40 ^{***}	1-6	4.60 (0.66)	-.22 (.17)	-.37 (.33)
3. MR T1	-	-	-.65 ^{***}	.50 ^{***}	1-6	4.44 (0.68)	-.50 (.17)	.42 (.34)
4. PS T1	-	-	-	-.59 ^{***}	1-4	2.06 (0.56)	.20 (.16)	-.22 (.31)
5. LS T2	-	-	-	-	1-7	5.39 (1.33)	-1.02 (-.16)	.68 (.31)
Girls from 9th to 10th grade								
1. PU T1	.44 ^{***}	.50 ^{***}	-.32 ^{**}	.24 ^{***}	1-6	4.47 (0.53)	-.10 (.18)	-.44 (.36)
2. EL T1	-	.61 ^{***}	-.53 ^{***}	.33 ^{**}	1-6	4.55 (0.53)	-.09 (.18)	-.16 (.36)
3. MR T1	-	-	-.65 ^{***}	.49 ^{***}	1-6	4.46 (0.53)	-.19 (.18)	.29 (.36)
4. PS T1	-	-	-	-.59 ^{***}	1-4	2.25 (0.57)	.10 (.17)	-.14 (.34)
5. LS T2	-	-	-	-	1-7	5.04 (1.28)	-.55 (.17)	-.18 (.34)
Boys from 7th to 8th grade								
1. PU T1	.74 ^{***}	.77 ^{***}	-.31 ^{**}	.16 [*]	1-6	4.42 (0.80)	-.93 (.20)	1.09 (.39)
2. EL T1	-	.76 ^{***}	-.39 ^{***}	.32 ^{***}	1-6	4.49 (0.83)	-.95 (.20)	1.18 (.39)
3. MR T1	-	-	-.43 ^{***}	.36 ^{***}	1-6	4.36 (0.78)	-.64 (.20)	.73 (.40)
4. PS T1	-	-	-	-.30 [*]	1-4	1.95 (0.55)	.37 (.18)	.46 (.36)
5. LS T2	-	-	-	-	1-7	5.47 (1.38)	-1.02 (.18)	.62 (.36)
Boys from 9th to 10th grade								
1. PU T1	.53 ^{***}	.83 ^{***}	-.29 [*]	.26 ^{**}	1-6	4.30 (0.60)	-.23 (.20)	-.08 (.39)
2. EL T1	-	.61 ^{***}	-.35 [*]	.05	1-6	4.37 (0.67)	-.42 (.19)	.60 (.38)
3. MR T1	-	-	-.50 ^{**}	.33 ^{**}	1-6	4.32 (0.63)	-.34 (.20)	.85 (.39)
4. PS T1	-	-	-	-.20 [*]	1-4	2.01 (0.41)	.07 (.19)	-.30 (.38)
5. LS T2	-	-	-	-	1-7	5.13 (1.17)	-.68 (.19)	.29 (.38)

Note. All measures are standardized. PU = Perceive and Understand emotions, EL = Express and Label emotions, MR = Manage and Regulate emotions, PS = Perceived Stress, LS = Life Satisfaction; T1 = Time 1 (March 2015), T2 = Time 2 (December 2015); * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2. **Model Fit Indices Testing for Scalar Measurement Invariance.**

Construct	Model	df	χ^2	p	CFI	RMSEA	90% CI	SRMR
Perceived Stress and Life satisfaction	Form Invariance:							
	Girls 7 th and 8 th grade	26	32.83	.17	.99	.03	(.00-.06)	.04
	Girls 9 th and 10 th grade	26	23.87	.58	1.00	.00	(.02-.05)	.03
	Boys 7 th and 8 th grade	26	33.76	.14	.98	.04	(.00-.08)	.05
	Boys 9 th and 10 th grade	26	41.56	.03	.95	.06	(.02-.09)	.06
	Model A	105	139.91	.01	.98	.04	(.02-.06)	.05
	Model B	131	198.47	.00	.97	.05	(.04-.07)	.10
	Model B2	129	174.38	.00	.98	.04	(.02-.06)	.09
	Model C	150	212.46	.00	.97	.05	(.03-.06)	.09
	Model C2	149	200.42	.00	.98	.04	(.03-.06)	.09
Perceive and understand emotions	Form Invariance:							
	Girls 7 th and 8 th grade	90	143.81	.00	.94	.05	(.03-.06)	.05
	Girls 9 th and 10 th grade	90	170.06	.00	.87	.07	(.05-.08)	.06
	Boys 7 th and 8 th grade	90	128.37	.00	.95	.05	(.03-.07)	.05
	Boys 9 th and 10 th grade	90	171.12	.00	.88	.07	(.06-.09)	.06
	Model A	360	611.90	.00	.91	.06	(.05-.07)	.06
	Model B	405	693.98	.00	.90	.06	(.05-.07)	.15
	Model B2	404	659.08	.00	.91	.06	(.05-.06)	.15
	Model C	446	749.42	.00	.90	.06	(.05-.07)	.16
	Model C2	443	693.04	.00	.92	.05	(.05-.06)	.16
Express and label emotions	Form Invariance:							
	Girls 7 th and 8 th grade	77	167.48	.00	.91	.07	(.06-.08)	.07
	Girls 9 th and 10 th grade	77	181.87	.00	.89	.08	(.07-.10)	.06

Study 3

Construct	Model	df	χ^2	p	CFI	RMSEA	90% CI	SRMR
	Boys 7 th and 8 th grade	77	148.13	.00	.90	.07	(.06-.09)	.06
	Boys 9 th and 10 th grade	77	132.11	.00	.91	.07	(.05-.08)	.07
	Model A	308	627.21	.00	.90	.07	(.06-.08)	.06
	Model B	350	704.094	.00	.90	.07	(.06-.08)	.10
	Model B2	349	670.48	.00	.90	.07	(.06-.08)	.10
	Model C	388	771.51	.00	.88	.07	(.06-.08)	.11
	Model C2	384	705.34	.00	.90	.07	(.06-.07)	.10
Manage and regulate emotions	Form Invariance:							
	Girls 7 th and 8 th grade	77	99.36	.04	.95	.03	(.01-.05)	.05
	Girls 9 th and 10 th grade	77	128.91	.00	.86	.06	(.04-.07)	.06
	Boys 7 th and 8 th grade	77	110.41	.01	.93	.05	(.03-.07)	.06
	Boys 9 th and 10 th grade	77	103.69	.02	.89	.05	(.02-.07)	.07
	Model A	308	439.94	.00	.91	.05	(.04-.06)	.06
	Model B	350	517.47	.00	.89	.05	(.04-.06)	.11
	Model B2	348	485.33	.00	.91	.05	(.04-.05)	.10
	Model C	387	603.10	.00	.86	.05	(.05-.06)	.12
	Model C2	381	522.08	.00	.91	.04	(.03-.05)	.11

Note. Model A = unrestricted baseline model (all parameters free); Model B = equality of factor loadings (full metric invariance), Model B2 = partial metric invariance, Model C = equality of intercepts (scalar invariance), Model C2 = partial scalar invariance.

Table 3. Testing for Equality of Form, Factor Loadings and Intercepts: Chi²—Difference Tests.

Construct	Model compared to each other	$\Delta \chi^2$	p	Δdf
Perceived Stress and Life satisfaction	Model B compared to Model A	76.20	.00	26
	Model B2 compared to Model A	34.59	.08	24
	Model C compared to Model B	39.23	.00	21
	Model C2 compared to Model B	25.93	.17	20
Perceive and understand emotions	Model B compared to Model A	82.24	.00	45
	Model B2 compared to Model A	46.35	.38	44
	Model C compared to Model B	95.27	.00	42
	Model C2 compared to Model B	26.85	.93	39
Express and label emotions	Model B compared to Model A	76.20	.00	42
	Model B2 compared to Model A	39.30	.52	41
	Model C compared to Model B	107.68	.00	39
	Model C2 compared to Model B	25.03	.89	35
Manage and regulate emotions	Model B compared to Model A	76.22	.00	42
	Model B2 compared to Model A	46.19	0.23	40
	Model C compared to Model B	131.37	.00	39
	Model C2 compared to Model B	34.75	0.43	33

Note. Model A = unrestricted baseline model (all parameters free), Model B = equality of factor loadings (full metric invariance), Model B2 = partial metric invariance, Model C = equality of intercepts (scalar invariance); Model C2 = partial scalar invariance.

Emotional intelligence. When analysing emotional intelligence we observed equality of factor structure, equality of factor loadings and partial invariance across intercepts across the four groups. Mean comparisons with girls from 7th to 8th grade as the reference group indicated that both boy groups scored significantly lower on the perceive and understand emotions scale (boys 7th to 8th: $\beta = -.264$, $p = .026$; boys 9th to 10th: $\beta = -.446$, $p < .000$). However, girls from different age groups did not differ in emotional perception. Furthermore, there were no significant sex and age-differences in express and label emotions. Though, girls from 9th to 10th grade reported less emotional management than the reference group (girls 9th to 10th grade: $\beta = -.217$, $p = .043$), showing no significant differences with both boy groups.

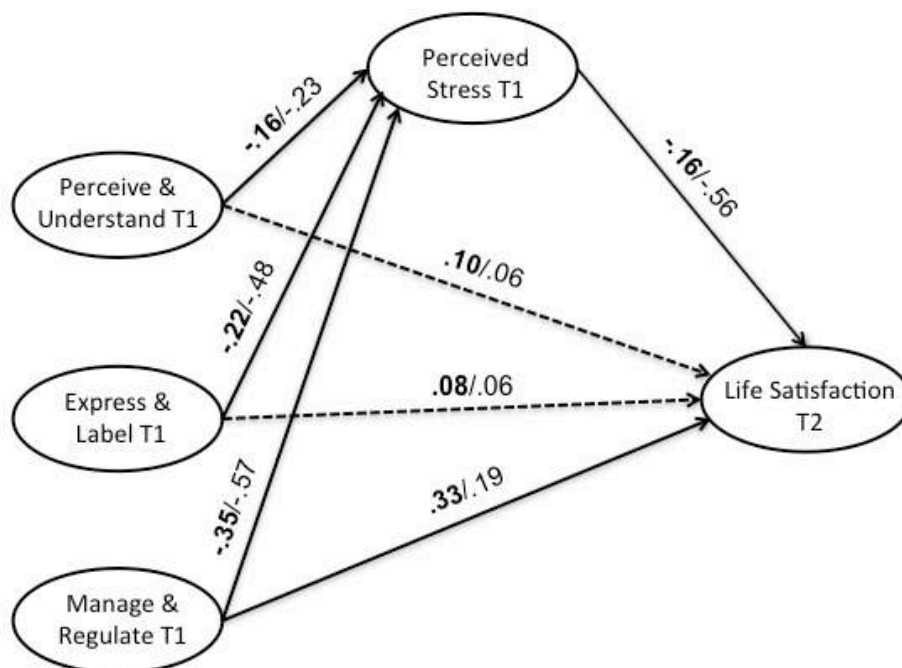
Perceived stress. Regarding perceived stress, multiple group invariance evaluation revealed equality of factor structure, partial equality of factor loadings, and partial equality across intercepts across groups. Mean comparisons with the same reference group as before showed that girls from 9th to 10th grade reported significantly more perceived stress (girls 9th to 10th grade: $\beta = .451$, $p < .000$), while there were no significant differences with both boy groups.

Life satisfaction. With regard to life satisfaction, we found equality of factor structure, equality of factor loadings and partial invariance across intercepts across the four groups. With girls from 7th and 8th grade as the reference group, mean comparisons showed that both older age groups reported less life satisfaction (girls 9th to 10th: $\beta = -.301$, $p = .003$; boys 9th to 10th: $\beta = -.229$, $p = .027$). In contrast, boys from 7th to 8th grade showed no difference in life satisfaction.

Multi-group Structural Equation Modeling (MGSEM)

As partial scalar measurement invariance has already been proved for all constructs using the Multigroup CFA (MGCFA), we constructed three MGSEM in the next step (one for each subscale of the ESCQ). All three models included direct paths (1) from emotional intelligence (perceive and understand emotions, express and label emotions or manage and regulate emotions) to perceives stress and life satisfaction, along with (2) from perceived stress to life satisfaction. In addition, all three models included indirect path from emotional intelligence (perceive and understand emotions, express and label emotions or manage and regulate emotions) to life satisfaction through perceives stress (Figures 1, 2, 3).

Figure 1. **Structural Equation Modeling (SEM): Interplay of Emotional Intelligence and Life Satisfaction mediated by Perceives Stress.**



Note: T1 = Time 1 (March 2015), T2 = Time 2 (December 2015); Significant effects shown as unstandardized coefficients (B) in first position and standardized coefficients (β) in second position, bold pathways are significant at $p < .01$, dotted pathways are not significant; factor loadings are standardized. unstandardized coefficients (B) in first position and standardized coefficients (β) in second position, bold pathways are significant at $p < .01$, dotted pathways are not significant; factor loadings are standardized.

Model A (ESCQ: perceive and understand emotions). Initially, a less restricted model with factor loadings hold equal between the four groups, whereas the thresholds, and regression coefficients were allowed to be free, was computed. This less restricted model showed a favorable fit [χ^2 (1119) = 1613.61, $p < .001$; CFI = .91; RMSEA = .05 (.04-.05); SRMR = .08]. Subsequently, a more restricted model was computed, in which the factor loadings, thresholds and regression coefficients between the groups were hold equal. The indices showed an adequate fit for this more restricted model [χ^2 (1128) = 1618.87, $p < .001$; CFI = .91; RMSEA = .05 (.04-.05); SRMR = .08]. Using χ^2 -difference test, the more restricted model was compared to the less restricted model. The test did not reach significance (χ^2 (9) = 5.96, $p = .75$) (Satorra & Bentler, 2001), which implies that the more restricted multi-group model fits the data not worse than the less restricted model. Thus, male and female children at different ages resembled each other in the examined interplay (Yuan & Bentler, 2004).

Direct and indirect effects. In this more restricted model, the associations between perceived stress and life satisfaction ($B = -1.58$, $\beta = -.56$, $SE = 0.19$, $p < .001$) was highly significant. In addition, the direct effect of perceive and understand emotions on perceived stress ($B = -0.16$, $\beta = -0.23$, $SE = 0.03$, $p < .001$) was significant, even though, the direct effect of perceive and understand emotions on life satisfaction ($B = 0.10$, $\beta = 0.06$, $SE = 0.08$, $p > .05$) was not significant indicating full mediation. The indirect effect of perceive and understand emotions on life satisfaction ($B = 0.25$, $\beta = 0.14$, $SE = 0.05$, 95% CI [0.15, 0.35]) fully mediated by perceived stress was found to be significant. Overall, 28% of the variance of life satisfaction ($R^2 = 0.28$) was explained through the combined effects of this mediation model.

Model B (ESCQ: express and label emotions). Assuming equal factor loadings, free thresholds, and free regression coefficients across four sex and age groups, a less restricted model was applied in a first step. The indices indicated a satisfactory fit for this less restricted model [χ^2 (1027) = 1603.044, $p < .001$; CFI = .90; RMSEA = .05 (.05-.06); SRMR = .08]. In a second step, a more restricted model was applied, assuming equal factor loadings, equal thresholds and equal regression coefficients among groups. The more restricted model showed a favourable fit [χ^2 (1036) = 1618.478, $p < .001$; CFI = .90; RMSEA = .05 (.05-.06); SRMR = .09]. Using χ^2 - difference test, this multi-group model was contrasted to the less restricted model. The test did not reach significance (χ^2 (9) = 15.194, $p = .086$) (Satorra & Bentler, 2001), which shows that the more restricted multi-group model represents the data better than the less restricted model. Thus, male and female children at different ages did not differ considerably in the examined interplay (Yuan & Bentler, 2004).

Direct and indirect effects. The direct effect of express and label emotions on perceived stress ($B = -0.22$, $\beta = -0.48$, $SE = 0.03$, $p < .001$) was found to be significant, whereas the direct path of express and label emotions on life satisfaction ($B = 0.08$, $\beta = 0.06$, $SE = 0.08$, $p > .05$) was not significant proving full mediation. Nevertheless, the association between perceived stress and life satisfaction ($B = -1.49$, $\beta = -0.53$, $SE = 0.21$, $p < .001$) was highly significant. The indirect effect of express and label emotions on life satisfaction ($B = 0.33$, $\beta = 0.25$, $SE = 0.06$, 95% CI [0.21, 0.45]) fully mediated by perceived stress was found to be significant. Overall, the combined effects for this mediation model explained about 27% of the variance of life satisfaction ($R^2 = 0.27$).

Model C (ESCQ: manage and regulate emotions). The less restricted model showed a favorable fit [χ^2 (1219) = 1760.80, $p < .001$; CFI = .89; RMSEA = .05 (.04-.05), SRMR = .08]. Second, a more restricted model was applied, assuming equal factor loadings, equal thresholds and equal regression coefficients among groups. The more restricted model showed a satisfactory fit [χ^2 (1210) = 1744.112, $p < .001$; CFI = .89; RMSEA = .05 (.04-.05); SRMR = .09]. By way of a χ^2 -difference test, this multi-group model was compared to the less restricted model. The test did not reach significance (χ^2 (9) = 16.122, $p = .064$), which means that the more restricted multi-group model fits the data better than the less restricted model. Thus, male and female children at different ages did not differ substantially in the examined interplay (Yuan & Bentler, 2004).

Direct and indirect effects. The direct effect of manage and regulate emotions on perceived stress ($B = -0.35$, $\beta = -0.57$, $SE = 0.04$, $p < .001$) was found to be significant, as well as the direct path of manage and regulate emotions on life satisfaction ($B = 0.33$, $\beta = 0.19$, $SE = 0.12$, $p < .01$) was significant indicating partial mediation. In addition, the associations between perceived stress and life satisfaction ($B = -1.26$, $\beta = -.45$, $SE = 0.21$, $p < .001$) was highly significant. The indirect effect of manage and regulate emotions on life satisfaction ($B = 0.44$, $\beta = 0.25$, $SE = 0.08$, 95% CI [0.28, 0.60]) partial mediated by perceived stress was found to be significant. Overall, the combined effects for this mediation model explained about 30% of the variance of life satisfaction ($R^2 = 0.30$).

DISCUSSION

Based on Mayer and Salovey's¹⁰ theory of emotional intelligence, the present study examined the interplay of emotional intelligence and life satisfaction and the mediating role of perceived stress, for girls and boys during early and middle adolescence.

In line with our first hypothesis, differences between students in early and middle adolescence were found, such as younger ones from 7th to 8th grade experience higher levels of life satisfaction than older students from 9th to 10th grade. This finding supports previous research, which has shown that subjective well-being decreases from early to middle adolescence.^{2,37} Goldbeck and cols.¹ explain that these age differences might be due to the changes that adolescents are undergoing during their transition from childhood to adulthood, which might lead to a general dissatisfaction.³⁸ Furthermore, girls perceive and understand emotions better than boys not only their same age, but older ones, too.¹² Our results confirm and extend previous findings, where girls typically score higher than boys in emotional competence tasks.¹⁵ Hence, we documented a female advantage in the development of emotional competence, suggesting that girls are emotionally more mature and foster their emotional abilities in middle adolescence. This could stem from different social behavior among female and male adolescents. On the one hand, girls' interactions are more intimate than those of boys, therefore they identify the emotions associated with facial expression more easily.⁵⁵ On the other hand, females are more likely to protect their emotional needs in stressful situations by seeking comfort from their peers.^{5,16} As regards stress symptoms, girls perceive higher amounts of stress at an older age. This findings are consistent with a German study that showed increased perceived interpersonal stress among female adolescents compared with female children.³⁹ The authors mentioned that girls are more

vulnerable to interpersonal stressors such as malicious gossip and arguments with parents and friends, increasing their efforts in coping with social stressors at an older age.

In contrast to hypothesis I, no sex differences in life satisfaction have been found. This contradicts previous studies that reported lower life satisfaction for girls than for boys.^{1,33} We explain our unexpected results, in part, by the fact that girls and boys experience a similar life satisfaction in general, but there might be differences regarding sex-specific domains of subjective well-being. Girls are more satisfied than boys in relationship and emotional factors, and the opposite is true for health and physical related aspects of well-being, culminating in no significant differences in overall life satisfaction.^{2,36}

In line with the second hypothesis, it was observed that perceived stress fully mediated the association between the emotional competencies of perception and expression and life satisfaction. In other words, perceived stress drops the association between emotional intelligence and life satisfaction to zero. That means that although students perceive emotions accurately and are able to express and identify them in a proper manner in early adolescence, they do not benefit in terms of life satisfaction in a longitudinal way when they perceive stress at the same time. Furthermore, the influence of the capacity to manage and regulate emotions was only partially mediated by perceived stress. That means that the students with high emotional management skills in early adolescence are more satisfied with life in general in middle adolescence, although the negative effect of perceived stress diminishes the longitudinal influence on life satisfaction. In other words, our results showed that perceived stress has an important impact on adolescents' well-being, by restraining the positive influence of emotional intelligence on life satisfaction.^{8,21,56} These findings enhance recent research, which

suggested a positive association between emotional intelligence and subjective well-being, particularly life satisfaction.^{20,24,25} Hence, high levels of stress drop this relationship, which might lead to more vulnerability for negative health outcomes in adolescents who are undergoing a critical developmental stage⁵ The raising awareness of long-term consequences of perceived stress has led to implement school-based promotion programs^{57,58}

In contrast to hypothesis II, neither sex nor age did affect the interplay of emotional intelligence and life satisfaction mediated by perceived stress. Given this complex association, our results indicate that boys and girls, younger and older ones, are equally threatened by perceived stress as a risk factor concerning subjective well-being regardless the emotional skills and abilities they might have developed.^{35,36} In other words, the current findings prove that girls and boys are similar in the way that emotional intelligence in early adolescence influences their satisfaction with life in middle adolescence through perceived stress.

Limitations

Although the findings contribute to the literature on stress, emotional intelligence and life satisfaction in adolescence, our study is not without limitations. First, one may criticize the use of self-report measures. However, we believe that self-report data were appropriate for the current study given that: (a) internal states as opposed to more objective, overt behavior were assessed; and (b) adolescents were the informants rather than young children who might have more difficulties to express their internal states. In addition, future studies might use multi-method (eg, qualitative and quantitative methods), multi-rater (eg, teachers, peers) designs to improve the validity of our findings. Second, this study was conducted with Spanish secondary students and findings may differ for adolescents from other countries with different school systems

and/or different cultures. Therefore, future replication studies from other countries are warranted.

Conclusions

Despite these limitations, this study makes an important contribution to the current research of adolescents' perception of stress, emotional intelligence and life satisfaction, by considering both age and sex differences in a large sample of Spanish students during adolescence. Thus, results from this study indicated that girls not only perceive and understand emotions better than boys, but they also perceive higher amounts of stress at an older age. Nevertheless, the fact that perceived stress drops the positive association between emotional intelligence in early adolescence and satisfaction with life in middle adolescence affect younger and older, as well as female and male students the same way. Future studies might include additional environmental factors (eg, family and peer relationships) in young people's lives, which might foster positive developmental outcomes via proximal processes.⁵⁹

IMPLICATIONS FOR SCHOOL HEALTH

The present study has provided evidence that high levels of perceived stress is a significant risk factor and should be given more attention to the assessment and promotion of youth development. Therefore, it seems reasonable to develop and implement school-based prevention programs in order to promote student's psychosocial adjustment and well-being by strengthening coping capacities as well as emotional abilities.^{60,61} These programs should in part focus on establishing a flexible repertoire of adaptive coping strategies, which facilitates adolescents to cope effectively with diverse stressors.⁵⁸ Furthermore, these programs need to include emotional education training based on the capacity to perceive, understand and manage emotions adequately, creating students awareness of the emotional processes with regard to

emotional reasoning and comprehension of their own emotions and of others.^{9,14} In conclusion, students might benefit more from socio-emotional prevention program that include stress management training, thus, emotional intelligent adolescents who cope successfully with stressful situation are more satisfied with their life, and this have important implications for their healthy development and well-being.

When planning and implementing a socio-emotional prevention/intervention program, schools may consider the following factors:

- Social and emotional education starts with the training of teachers in basic social and emotional skills, so they can transmit their students what they have experienced themselves.
- Cooperative activities should be included in the program to facilitate the development of coping strategies based on social support and peer relationships.
- Motivation is an important factor and can only be achieved by working on individual goals and benefits for each participant, giving the program a personal meaning.
- By including teachers, school staff, students and families in the program, it becomes a normal part of everyday life and it is more likely to remain over time.

Human Subjects Approval Statement

All procedures were reviewed and approved by the chair of the Ethics Committee of Human Research of the University of Valencia (H1385330676977).

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**Study 4: Development of emotional skills in adolescents to prevent
cyberbullying and improve subjective well-being**

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Abstract

Bullying behavior alters the way in which students coexist together in the classroom and negatively affects adolescents' well-being. Research highlights the importance of emotional skills in promoting positive youth development and optimal social functioning. Therefore, education in these skills is a potential target for interventions aimed at reducing cyberbullying and promoting satisfaction with life during adolescence. This study analyzes the impact of an emotion education program in adolescents to promote classroom coexistence and well-being. The sample comprised 148 students from 7th and 8th grade of secondary school aged between 12 and 15 years ($M_{age} = 12.63$, $SD_{age} = 0.74$; 57% girls). A quasi-experimental design with longitudinal data collection was used in this study with randomized classroom assignment to the experimental group and the control group. The intervention program was based on the emotional intelligence model of Mayer and Salovey (1997). Its objective was to develop adolescents' emotional skills to improve the quality of interpersonal relationships and reduce conflicts between peers, positively influencing coexistence and well-being. The intervention took place in eleven sessions during school hours over a period of three months. Participants completed the emotional competence questionnaire, the cyberbullying scale and the life satisfaction scale before (T1), immediately after (T2) and six months after the intervention (T3). The results showed that the intervention program reduced victimization and assault via mobile phones and the Internet in T2 and T3. In the follow-up (T3), the intervention group had enhanced emotional perception and regulation skills and reported an increase in life satisfaction in comparison to the control group. Our findings suggest that implementing classroom intervention programs to develop students' emotional competencies could be beneficial for their subjective well-being and peer coexistence.

Keywords: intervention program, emotional education, peer-to-peer coexistence, cyberbullying, life satisfaction, well-being, adolescents

INTRODUCTION

Learning to live together is a necessary and fundamental objective for the integral development of a student's personality (Olweus & Limber, 2010). Research has shown that school violence (bullying and cyberbullying) alters peaceful coexistence (Smith, 2013). The benefits of emotional competencies on classroom coexistence and their positive impact on bullying prevention and adolescents' well-being have been studied over the last few decades (e.g., Elipe, Mora-Merchán, Ortega-Ruiz, & Casas, 2015; Marikutty & Joseph, 2016; Schokman et al., 2014). To address this problem, intervention programs have been designed to prevent traditional bullying and cyberbullying behavior (Ttofi & Farrington, 2010; Zych, Ortega-Ruiz, & Del Rey, 2015). However, bullying prevention programs that focus on social-emotional development and include aspects of adolescents' subjective well-being are rare (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). This study attempts to fill these gaps by evaluating not only the effectiveness of a social-emotional education program to promote coexistence in the classroom in relation to cyberbullying behaviors but also the impact on adolescents' well-being over six months.

Coexistence and well-being in the classroom

School coexistence requires students to learn to relate to and interact with the people with whom they share daily time (school hours) and space (classroom): students and teachers. In the case of student-student relationships, peer conflict and harassment, such as bullying behavior, have a negative influence on peaceful classroom coexistence (Olweus, 1997). Although traditional bullying tends to begin at an early age (Hymel & Swearer, 2015), during adolescence, cyberbullying increases significantly because as age increases, so does the use of mobile phones and the Internet, hence the need to conduct studies focused on this type of bullying (Moral & Suárez, 2016).

Several definitions of cyberbullying have been proposed that coincide in their description, pointing out that it is an aggressive and intentional behavior carried out repeatedly by a group of people or an individual, via mobile phones or the Internet without the permission of the victim, who cannot stop these aggressions (e.g. Smith, 2013; Tokunaga, 2010). The aim of aggressors is to intimidate, harass, threaten or harm by sending or posting threatening or humiliating texts, images or videos related to the victim (Slonje, Smith, & Frisé, 2013). Drawn from these definition, three key elements of cyberbullying have been identified: 1) Power imbalance, 2) multiple repetition of aggressive behavior and 3) intention to harm others, (Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). Power imbalance refers to the attempt by the bully to exert control over the targeted victim, who feels helpless or powerless to stop the aggressions. The victim experiences multiple incidents of aggression over a specified time period or feels strongly concerned about it to be repeated. The aggressive behavior is always intentional and meant to produce harm and other negative feelings to the victim (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014).

Cyberbullying is a growing problem that exists in all parts of the world without great differences due to cultural, geographical or educational contexts (Zych et al., 2015). According to the UN Educational, Scientific and Cultural Organisation (UNESCO) report (2017), prevalence data come mainly from industrialized countries and suggest that between 5% and 21% of children and adolescents are affected by cyberbullying worldwide. According to this report, the incidence of cyberbullying increased in Europe from 8% to 12% between 2010 and 2014. In Spain, cyberbullying already accounts for one in four cases of harassment. This proportion increases with age, so that, from the age of 13, 36.5% of cases of harassment (more than one in three) are due to cyberbullying (ANAR Foundation & Mutua Madrileña Foundation, 2017).

The psychological consequences of cyberbullying may be greater than those of traditional bullying due to the lack of space and time constraints and its ability to reach large numbers of people (Li, 2007; Slonje et al., 2013). Thus, adolescents who have experienced cyberbullying report more emotional symptoms and social problems than victims of traditional bullying (Elipse et al., 2015). There is also sufficient empirical evidence on the negative effects of cyberbullying on mental health and psychological adjustment in the long term (Albin, 2012). It appears that the negative consequences of cyberbullying are especially severe during adolescence due to the major neurobiological, cognitive, emotional and social transformations occurring during this developmental phase (Pabian & Vandebosch, 2016). At this age, changes occur in regions of the brain involved in the processes of emotional regulation, which have important implications for psychological adjustment and social functioning (McRae et al., 2012; Silvers et al., 2017).

Cyberbullying also has a negative effect on subjective well-being, specifically on adolescents' satisfaction with life (Navarro, Ruiz-Oliva, Larrañaga, Yubero, 2013; Moore, Huebner, & Hills, 2012). People's overall assessment of their own lives is considered the cognitive component of subjective well-being, while the affective component refers to positive and negative affects (Diener, Oishi, & Lucas, 2003). Life satisfaction is a key variable in adolescents as an indicator of subjective well-being and optimal social functioning (Proctor, Linley, & Maltby, 2009). With regard to the school context, students who have been bullies and/or victims of bullying over mobile phones and the Internet report that they are less satisfied with their lives than their peers (29% vs. 40%) (UNESCO, 2017).

In summary, school violence endangers peaceful coexistence in the classroom, as well as students' life satisfaction (Navarro et al., 2013; Tokunaga, 2010). Among the

factors that influence bullying are the so-called emotional competencies (e.g., Beltrán-Catalán, Zych, Ortega-Ruiz, & Llorent, 2018; Kokkinos & Kipritsi, 2012; Schokman, 2014).

The role of emotional skills and competencies

Social and emotional competencies seem to influence the development of bullying behavior (Kokkinos & Kipritsi, 2012), but their effect on cyberbullying is still not clear (Beltrán-Catalán et al., 2018). Learning to live together necessarily involves emotional aspects that must be part of the student's competence to relate to others (Vallés, 2013). According to Mayer, Caruso and Salovey (2008, 2016), emotional ability refers to knowing how to identify one's emotions and feelings and those of others, increase one's emotional understanding and regulate negative emotions such as anger, fear and other negative moods (hatred, contempt, animosity, jealousy, etc.) that are often present in classroom conflicts. This emotional learning is an important challenge in the educational context and requires the implementation of an emotional education that complements or is integrated into the contents of education for peaceful school coexistence (López-González & Oriol, 2016; Zeidner, Roberts, & Matthews, 2002).

Emotionally intelligent adolescents tend to be more aware of their own emotions, express their feelings accurately, and regulate emotional responses effectively, thus fostering their emotional and intellectual growth (Mayer, Salovey, & Caruso, 2008). In addition, they demonstrate higher levels of social support and maintain positive and healthy social relationships by meeting the emotional needs of their friends. Furthermore, students with high emotion regulation skills communicate unpleasant moods without offending and manage emotional conflicts and everyday challenges effectively (Brackett, Rivers, & Salovey, 2011). Hence, emotional competencies seem to play a key role in social functioning and peer relationships (Brackett, Rivers,

Shiffman, Lerner, & Salovey, 2006; Peachey, Wenos, & Baller, 2017), which in turn enhances adolescents' subjective well-being (Serrano & Andreu, 2016).

Studies that analyze the benefits of developing emotional skills highlight, among other aspects, that they are an important protection factor against the negative consequences of cyberbullying victimization (Baroncelli & Ciucci, 2014), since they could cushion mental health problems (Davis & Humphrey, 2012) by promoting adolescents' life satisfaction (Geng, 2016). On the other hand, deficits in emotional processing play a crucial role in aggressive behaviors at different levels, so emotional competencies may help to explain the processes involved in peer harassment behaviors (García-Sancho, Salguero, & Fernández-Berrocal, 2017).

Likewise, the positive association between emotional competence and subjective well-being has been investigated over the past decades (Di Fabio & Kenny, 2016; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016; Szczygieł & Mikolajczak, 2017). In general, people with high skills in perceiving, expressing, understanding and managing emotions resolve emotional conflicts more successfully and therefore be more satisfied with their lives (Mayer et al., 2016). However, the mechanisms that link improvement in peer coexistence and subjective well-being with social-emotional skills in young people have not been studied (Extremera, Quintana-Orts, Mérida-López, & Rey, 2018). However, the role of emotional competence as a buffer against the negative impact of cyberbullying on adolescents' life satisfaction seems to be a promising research approach.

In summary, emotional education in the school population could act as a protective factor against the development of bullying behavior and as a buffer against the negative psychological repercussions of such behavior (Espelage, Low, Van Ryzin, & Polanin, 2015; Sánchez-Calleja, García-Jiménez, & Rodríguez-Gómez, 2016). This

requires the design of effective, scientifically based interventions to develop students' emotional abilities that are relevant to addressing the negative consequences of bullying on victims, offenders and all those involved (Garaigordobil, Martínez-, Maganto, Bernarás, & Jaureguizar, 2016).

Evidence-based approaches for teaching social and emotional skills in schools, also known as social and emotional learning (SEL), has gained strength over the last 20 years, and in some countries, policies have been incorporated to promote its integration into the classroom (Torrente, Rivers, & Brackett, 2016). SEL enhances the emotional knowledge and abilities of the whole school community, including children and adults, across all grade and school levels. The approach involves the idea that incorporating social learning and emotional competencies into the core academic curriculum and providing training and support for all school members would promote school coexistence and students' well-being (Taylor et al., 2017; Torrente et al., 2016).

For instance, most SEL programs have been shown to be effective in improving social-emotional skills in children and adolescents (e.g., Espelage & Hong, 2017; Taylor et al., 2017; Torrente et al., 2016). In addition, these programs have shown positive results on psychological adjustment (Sklad, Dijkstra, de Ritter, Ben, & Gravesteyn, 2012), coexistence and a supportive environment in the classroom (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013), self-esteem and self-control (Coelho, Sousa, & Figueira, 2016), and student well-being (Taylor et al., 2017). In addition, some interventions have effectively prevented emotional symptoms such as depression and anxiety (Durlak et al., 2011), conflict in the classroom (Machado, Rinaldi, de Moraes, Levy, & Menezes, 2015), sexual harassment perpetration (Espelage et al., 2015), and aggressive behavior (Castillo-Gualda, Cabello, Herrero, Rodríguez-Carvajal, & Fernández-Berrocal, 2018).

With regard to the prevention of school violence, programs are geared toward interventions on cyberbullying (Del Rey, Mora-Merchán, Casas, Ortega-Ruiz, & Elipe, 2018; Della Cioppa, O’Neil, & Craig, 2015), and it has been shown that social-emotional development during adolescence may have a positive impact on the classroom climate and school coexistence (Garaigordobil et al., 2016) and is negatively associated with school violence (Peachey et al., 2017). In light of the effectiveness of school interventions in general, the school environment is the ideal place to foster social-emotional development during adolescence.

Drawing from the presented literature on emotional education programs, we developed a novel social and emotional-skill intervention for adolescent population: PREDEMA. The theory underlying PREDEMA is the ability model of emotional intelligence (Mayer & Salovey, 1997) and the dialogical paradigm oriented to meaningful learning (Flecha, 2000). Hence, the purpose of the program was that students learn and apply the skills of emotional abilities through dialogue between the teacher and the student, as well as between the adolescent himself and his emotional reality, allowing them to find meaning in his learning experience (Racionero & Padrós, 2010). To our best knowledge, there has been no study on an evidence-based emotional education program that also monitor changes in school coexistence in terms of cyberbullying and the subjective well-being of adolescents.

Present study

Research on emotional education interventions in the school setting confirms that social-emotional competencies can significantly influence young people's successful development, well-being and optimal social functioning (Torrente et al., 2016). However, despite this evidence, research on the effectiveness of the programs during the months following the intervention is scarce (Weissberg, Durlak, Domitrovich, &

Gullotta, 2015). Moreover, despite the extensive literature supporting the relationship between emotional competence and peer coexistence on the one hand (e.g. Baroncelli & Ciucci, 2014), and subjective well-being on the other (e.g. Peachey et al., 2017), there is still insufficient data to understand how these constructs are related to each other during adolescence.

For all these reasons, this study aims to fill an important gap in the literature on early-middle adolescence. A program of social-emotional intervention PREDEMA was designed that is capable of enhancing not only peer coexistence but also adolescents' well-being. The contribution of this study lies in determining the sequence of the mechanisms involved using path analysis, helping us to understand the process of change. The analysis of the change process is presented both at the end of the program and after six months of follow-up. We hypothesized that our social-emotional intervention 1) would develop and improve participants' emotional skills (perceiving, understanding and regulating emotions); 2) would significantly enhance cognitive aspects of the participants' subjective well-being, specifically life satisfaction; and 3) would decrease the incidence of cyberbullying through the participants' learning of peaceful coexistence in the classroom.

MATERIALS AND METHODS

Participants

For this study, a convenience sample of 360 adolescents was chosen, with the following inclusion criteria: 1) interest of their school in participating in the research project, 2) availability to collaborate in the evaluation and intervention during a whole school year, and 3) no previous participation in any SEL programs in the school. The preselected students were randomly divided into two groups: the experimental group, composed of 168 participants, and the control group, composed of 192 adolescents who

participated in an alternative intervention proposed by the school. Data were collected in three waves: before the intervention program (preintervention, T1), immediately after intervention was completed (postintervention, T2) and at six months follow-up (follow-up, T3). Of the initial 360 participants who responded to the first evaluation (preintervention), data from 28% of the participants was lost in the postintervention period and 43% in the follow-up.

The final sample of this study comprised 148 adolescents (64 boys and 84 girls) aged 12 to 15 years ($M = 12.63$, $SD = 0.74$). Participants were in their first and second year of compulsory secondary school from four different high schools in the Valencian Community: 88 were in 7th grade and 60 were in 8th grade; 73 attended private schools and 75 attended public schools. Participating schools were similar in size and number of students, as well as ethnic and socio-economic background.

Study design and data collection

For this study, a quasi-experimental design was used with an intervention (experimental) and a control group. Allocation of schools to the experimental or control group was carried out at random. T-tests of independent samples and chi-squared tests were performed prior to the intervention, indicating that the intervention ($n = 72$) and control group ($n = 76$) did not differ significantly ($p \geq .05$) in any of the studied variables, indicating a correct random allocation.

The research team contacted the schools that had indicated their intention to participate in the project. Information sessions for parents and schoolteachers were organized to explain the nature of the research and present the objective of the intervention program. All students participated in the study voluntarily, with the prior consent of their parents or legal guardians. As mentioned before, data were collected in

three waves (T1, T2, and T3) by means of self-reports and after signing an informed consent form. The control group carried out the three evaluations under the same conditions as the experimental group: as a group, in the classroom, during school hours, with a duration of 50 minutes. Students from the control group, who didn't participated in the intervention program, had access to regular resources and cyberbullying prevention protocols provided by the schools, for instance, school counseling or peer mediation programs.

Ethics

The data were collected according to the standards of the Declaration of Helsinki (World Medical Association, 2013), with permission from the Department of Education, Culture and Sport of the Valencian Community and the Ethics Commission of the University of Valencia (H1385330676977) and the parents. The results of the study are presented following the indications of APA for quantitative research in psychology (Appelbaum et al., 2018).

Measurements

The measurements used in this study have adequate psychometric properties of reliability and validity, and they have been adapted and validated in Spanish samples. The Cronbach's alpha indices reported here, correspond to the sample of this study.

Emotional competencies were evaluated through the Emotional Skills and Competencies Questionnaire (ESCQ; Takšić, Mohorić, & Duran, 2009; adapted to Spanish by Extremera and Fernández-Berrocal (Faria, et al., 2006). It consists of 45 items with six response alternatives (1 = *Never*; 6 = *Always*). The instrument evaluates three factors: emotional perception and understanding ($\alpha = .90$); emotional expression

and labeling ($\alpha = .88$); emotional management and regulation ($\alpha = .85$). The reliability of the subscales has been proven in previous studies ($\alpha = .74 - .86$) (Faria, et al., 2006).

Cyberbullying was estimated using two different scales. On the one hand, the cybervictimization dimension was evaluated through the Victimization Scale Via Mobile Phone and Internet (CYB-VIC; Buelga, Cava, & Musitu, 2012). This one-dimensional scale consists of 10 items with five response values (1 = *Never*; 5 = *Many times*). The cybervictimization scale presents good internal consistency in this study ($\alpha = .82$) and previous studies ($\alpha = .84$) (Buelga et al., 2012). On the other hand, the incidence of cyberaggression was evaluated using the Cyber-Aggression Scale Using Mobile Phones and the Internet (CYB-AG; Buelga & Pons, 2012). The scale provides a general incidence of bullying behavior using mobile phones or the Internet to harass and mock. It is composed of 10 items ($\alpha = .68$) that are rated on the four-point Likert scale (1 = *Never*; 4 = *Many times*). Its validity and reliability have also been confirmed in previous studies; Cronbach's alpha ranges from .88 to .89 (Buelga & Pons, 2012).

Subjective well-being was assessed using the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; validated by Atienza, Pons, & Balaguer, 2000). This scale consists of five items with five response values (1 = strongly disagree, 5 = strongly agree). The validity and internal consistency in the present study was suitable ($\alpha = .81$), as has been confirmed by previous studies (α from .79 to .89) (Diener et al., 1985).

Intervention program: PREDEMA

Guided by Mayer and Salovey's emotional intelligence model (1997) and the theory of dialogical learning (Flecha, 2000), PREDEMA was designed to promote classroom coexistence and subjective well-being by developing emotional competencies in adolescents. The program was implemented in six classes with 25-30 students each by a trained psychologist. It consisted of eleven sessions, each of 50 minutes, which took place over a three-month period of tutoring time. The first part of the program (sessions 1-6) focused on the most basic emotional abilities, including perceiving, labeling, expressing, using and understanding emotions. The second part (sessions 7-11) targeted emotional regulation and management in different contexts and situations. In addition, complementary issues were discussed, such as personal and global values, responsibility and tolerance, as well as preventing interpersonal conflicts. The sessions started with exploring a personal or emotionally experience, followed by creating a symbolic representation or meanings of the experience in order to integrate it into previous knowledge, and finally transferring the experience to other contexts and discussing the relevance for future experiences. Each week participants were given home practice activities and a worksheet in which to record their daily experience during the week. For further description of the different activities, contents and procedures of the intervention program, see Montoya-Castilla, Postigo, and González (2016).

Statistical data analysis and sample size

Before testing the hypothesized models, descriptive analyses, Pearson correlations and multivariate and univariate variance analysis (MANOVA, ANOVA) were performed to identify possible differences between the experimental group and the control group at baseline (T1). In addition, multivariate and univariate covariance

analyses (MANCOVA, ANCOVA) were performed to identify changes in postintervention (T2) and follow-up (T3), controlling for preintervention scores (covariable). In addition, the effect size (Cohen's *d*) of each variable was calculated to estimate the magnitude of the differences between experimental and control groups (Lipsey & Wilson, 2001). These analyses were performed with the statistical package SPSS V.24.

The path analysis was then performed with the final sample ($N = 148$). There is no consensus in literature about an appropriate sample size for conducting Structural Equation Modeling (SEM) (Wang & Wang, 2012). A sample of $N = 100-150$ is usually considered the minimum to test simple SEM models, such as the path models proposed in this study (Tabachnick & Fidell, 2007). In order to examine the impact of the intervention on T2 (Figure 1) and T3 (Figure 2) two different models were tested. The two tested path analysis models were theoretically founded and based on the results of the previous correlation analysis and analysis of variance. Thus, in both models, the intervention group (1 = experimental, 0 = control) was included as a predictor of the variables evaluated in postintervention (T2) and follow-up (T3), controlling the effect of preintervention evaluations (T1). The first model proposes a multiple regression with direct paths from the intervention group to emotional competencies T2, indicated by perception T2, expression T2 and regulation T2; cyberbullying in T2, indicated by cybervictimization T2 and cyberaggression T2; and satisfaction with life T2. The second model proposes an indirect path from the intervention group on satisfaction with life T3 through emotional competencies T3 and cyberbullying T3. In addition, direct paths from T1 variables were included that reflect the initial levels of emotional competence, cyberbullying and life satisfaction in the two models to provide a rigorous test.

The five main indices recommended in the literature were used to evaluate the model fit (Hu & Bentler, 1999): the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), for which a value of .90 or higher is usually considered appropriate for accepting the model; the Root Mean Square Error of Approximation (RMSEA), parsimony index and measure of the amount of error, with values of less than .08 considered acceptable to state that a model is plausible; the Standardized Root Mean Square Residuals (SRMR), as an absolute index that shares criteria with the previous one, and the Robust Chi-Square Test of Model Fit χ^2 with degrees of freedom (*df*) (Kaplan, 2000; Kline, 2016). Path analyses were performed using Mplus 7.0 with *MLR* (Maximum Likelihood estimation with Robust standard errors) for non-normal data (Muthén & Muthén, 2017).

RESULTS

Preliminary results

The results of MANOVA with baseline scores (Table 1) indicated that there were no differences between the intervention and the control group in T1 (Wilks' lambda, $\lambda = .964$, $F(104) = 0.651$, $p = .689$, $\eta = .036$). However, univariate analyses indicated that participants in the experimental group had lower scores in perception and regulation than the control group. No significant differences were observed between the experimental and control groups in any of the other studied variables, which indicate a high level of homogeneity between the experimental and control groups.

Study 4

Tabla 1

Means, SDs, Effect Sizes, Analysis of Variance and Analysis of Covariance

		Experimental group	Control group	<i>Cohen's d</i> [95% CI]	ANOVA		ANCOVA	
		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)		<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Perceive emotions	T1	67.00 (11.97)	68.08 (11.53)	0.09 [-2.10, 1.91]	.01	.94		
	T2	65.78 (13.84)	68.29 (13.45)	-0.19 [-2.51, 2.14]			1.91	.17
	T3	70.57 (9.80)	65.17 (12.35)	0.49 [-1.41, 2.39]			15.60	<.001
Express emotions	T1	58.41 (11.97)	61.70 (11.85)	-0.28 [-2.31, 1.75]	.83	.36		
	T2	57.17 (11.97)	61.29 (12.16)	-0.34 [-2.40, 1.71]			1.58	.21
	T3	58.63 (11.86)	57.57 (12.05)	0.09 [-1.95, 2.13]			0.81	.37
Manage emotions	T1	73.84 (11.11)	75.08 (11.54)	-0.11 [-2.04, 1.82]	.04	.84		
	T2	74.03 (11.97)	75.61 (12.55)	-0.13 [-2.22, 1.96]			0.45	.50
	T3	76.70 (8.26)	70.97 (10.57)	0.61 [-1.01, 2.23]			16.41	<.001
Cyberaggression	T1	12.78 (3.13)	12.36 (2.77)	0.14 [-0.36, 0.65]	.23	.63		
	T2	11.46 (2.24)	13.96 (5.46)	-0.60 [-1.31, 0.11]			23.27	<.001
	T3	11.42 (2.05)	12.82 (4.86)	-0.38 [-1.01, 0.26]			6.86	.01
Cybervictimization	T1	12.78 (2.97)	12.82 (3.09)	-0.01 [-0.53, 0.50]	.47	.50		
	T2	11.88 (2.45)	13.92 (5.02)	-0.52 [-1.19, 0.15]			14.42	<.001
	T3	12.35 (2.62)	13.01 (3.25)	-0.23 [-0.73, 0.28]			1.19	.28
Life satisfaction	T1	26.38 (6.00)	27.36 (5.27)	-0.18 [-1.13, 0.79]	.59	.44		
	T2	27.46 (5.78)	28.75 (5.51)	-0.23 [-1.19, 0.73]			0.84	.36
	T3	27.63 (5.66)	26.27 (6.63)	0.22 [-0.83, 1.27]			5.86	.02

Note. *M* = Mean, *SD*, Standard Derivation, *Cohen's d* = effect size, CI = confidence interval, *F* = F ratio, *p* = probability, T1 = pre-intervention, T2 = post-intervention, T3 = follow-up.

With regard to T2 and T3 (Table 1), significant differences were observed between the experimental condition and short-term control (Wilks' lambda, $\lambda = .81$, $F(6) = 2.79$, $p = .017$, $\eta = .195$). Specifically, after participating in the intervention program, the experimental group improved significantly in cyberaggression and cybervictimization in T2 compared to the control group. The effect size was moderate-high in both cases. These immediate changes were maintained over six months (Wilks lambda, $\lambda = .746$, $F(6) = 4.77$, $p = <.001$, $\lambda = .254$). Thus, differences were observed between the experimental group and the long-term control group in emotional perception, emotional regulation, cyberaggression, and satisfaction with life in T3, with a moderate to large effect size.

Correlations

Pearson correlations were performed for all studied variables (Table 2). The results indicated that variables in T1 were significantly correlated with the corresponding measure at T2 and T3. In addition, significant positive correlations were observed between emotional competencies T2 and life satisfaction T2, as well as between emotional regulation T3 and life satisfaction T3. Also noteworthy is the negative and significant relationship between cyber aggression and life satisfaction in both T2 and T3. Finally, emotional competencies T2 are negatively and significantly related to cyberaggression T2.

Study 4

Table 2

Correlation between Study Variables (N = 148)

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. T1 Cyberaggression	12.56	2.95	–																
2. T1 Cybervictimization	12.80	3.02	.32**	–															
3. T1 Perceive emotions	67.52	11.73	-.22*	0.04	–														
4. T1 Express emotions	60.11	11.98	-0.15	-0.03	.66**	–													
5. T1 Manage emotions	74.43	11.29	-.29**	-0.05	.74**	.7**	–												
6. T1 Life Satisfaction	26.88	5.64	-.26**	-0.13	.27**	.45**	.50**	–											
7. T2 Cyberaggression	12.74	4.38	.50**	.21*	-0.13	-0.10	-.24**	-.26**	–										
8. T2 Cybervictimization	12.93	4.10	.24**	.44**	0.01	0.01	-0.13	-0.08	.44**	–									
9. T2 Perceive emotions	67.10	13.64	-.18*	0.03	.77**	.63**	.70**	.34**	-0.13	-0.04	–								
10. T2 Express emotions	59.42	12.20	-0.13	-0.01	.57**	.66**	.61**	.47**	-0.14	-0.04	.77**	–							
11. T2 Manage emotions	74.83	12.73	-0.15	-0.09	.57**	.62**	.71**	.46**	-.20*	-0.10	.81**	.82**	–						
12. T2 Life Satisfaction	28.12	5.66	-.20*	-0.07	0.16	.30**	.35**	.67**	-.23**	-0.01	.34**	.47**	.47**	–					
13. T3 Cyberaggression	12.13	3.80	.29**	.22**	-0.06	0.05	0.02	-0.07	.25**	0.08	0.04	0.06	-0.03	-0.01	–				
14. T3 Cybervictimization	12.68	2.96	.24**	.44**	0.15	0.068	0.04	-.16*	.24**	.36**	0.17	-0.01	0.04	-0.06	.30**	–			
15. T3 Perceive emotions	67.85	11.44	-.21*	-0.10	.62**	.38**	.45**	.17*	-0.11	-.19*	.55**	.36**	.38**	.22**	0.01	0.06	–		
16. T3 Express emotions	58.08	11.93	-0.11	-0.10	.32**	.49**	.34**	.29**	-0.01	-0.00	.40**	.51**	.42**	.35**	0.00	-0.06	.60**	–	
17. T3 Manage emotions	73.73	9.92	-.19*	-.18*	.32**	.30**	.37**	.26**	-.22*	-0.08	.43**	.25**	.45**	.32**	-0.13	-0.09	.65**	.63**	–
18. T3 Life Satisfaction	0.09	5.36	0.11	0.03	-0.09	-.20*	-.198*	-.37**	-0.07	-0.05	0.02	-0.1	-0.07	0.01	-.28**	-0.09	0.14	0.07	.30**

Note. *M* = Mean, *SD*, Standard Derivation, T1 = pre-intervention, T2 = post-intervention, T3 = follow-up.

p* < .05; *p* < .01

Table 3

Path Coefficients and Model-fit Indices for Hypothesized Mediation Models (N = 148)

	Model 1: Path analysis T2		Model 2: Path analysis T3		Model 3: Mediation T3	
	β	95% CI	β	95% CI	β	95% CI
Direct Effects						
Intervention → Cyberbullying	-.42***	[-.59 to -.25]	-.29**	[-.51 to -.07]	-.29**	[-.49 to -.09]
Intervention → Emotional Competencies	-.05	[-.17 to .07]	.31***	[.19 to .43]	.24**	[.07 to .40]
Intervention → Life satisfaction	-.06	[-.18 to .06]	.16**	[.04 to .28]	-.17	[-.51 to .16]
Cyberbullying → Life satisfaction	–	–	–	–	-.73	[-1.58 to .12]
Emotional Intelligence → Life satisfaction	–	–	–	–	.44***	[.24 to .64]
Indirect Effects						
Intervention → Cyberbullying → Life satisfaction	–	–	–	–	.21	[-.13 to .56]
Intervention → Emotional Competencies → Life satisfaction	–	–	–	–	.10**	[.02 to .19]
Model-fit indices						
χ^2 (df)	87.98 (46)		84.61 (47)		77.25 (47)	
$\Delta\chi^2$ (df)	1.87		1.80		1.64	
CFI	.95		.94		.95	
TFI	.91		.90		.91	
RMSEA [90% CI]	.07 [.05-.10]		.07 [.05-.09]		.06 [.04-.09]	
SRMR	.13		.06		.06	

Note. β = standardized path coefficient. CI = confidence interval. χ^2 = Chi-Square Test of Model Fit, df = degrees of freedom. CFI = Comparative Fit Index. TFI = Tucker-Lewis Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Square Residuals.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Path analyses

The first model (Figure 1), which represents the post-intervention change process (T2), showed a satisfactory model fit, except for SRMR: $\chi: 87.98$ ($df: 46$); $p < .05$; CFI: .95; TLI: .91; RMSEA: .07 [.05-.10]. The SRMR (.13) might be positively biased due to small sample size and low df (Hooper, Coughlan, & Mullen, 2008). In relation to T2 change processes, the intervention group predicted low levels of T2 cyberbullying, while paths to T2 emotional intelligence and T2 life satisfaction were not significant. With respect to the control variables, in the prediction of emotional intelligence T2, cyberbullying T2 and life satisfaction T2 affect the initial T1 levels of the corresponding variables (Table 3).

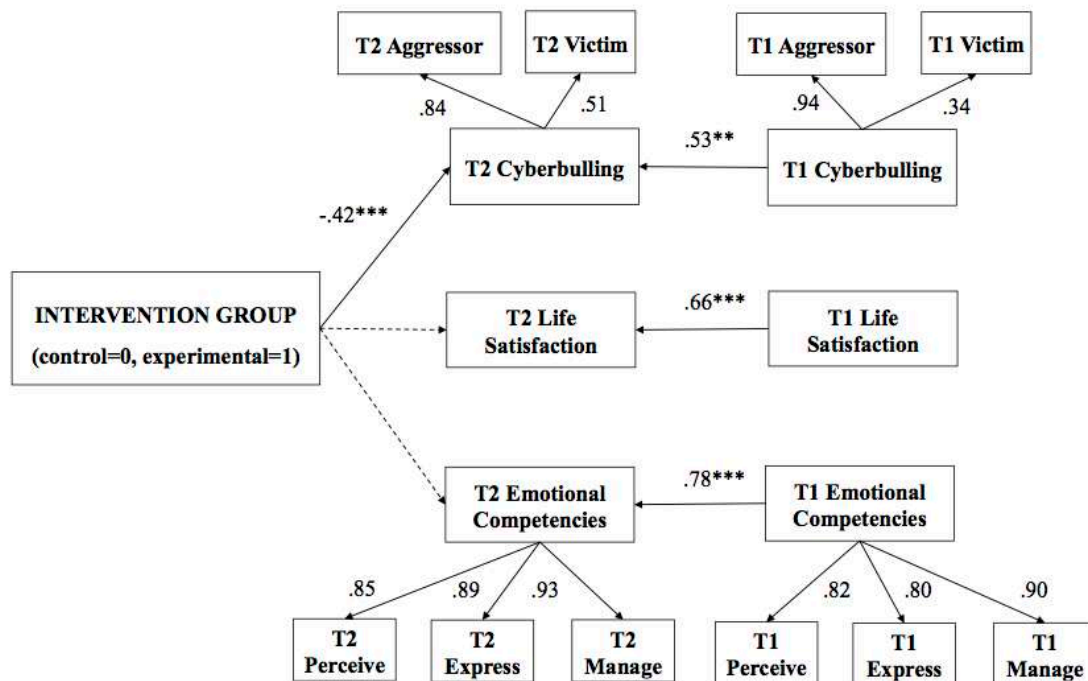


Figure 1 Path analysis at post-intervention: The impact of the intervention group on all measured variables (N = 148). Note. T1 = pre-intervention. T2 = post-intervention. Bold pathways are significant at $p < .01$, dotted pathways are not significant. Factor loadings and estimators (β) are standardized.

In summary, participants in the emotional education program scored lower on cyberbullying than the control group immediately after the intervention program had finished, controlling for the effect of baseline levels on all variables. However, the changes at T2 in emotional competences and life satisfaction were not statistically significant. The model accounted for 48% of the variance of cyberbullying.

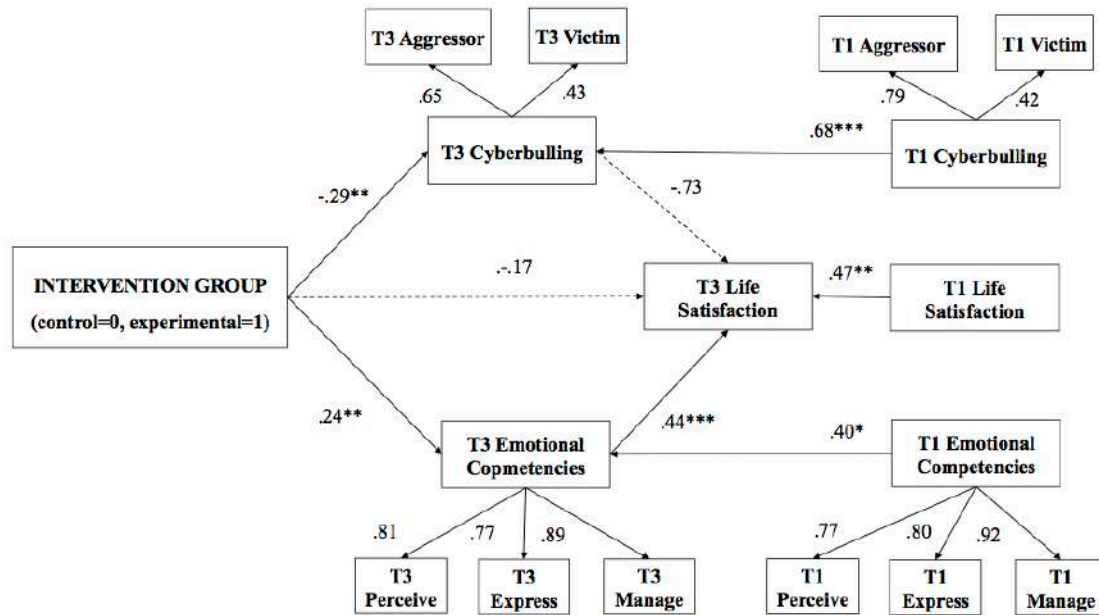


Figure 2 Path analysis at follow-up with mediation: The impact of the intervention group on all measured variables at follow-up (N = 148). Note. T1 = pre-intervention. T3 = follow-up. Bold pathways are significant at $p < .01$, dotted pathways are not significant. Factor loadings and estimators (β) are standardized.

The second model (Figure 2), which includes the indirect effects of the intervention group on life satisfaction through cyberbullying and emotional competencies in T3, fits the data better than the non mediation model: $\chi^2: 77.25$ ($df: 47$); $p < .05$; CFI: .95; TLI: .91; RMSEA: .06 [.04-.08]; SRMR: .06. With regard to the mediation model, the intervention group predicted low levels of cyberbullying T3 and high levels of emotional competence T3, while the direct effect to life satisfaction T3 was not statistically significant, indicating complete mediation. However, the indirect

effect from the group predicted higher levels of life satisfaction T3 mediated by emotional competencies T3, while the indirect effect mediated by T3 cyberbullying was not significant (Table 3).

In summary, emotional competence mediates the relationship between the intervention group and life satisfaction over six months. In other words, participants in the emotional education program with better emotional competencies scored higher in life satisfaction than the control group at follow-up, controlling for the effect of the initial levels of both variables. However, the changes in cyberbullying were not related to the changes in life satisfaction. The mediation model explains 52% of the variance in cyberbullying and 32% of the variance in emotional competence. With respect to indirect effects, the total effect represented 14% of the variance of life satisfaction.

DISCUSSION

Different intervention programs have been designed and implemented to prevent school violence, both traditional (bullying) and via mobile phones and the Internet (cyberbullying), as well as conflicts between peers in the classroom, as they endanger the successful intellectual and social development of students (Del Rey et al., 2018; Garaigordobil et al., 2016). Of the programs for adolescents that focus on the social-emotional competencies proposed in the literature, few have evaluated their effectiveness, focusing on cyberbullying behaviors, in follow-up evaluations (Castillo-Gualda et al., 2018). Taking into account these gaps in the literature on school interventions, the objectives of the present study were to implement an emotional education program and to evaluate its immediate and follow-up effectiveness in promoting peer coexistence, assessed through cyberbullying behaviors, and subjective well-being. It was also intended to identify the process by which the development of

emotional skills promotes peer coexistence and subjective well-being during adolescence.

In relation to the first hypothesis, the program was not effective in developing emotional competencies at the follow-up in the intervention group compared to the control group. The intervention group significantly improved their ability to perceive, understand and regulate emotions, although this result was not pronounced immediately after the intervention, only at follow-up. This may be because the knowledge and experiences gained during the program did not have an immediate impact on adolescents. It seems that the social-emotional skills need to be established and matured over time, put into practice in everyday life and thus integrated into one's own repertoire. These results are in line with the literature that indicates that interventions in the school setting can be effective in developing emotional competencies and strategies in adolescents to better perceive, express and regulate emotional responses (Coelho et al., 2016; Sánchez-Calleja et al., 2016).

In addition, the results support the second hypothesis that the intervention program would be effective in promoting coexistence in the classroom by reducing the incidence of cyberbullying longitudinally. In this sense, the adolescents who participated in the program reported fewer threatening and humiliating behaviors via mobile phone and the Internet compared to the control group, both immediately after the program ended and after some time had passed. Thus, the emotional education program PREDEMA proved to be effective as a short-term and long-term cyberbullying prevention program in a population as vulnerable as the adolescent. The benefits of social-emotional interventions on bullying have been shown in previous studies (e.g. Del Rey et al., 2018; Espelage & Hong, 2017; Garaigordobil, 2016; Tokunaga, 2010). These programs have used different theoretical approaches and methodologies when

designing effective interventions to reduce both mobile phone and Internet aggressions as well as cybervictimization in the classroom.

With regard to the third scenario, the intervention program promoted long-term subjective well-being, specifically satisfaction with life for adolescents. Our results indicated a significant improvement in the assessment of the positive aspects they have in their lives when appreciating their own competencies at different levels compared to the control group. These benefits were evident a few months after the intervention. One possible explanation could be the impact that one's own emotional competencies have on well-being, as both show their effect over time (Sánchez-Álvarez, 2016). In particular, emotional competencies mediated the effect of social-emotional intervention on life satisfaction. That is, as soon as adolescents were able to integrate their new knowledge and emotional competencies into their lives, their satisfaction with general aspects of their lives also increased, appreciating the new resources and strategies they had acquired to become better involved in the classroom and maintain positive relationships with peers (Geng, 2016).

In our opinion, this study is a pioneering one that examines the mechanisms that explain the benefits of an emotional education program on the well-being of participants using longitudinal postintervention and follow-up data. In this case, the protective factors of peer coexistence and psychological well-being are examined by considering the processes that may explain their effectiveness (Durlak et al., 2011). In addition, our results provide evidence of the benefits of developing emotional competencies in adolescents, a particularly key evolutionary stage for future personal and intellectual growth. A better understanding of the predictors and mechanisms of subjective well-being in adolescence is very relevant because the mere prevention of problematic and

aggressive behaviors does not necessarily imply the presence of mental health and psychological adjustment in adolescents (Davis & Humphrey, 2012).

Our results support the revised model of emotional intelligence (Mayer et al., 2016) that considers emotional intelligence as the ability to solve interpersonal problems by recognizing the emotional needs of peers, understanding the meaning of emotions and their implications for the behavior of others, managing one's own emotions and those of others to achieve desired emotional states in oneself and in those around one. In this sense, adolescents are more likely to resort to aggressive behavior when they are unable to regulate their unpleasant emotional states and resolve interpersonal conflicts (García-Sancho et al., 2017). According to this theory, people with high levels of emotional competence have greater social support by maintaining strong and healthy bonds with their friends, which protects them from being isolated and helpless in the face of sudden and prolonged aggression (Baroncelli & Ciucci, 2014; Peachey et al., 2017). In contrast, adolescents with few emotional skills are more likely to be victims of bullying and cyberbullying because they have fewer resources and social-emotional strategies to successfully confront threats and humiliations (Extremera et al., 2018).

In summary, our study has different strengths, including a longitudinal design with three evaluations (pre- and postintervention and a 6-month follow-up), a quasi-experimental design with an experimental and control group, random assignment of classrooms to experimental conditions and rigorous analysis of results using path analysis.

Limitations and future research

Although the results of this study are promising, they must be interpreted in light of some limitations, which might affect external and internal validity of our findings. First, all data used in the study were self-reported, implying a bias of social desirability and increasing the likelihood that relationships would inflate due to the variance of the shared method (Brackett et al., 2006). Future studies should also include other forms of evaluation of cyberbullying, as well as reports from teachers, which will provide a more reliable and comprehensive picture of indicators of coexistence among adolescents. Second, this study was conducted with a sample of Spanish youth, the results may differ from adolescents in other countries with different school systems and/or cultural contexts. Therefore, it would be advisable for future lines of research to use a cross-cultural design to replicate the results, as well as to apply and validate the intervention program with participants from multiple countries. Third, the sample might be biased and only partially representative for the broader population of Spanish adolescent, due to sampling procedures of convenience and dropout effects, decreasing sample size. Finally, in order to improve external validity, future research should consider using a more systematic sampling plan and take actions to avoid participants to abandon the study early.

Conclusions and practical implications

Despite these limitations, this study makes an important contribution to the literature on interventions in emotional competence with longitudinal data. Our findings indicate that the emotional education program has important implications from two perspectives: promoting peer coexistence in the classroom by reducing cyberbullying and improving the subjective well-being of adolescents in a school setting. Considering that emotional skills and abilities are a predictor of good academic performance, coping

strategies, and well-being (Brackett et al., 2011; Geng, 2016; Sánchez-Álvarez, 2016), the emotional education program may be a valuable intervention for adolescent mental health at this critical developmental stage (McRae et al., 2012).

These findings will help design programs to prevent bullying in the school environment, supporting psychosocial functioning and the well-being of adolescents. In addition, our results provide a better understanding of the processes involved in the effects of adolescent interventions. In light of these findings, emotional education intervention and prevention programs are appropriate and acceptable for adolescents and should be included in school education plans to increase student self-efficacy and facilitate academic success (Taylor et al., 2017).

The same data can be used by teachers and school counselors to identify adolescents' social and emotional strengths, their interests and concerns when considering implementing a SEL program such as PREDEMA. To increase the likelihood of successful implementation, future studies should determine whether the program is more or less effective for students with high-risk, identify optimal conditions (location, timing, number of participants) for the intervention, generate a climate of respect among students and make adjustments without harming the integrity of the program (Torrente et al., 2016). Drawn by our own experience and in accordance with others (Lavy & Eshet, 2018), we suggest that educators might consider to engage in a previous training in social-emotional skills themselves. They could then promote these competences in their students in the classroom acting as a socio-emotional role model. , before teaching students about these skills.

This would allow progress to be made in understanding the impact of the development of emotional competencies at the inter- and intrapersonal levels compared to previous studies with short-term interventions and cross-sectional data (e.g. Del Rey,

et al. 2018; Garaigordobil et al., 2016). In addition, this study makes an important contribution to the existing literature that supports the role of emotional competencies in peer-to-peer coexistence by preventing the prevalence of cyberbullying behaviors and promoting satisfaction with life among adolescents (Castillo-Gualda et al., 2018; Di Fabio & Kenny, 2016; Peachey et al., 2017; Torrente, et al., 2016)

Author contributions:

All authors participated and contributed in study design, data collection, statistical analysis, interpretation of data, and drafted the manuscript. Besides, all authors read and approved the final manuscript.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.02050/full#supplementary-material>.

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**Study 5: Impact of emotional intelligence on burnout among Spanish
teachers: a mediation study**

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Abstract

The topic of emotional intelligence and its association with work-related stress among teachers has been gaining importance in education research. The objective of this study was to examine whether positive and negative affect mediate the interplay between emotional abilities and burnout syndrome. Using structural equation modeling with self-report data from 200 schoolteachers, aged between 22 to 64 years ($M = 44.97$; $SD = 9.31$; 73.50% women), the study design was exploratory and cross-sectional. Results showed significant direct and indirect effects of mood clarity and emotional repair on all four burnout dimensions, while attention did not predict teacher burnout. As hypothesized, positive affect mediated the interplay between emotional intelligence and enthusiasm toward the job, while negative affect mediated the association between emotional abilities and psychological exhaustion, indolence and guilt. Our findings suggest that enhanced emotional abilities are directly related to lower levels of work-related stress. Nevertheless, the mediation model demonstrated that negative affect restrains the positive influence of emotional intelligence on burnout symptoms, which could lead to more vulnerability for negative health outcomes in teachers who are working in a stressful environment, dealing with conflicts in the classroom on a daily basis.

Keywords: emotional intelligence (EI), teacher burnout, work stress, positive and negative affect, well-being, structural equation modeling (SEM)

Introduction

Research on teacher burnout is still a major concern within the public education system. The complexity of the construct has been studied over the last 30 years placing the individual stress experience within the school context of teachers' relation to their work (Friedman, 2002; Kyriacou, 2001; Maslach, Schaufeli, & Leiter, 2001). One of these problems is work-related stress, which might impact emotional stability, physical endurance and motivation (Mabry, 2005). In response to chronic stressful conditions in the workplace, teachers might suffer from burnout, as a consequence of maladjustment to an adverse environment (Mulholland, McKinlay, & Sproule, 2013). Burnout refers to progressive emotional, physical and psychological exhaustion, which negatively impacts teachers' performance and efficiency (Mäkikangas & Kinnunen, 2016), and might lead to job insecurity (Glambek, Skogstad, & Einarsen, 2018).

Burnout is considered a primary health concern among school teachers, since it influences psychological and physical endurance (Aparisi, Torregrosa, Ingles, & Garcí, 2019; Deligkaris, Panagopoulou, Montgomery, & Masoura, 2014). The teaching staff deals with stress through coping strategies, but they might fail in the long-term, therefore their vulnerability to emotional problems increases (Philippe, Lopes, Houlfort, & Fernet, 2019). One of the main outcomes of burnout is an decrease in enthusiasm toward work: it refers to a lack of interest about reaching work-related goals, and it usually happens when teachers lose their intrinsic motivation and work engagement (Figueiredo-Ferraz, Gil-Monte, & Grau-Alberola, 2013). Indolence is another of the main burnout fallouts: it refers to indifference toward one's job role, and it appears as negative attitudes, intolerance and cynicism (Gil-Monte & Zuñiga Caballero, 2010). Also, teachers may suffer from psychological exhaustion, due to the constant environmental stressors (Skaalvik & Skaalvik, 2017). When stress becomes part of

routine in the workplace, it might severely impact emotional and physical health (Katz, Harris, Abenavoli, Greenberg, & Jennings, 2018; Richards, Washburn, & Hemphill, 2017). Teachers may also experience guilt about their behaviour – especially toward their colleagues and students – and inefficacy at work (Abós, Sevil, Sanz-Remacha, Corral, & Estrada, 2019).

According to Mayer and Salovey (1997), emotional intelligence (EI) is the ability to perceive, express, facilitate and understand emotions, and it's associated with quality interpersonal relationships in their everyday lives and on the job (Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014; Mayer, Caruso, & Salovey, 2016). Teachers with higher EI are less likely to suffering from burnout and tend to experience more job satisfaction (Extremera, Durán, & Rey, 2007; Platsidou, 2010). EI is positively associated with self-efficacy, which relates to teachers' enthusiasm, interest and positive attitude toward their job (Tolson, Martin, Miller, Rounds-Bryant, & Koenig, 2015). In teaching professionals, EI predicts burnout and job satisfaction, thus, training EI might be a way of mitigating physical and psychological exhaustion (Bauer & Silver, 2018; Hong & Lee, 2016; Hopman et al., 2018).

It is a common belief that teachers who possess the ability to perceive, understand, express and regulate emotions accurately are considered be more effective in achieving academic goals, maintaining social relationships, and generating a favorable classroom environment and discipline practices (Castillo-Gualda, García, Pena, Galán, & Brackett, 2017; Di Fabio & Kenny, 2016; Pryce & Frederickson, 2013; Sutton, Mudrey-Camino, & Knight, 2009). In addition, most teachers have experienced the repercussions of poor emotional abilities, for instance, the teacher-student relationship may be affected by an inappropriate display of disrespect for student's feelings (Burić, Slišković, & Penezić, 2019; Poulou, 2017).

Affectivity is also a significant factor for burnout coping (Francis, Village, Robbins, & Wulff, 2011). Positive and negative affect are dispositions to experience pleasant or aversive affective states, the tendency to experience positive or negative feelings (Donahue, Goranson, McClure, & Van Male, 2014). Teachers who experience more positive and less negative affect in the classroom, account for better attitudes toward work and greater school engagement (Gustafsson, Skoog, Podlog, Lundqvist, & Wagnsson, 2013), as well as successful adaptation to stress (Gloria, Faulk, & Steinhardt, 2013). In addition, elevated positive affect and reduced negative affect might be the mechanism through which EI impacts upon emotional exhaustion (Peña-Sarrionandi, Mikolajczak, & Gross, 2015; Petitta, Jiang, & Härtel, 2017; Vergara, Alonso-Alberca, San-Juan, Aldás, & Vozmediano, 2015).

Previous studies showed that teacher's affective balance is strongly associated with EI (Fernández-Berrocal, Gutiérrez-Cobo, Rodríguez-Corrales, & Cabello, 2017; Thompson et al., 2011). In addition, positive and negative affect have been identified to function as a mediator in the link between EI and burnout (Augusto-Landa, López-Zafra, Berrios-Martos, & Pulido-Martos, 2012; Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010). Consequently, EI seems to be a protective factor of chronic work-related-stress, which may lead to burnout syndrome, by reducing the experience of emotional exhaustion (Rey, Extremera, & Pena, 2016; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015; Serrano & Andreu, 2016). Hence, current research should address the question how teachers with high EI might be able to reduce their levels of burnout by experiencing more positive and less negative affects (Boden & Thompson, 2017; Mérida-López & Extremera, 2017). A better understanding of the decreasing effect of EI on burnout symptoms or enhancing teachers to return to work could be the

key for the development of effective burnout intervention and prevention (Ahola, Toppinen-Tanner, & Seppänen, 2017; Dolev & Leshem, 2017; Gálvez-Iñiguez, 2018).

The purpose of this study was to evaluate burnout syndrome among schoolteachers and whether positive and negative affect mediate the relationship between EI and work-related stress. We hypothesized 1) EI may be negatively related to burnout, 2) EI would be positively related to positive affect and negatively related to negative affect, 3) both positive and negative affect would relate correspondingly to burnout, and 4) affectivity may mediate the interplay between EI and teacher's burnout.

Method

Participants

Self-report data were collected using a cross-sectional study design with incidental sampling. The sample comprised 200 schoolteachers (73.50% female) from private and public schools in autonomous community of Valencia, Spain. Teacher's age ranged from 22 to 64 years, the mean age was 44.97 ($SD = 9.31$). The teachers of our sample represent all areas of the Spanish educational system: 8.38% were preschool teachers who taught students between 3 and 6 years old; 28.80% elementary teachers who taught students between 6 and 12 years old; 28.27% secondary schoolteachers who taught students between 12 and 16 years old; 20.94% high school teachers who taught students between 16 and 18 years old; 6.81% professional training teachers who taught students from 16 years old and 6.81% were school counselors. Teaching experience among participated was distributed as follows: 6.15% new teachers with 1-2 years of experience, 24.62% teachers with 3-10 years of experience, 29.74% teachers with 11-20 years of experience, 25.13% teachers with 21-30 years of experience, and 14.36% teachers with more than 30 years of experience. With respect to ethnicity, all participants had the Spanish nationality.

Instruments

All instruments used in this survey are well-established and were validated in Spanish population. The reported indices of reliability (Cronbach's α) are based on the current sample.

Emotional Intelligence was measured by the Trait-Meta-Mood-Scale (TMMS-24; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). We used the Spanish short-version (Fernandez-Berrocal & Extremera, 2004), which includes 24 items in order to assess people's belief and attitude toward basic aspects of emotional abilities from an interpersonal perspective. The instrument was based on the model of EI by Mayer and Salovey (1997) who differentiate three dimensions: 1) attention to feelings, 2) mood clarity, and 3) emotional repair. It comprises three subscales each with 8 items and 5-point Likert scales ($1=strongly\ disagree$; $5=strongly\ agree$): Attention (e.g., "I do not pay much attention to my feelings"), Clarity (e.g., "I am often aware of my feelings on a matter"), and Repair (e.g., "When I become upset I remind myself of all the pleasures in life"). Reliability indices showed acceptable internal stability for all three subscales ($\alpha = .88, .88$ and $.92$ respectively).

Positive and Negative Affect were measured by the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010). We utilized the 12-item version adapted by Silva and Caetano (2013). The instrument assesses pleasant (positive affects) and unpleasant (negative affects) feelings on a 5-point Likert scale ($1=never$; $5=always$). The two subscales (6 items each) presented acceptable reliability indices ($\alpha = .93$ and $.86$).

Burnout was assessed with the Spanish Burnout Inventory (SBI; Gil-Monte, 2011), which is based on the theoretical model that underlies the importance of chronic work-related stress and complicated interpersonal relationships for burnout outcome

(Figueiredo-Ferraz, Gil-Monte, & Grau-Alberola, 2013). The questionnaire is a 45-item self-reported measure comprised by four subscales: Enthusiasm toward the job ($\alpha = .91$; e.g. “I see my job as a source of personal accomplishment”), Psychological exhaustion ($\alpha = .83$; e.g. “I feel emotionally exhausted”), Indolence ($\alpha = .75$; e.g. “I don’t like taking care of some students”), and Guilt ($\alpha = .71$; e.g. “I regret some of my behaviors at work”). Participants were requested to answer on a 5-point Likert scale ($0=never; 4=very\ frequently,\ every\ day$). The internal stability was acceptable for all four subscales.

Procedure

Previous to the study, we received the approval of the Ethics Committee of our research institution (H1385330676977) and all procedures followed the ethic code established by the Helsinki Declaration (World Medical Association, 2013). After meeting with the principal of each school, teachers were informed about the purpose of the study and asked for their consent to participate voluntarily. Data were collected in small groups during school days. Two trained psychologists supervised the assessment of the survey; anonymous coding was used to guarantee confidentiality of teachers’ responses.

Data Analysis

Besides basic descriptive statistics and Pearson correlations using IBM SPSS Statistics 24, we performed structural equation modeling (SEM) with mediation analyses. We estimated three separated models, considering possible suppressor effects by cause of high intercorrelation among the subscale of the TMMS-24 (Cheung & Lau, 2008). Specifically, attention to feelings, mood clarity, and emotional repair were tested independently as predictors of the four indicators of burnout using positive and negative affect as mediators.

All analysis were conducted with Mplus, version 7.0 (Muthén & Muthén, 2017) and the maximum likelihood estimation (MLR). Following recommendation by MacKinnon (2008), confidence intervals around the estimates have been constructed to assess the effects of mediators (biased-corrected bootstrap), which reduced bias caused by the non-normality in the sampling distribution of indirect effects (Cheung, 2009). The model was estimated using five primary fit indices (Hu & Bentler, 1999): Robust Chi-Square Test of Model Fit (χ^2), Comparative Fit Index (CFI), Tucker-Lewis Index (TFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residuals (SRMR). To account for missing data the models were estimated with full information maximum likelihood (FIML). All results were reports as recommended by the Reporting Standards for Studies Using Structural Equation Modeling (Appelbaum et al., 2018).

Results

Correlations

Pearson's correlation analysis showed that EI was positively related to positive affect, and negatively to negative affect, except attention. All three EI subscales correlated positively with enthusiasm toward the job. Clarity and repair showed a negative correlation with indolence and psychological exhaustion. Positive affect correlated positively with enthusiasm toward the job, and negatively with indolence, psychological exhaustion and guilt; burnout subscales were inversely and significantly related to negative affect (Table 1).

The burnout subscales were significantly intercorrelated. Enthusiasm showed a negative correlation with all the others burnout subscales, while Indolence, Exhaustion and Guilt showed positive intercorrelations (Table 1).

Table 1
Descriptive Statistics and Intercorrelations for All Measures

	1	2	3	4	5	6	7	8	9
1. Attention	–								
2. Clarity	.40**	–							
3. Repair	.27**	.56**	–						
4. Positive affect	.14	.35**	.41**	–					
5. Negative effect	-.04	-.30**	-.29**	-.53**	–				
6. Enthusiasm	.27**	.21**	.41**	.44**	-.31**	–			
7. Indolence	-.14	-.22**	-.27**	-.37**	.45**	-.45**	–		
8. Exhaustion	-.06	-.18*	-.24**	-.36**	.48**	-.39**	.52**	–	
9. Guilt	.03	-.13	-.12	-.21**	.24**	-.10	.31**	.30**	–
<i>M</i>	26.43	27.04	28.35	22.68	13.64	3.34	1.01	1.58	1.03
<i>SD</i>	5.66	5.08	5.91	3.53	3.37	.66	.57	.80	.53
α	.88	.88	.92	.93	.86	.91	.75	.83	.71

Note. $N_{Women} = 147$. $N_{Men} = 53$. *M* = Mean, *SD* = Standard Derivation, α = alpha de Cronbach

* $p < .05$. ** $p < .01$.

Table 2

	Model 1: Attention			Model 2: Clarity			Model 3: Repair		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Direct Effects									
EI subscale → Positive affect	0.10	0.09	.09	0.30	0.07	.40***	0.26	0.06	.45***
EI subscale → Negative effect	0.03	0.12	.02	-0.32	0.07	-.37***	-0.23	0.05	-.34***
Positive affect → Enthusiasm	0.42	0.13	.37**	0.45	0.13	.40**	0.36	0.13	.32*
Negative affect → Indolence	0.50	0.12	.47***	0.48	0.13	.45***	0.48	0.12	.45***
Negative affect → Exhaustion	0.62	0.12	.55***	0.62	0.13	.55***	0.61	0.12	.54***
Negative affect → Guilt	0.31	0.12	.34**	0.32	0.12	.36**	0.32	0.12	.36**
Indirect Effects									
Positive affect → Enthusiasm	0.04	0.04	.03	0.14	0.05	.16**	0.09	0.04	.14*
Negative effect → Indolence	0.01	0.06	.01	-0.16	0.05	-.17**	-0.11	0.04	-.15**
Negative effect → Exhaustion	0.02	0.07	.01	-0.20	0.05	-.20***	-0.14	0.04	-.19***
Negative effect → Guilt	0.01	0.04	.01	-0.10	0.04	-.13*	-0.07	0.03	-.12*
Model-fit indices									
χ^2 (df)	1114.73(717)			879.964(642)			1033.900(679)		
CFI	.90			.93			.91		
TFI	.90			.93			.90		
RMSEA (90% CI)	.05 (.05-.06)			.04 (.04-.05)			.05 (.05-.06)		
SRMR	.08			.06			.06		

Note. *B* = unstandardized path coefficients; *SE* = Standard Error. β = standardized path coefficient. χ^2 = Chi-Square Test of Model Fit, df = degrees of freedom. CFI = Comparative Fit Index. TFI = Tucker-Lewis Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Square Residuals.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Mediation model analysis

We analyzed three separated mediation models, one for each EI subscale: attention (Figure 1), clarity (Figure 2) and repair (Figure 3). All three models revealed good model fit indices (Table 2).

Model 1: Attention

The direct effects between attention and positive and negative affect were non-significant, as well as the relation between attention and three of four of the burnout subscales: indolence, exhaustion and guilt. However, attention predicted significantly enthusiasm toward the job. These results indicate that teacher’s ability to attend and value their feelings was neither associated with their affective balance nor with most burnout symptoms. Given the previous results, the indirect mediating effects for positive and negative were non-significant either.

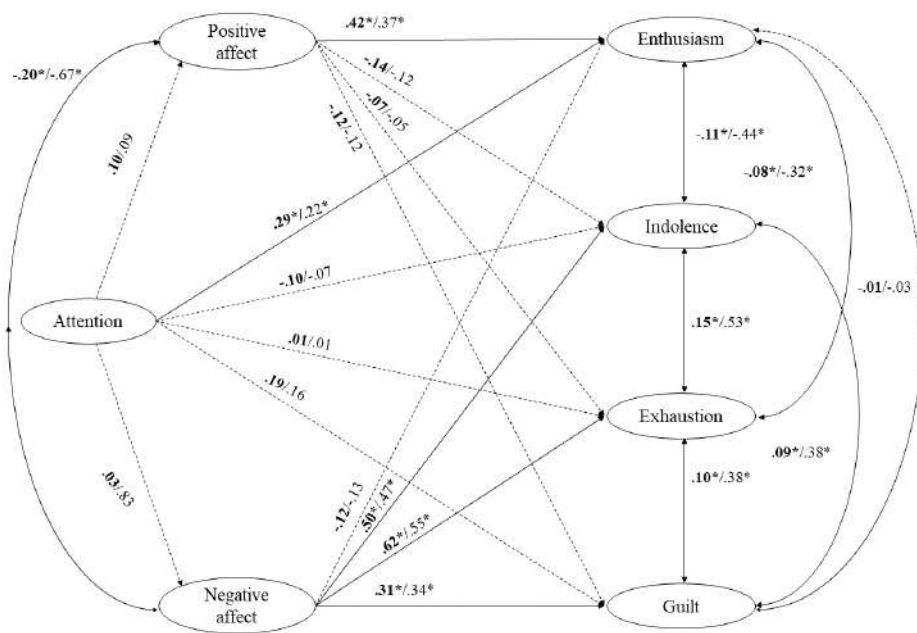


Figure 1. Model 1: the interplay between attention to feelings and burnout mediated by positive and negative affect. Significant effects shown as unstandardized coefficients (B) in first position and standardized coefficients (β) in second position, bold pathways are significant at $p < .01$, dotted pathways are not significant; factor loadings are standardized.

Model 2: Clarity

The direct effects between clarity and positive and negative affect were significant. Furthermore, positive affect significantly predicted enthusiasm, while negative affect had a significant effect on indolence, exhaustion and guilt. In other words, teachers who feel clear about their emotions, experience positive feelings more often and negative feeling less frequently, which are related to less emotional and physical stress symptoms. However, there was a non-significant relation between clarity and all burnout subscales, indicating full mediation.

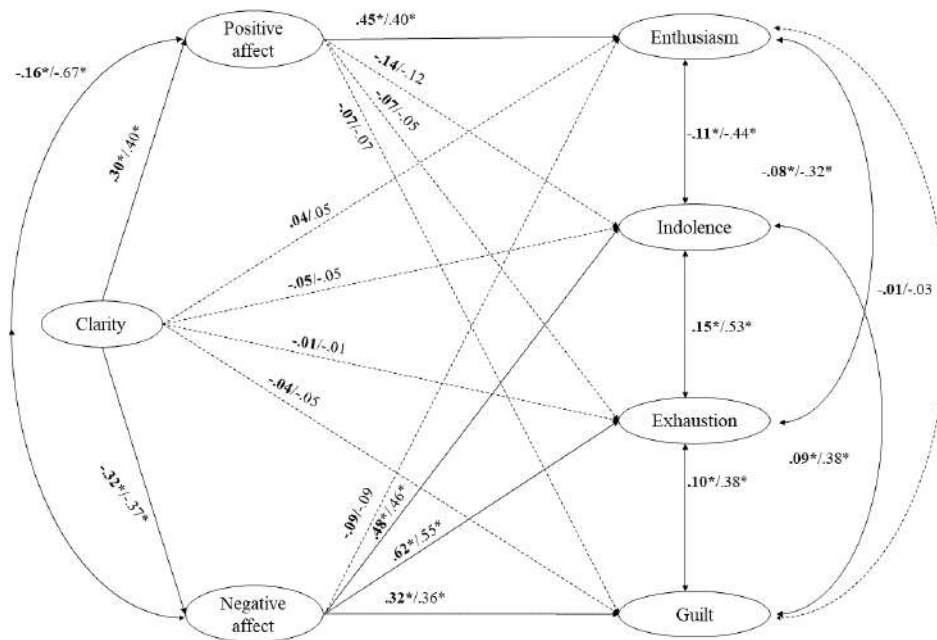


Figure 2. Model 2: the interplay between mood clarity and burnout mediated by positive and negative affect. Significant effects shown as unstandardized coefficients (B) in first position and standardized coefficients (β) in second position, bold pathways are significant at $p < .01$, dotted pathways are not significant; factor loadings are standardized.

The indirect effect of clarity on enthusiasm toward the job was fully mediated by positive affect, while the indirect effect on indolence, psychological exhaustion and guilt were fully mediated by negative affects. Overall, the combined effects for this mediation model explain about 24% of the variance of enthusiasm ($R^2 = .24, p = .003$), 31% of the variance of indolence ($R^2 = .31, p < .001$), 34% of the variance of psychological exhaustion ($R^2 = .34, p = .003$), and 18% of the variance of guilt ($R^2 = .18, p = .007$). These results indicate that negative affect functions as a mediator dropping the positive effect of clarity on negative burnout symptoms in teachers. In addition, positive affect fully explains the association between mood clarity and enthusiasm toward the job.

Model 3: Repair

The direct effects between repair and positive and negative affect were significant. Positive affect was a significant predictor of enthusiasm, and negative affect significantly predicted indolence, exhaustion and guilt. That indicates that teachers who use their cognitive skills to repair negative moods, experience pleasant feelings more often than unpleasant feelings, which are related to less burnout. Furthermore, there was a significant association between repair and enthusiasm toward the job, indicating partial mediation. However, the relation with indolence, exhaustion and guilt was non-significant, indicating full mediation.

The indirect effect of repair on enthusiasm toward the job was partially mediated by positive affect. The relation between emotional repair and indolence, psychological exhaustion, as well as guilt was fully mediated by negative affect. Overall, the combined effects for this mediation model explain about 28% of the variance of enthusiasm ($R^2 = .28, p < .001$), 31% of the variance of indolence ($R^2 = .32, p < .001$), 35% of the variance of exhaustion ($R^2 = .35, p < .001$), and 19% of the variance of guilt

($R^2 = .19, p = .006$). These results indicate that negative affect functions as a mediator dropping the positive effect of repair on teacher's burnout (indolence, psychological exhaustion and guilt). Furthermore, the relationship between repair and enthusiasm toward the job is only partially mediated by positive affect, indicating a weaker mediation effect.

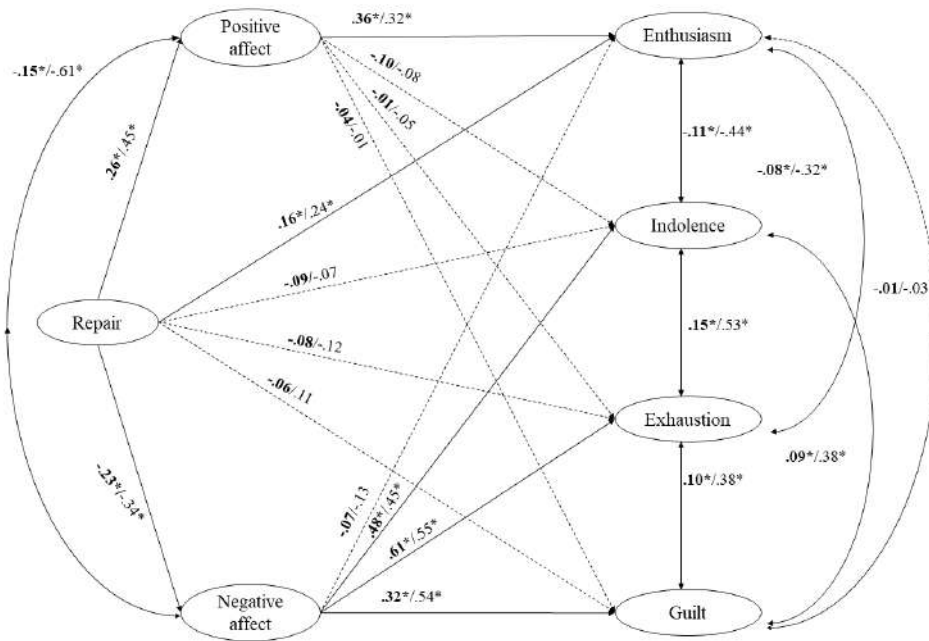


Figure 3. Model 3: the interplay between emotional repair and burnout mediated by positive and negative affect. Significant effects shown as unstandardized coefficients (B) in first position and standardized coefficients (β) in second position, bold pathways are significant at $p < .01$, dotted pathways are not significant; factor loadings are standardized.

Discussion

Traditionally, research has examined the impact of work-related factors on schoolteachers' perceived stress and burnout (Kyriacou, 2001; Maslach, Schaufeli, & Leiter, 2001). More recently, research has focused on personal resources, including social and emotional abilities, examining the role of EI in educational context. Previous research has focused on the association between EI and work-related stress, including burnout syndrome, and how this relationship may be altered by the experience of positive and negative feelings. This study extends earlier findings by exploring in depth the mediating role of affectivity on the interplay between the three dimensions of EI separately and the four indicators of burnout.

In partial support for our first hypothesis, we observed that two of the three dimensions of EI (mood clarity and emotional repair) were negatively related to indolence and psychological exhaustion, but not guilt. Enthusiasm toward the job relates positively to all three subscales of EI. There may be several possibilities to explain these findings. According to Maslach, Schaufeli, and Leiter (2001), burnout is a complex construct with different dimensions that are determined by personal and interpersonal factors. Previous research showed that burnout might be reduced due to the primarily use of adaptive coping with work-related stress, for instance through emotional regulation strategies (Kyriacou, 2001). Thus, the ability of emotional repair entails emotional regulation in both personal and interpersonal situations. Teachers with higher emotional repair, regulate their own emotions successfully and help others to do so. Hence, they are more likely to overcome stressful situations effectively, which in turn lead to less psychological exhaustion (Rey, Extremera, & Pena, 2016). Teachers with higher mood clarity might also be less affected from burnout outcomes because clarity contributes to a better understanding of one's own emotional reactions and those

of others. This ability might facilitate communication about complex emotions and mood changes with students and colleagues, to the extent that it enhances healthy relationships and prevents conflict and tension (Mayer, Caruso, & Salovey, 2016). Indeed, the relationship between high levels of emotional clarity and repair for preventing burnout symptoms – by feeling more control over stressful tasks at school, and employing more constructive strategies to cope with stress – has been previously established (Hopman et al., 2018).

The weak association between attention to feelings and burnout may be attributed to the EI subscale and how it has been measured. In line with previous studies, an adequate level of attention to feelings is needed for a proper understanding and regulation of emotions, whereas constant attention might be dysfunctional (R. J. Thompson et al., 2011). Nevertheless, high levels of attention combined with high levels of clarity and repair showed beneficial effects on well-being. Hence, the combination of all three EI dimensions ensure that attention to feelings might preempt negative mental health outcomes and psychopathology (Boden & Thompson, 2017; Serrano & Andreu, 2016; Vergara et al., 2015).

It is less clear why all three dimensions of EI were unrelated to guilt. Guilt is considered the appearance of unpleasant feelings and negative attitudes toward the job, as well as in relation to the people with whom teachers are working with (Figueiredo-Ferraz et al., 2013). Hence, individual difference in EI may not have a direct impact on the experience of guilt. Moreover, this experience is associated with the feeling of becoming cold and cynical in their interactions with others, as if a moral standard has been violated. However, it has not been assessed how well one is coping or dealing with these unpleasant and remorseful feelings (Gil-Monte et al., 2017).

In partial support of our second hypothesis, higher mood clarity and emotional repair, but not attention to feelings, were related with more positive and less negative affect. In line with earlier findings, the ability of understanding one's own emotions and regulating them adequately is related to the experience of less negative feelings and more positive feelings (Peña-Sarrionandi, Mikolajczak, et al., 2015). It appears that teachers who have a clear idea about their mood states and easily achieve emotional repair, are more skilled at generating pleasant emotions by using cognitive strategies, for instance positive reappraisal and refocusing to undo unpleasant emotional experience (Brackett et al., 2010; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015).

The nonsignificant association between attention to feelings and affectivity may have a few possible explanations. It has been suggested that becoming more aware of one's emotional states, both pleasant and unpleasant, might not be beneficial in terms of mental health (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015). For instance, attention to feelings was reported to be strongly related to negative rumination, which in turn leads to emotional distress and lack of well-being (Boden & Thompson, 2017).

In support of our third hypothesis, both positive and negative affect were associated with teacher's burnout. The results highlight the stronger association between positive affect and enthusiasm toward the job, while negative affect was more related to indolence, psychological exhaustion and guilt. Early research showed that pleasant feelings might be an emotional regulation strategy themselves as they accomplish desired emotional states and experiences in oneself and in others (Sutton, Mudrey-Camino, & Knight, 2009). Indeed, positive emotions have a protective function in situations of pressure and stress, which might be helpful for teachers to prevent burnout

and enhance job satisfaction (O'Boyle et al., 2011). Furthermore, unpleasant feelings are clearly a risk factor for teacher burnout. In line with recent findings, teachers who experience unpleasant emotional states, report more emotional exhaustion, a lack of motivation and pessimistic and cynic attitudes toward students and colleagues (Mérida-López & Extremera, 2017).

In full support of our last hypothesis, positive affect mediated the relationship between EI and enthusiasm toward the job, while negative affect mediated the link between EI and negative symptoms of burnout syndrome. In detail, the link between mood clarity and enthusiasm was fully mediated by positive affect. Similarly, emotional repair had a positive effect on enthusiasm, even when positive affect was included. In other words, teachers who understand their feelings without a doubt and are able to repair negative emotional states, are also more motivated with their work at school because there are able to elicit pleasant moods at the same time (Vergara et al., 2015). This finding suggests that clarity and repair have a beneficial indirect effect on teacher burnout through positive affect. Our findings highlight the key role of positive affect for positive job outcome and differ from prior research, which suggest that positive affect is mediating the interplay between EI and burnout in general (Augusto-Landa et al., 2012; Brackett et al., 2010).

As regard to negative affect, our results confirmed its mediating role between EI and psychological exhaustion, indolence and guilt. Specifically, the influence of mood clarity on negative burnout dimensions was fully mediated by negative affect. In much the same way, negative affect drops the positive influence of emotional repair on burnout symptoms to zero. That means that although teacher perceive their mood accurately and better at emotional prepare, they might not be able to prevent burnout when they experience unpleasant feelings simultaneously. Our results showed that

negative affect has an important impact on teacher's health, by restraining the positive influence of EI on burnout symptoms. The findings enhance recent research suggesting that increasing emotional abilities are directly related to lower levels of work stress (Extremera, Durán, & Rey, 2007; Platsidou, 2010), and may as well reduce the risk of job burnout (Rey, Extremera, & Pena, 2016). Nevertheless, negative affect drops this relationship, which could lead to more vulnerability for negative health outcomes in teachers who are working in a stressful environment, dealing with interpersonal conflict in the classroom on a daily basis (Pryce & Frederickson, 2013; Tolson et al., 2015).

The most important contribution of this mediation study is that positive affect partially mediated the interplay between EI dimensions mood clarity and emotional repair with enthusiasm toward the job. Negative affect fully mediated the link between such EI dimensions and psychological exhaustion, indolence and guilt. The present study corroborates earlier findings indicating that affective balance mediated the relationship between EI and teacher burnout (Brackett et al., 2010), indicating that higher EI appears to associate with more positive feelings and fewer negative feelings, consequently reducing the experience of chronic work stress (Mérida-López & Extremera, 2017).

This research transcends previous research in the study of EI dimensions to analyze emotional skills and abilities in three separate mediation models. Thus, these analyses allowed to examine how attention to feelings, mood clarity and emotional repair were individually related to positive and negative affect and each of the four burnout dimensions. Although previous studies reported that higher attention to feelings was related to less negative affect and teacher burnout (Augusto-Landa et al., 2012), our results did not confirm these associations. Nevertheless, our findings confirm the initial hypothesis about the indirect effects of mood clarity and emotional repair on teacher

burnout; expanding previous findings that affectivity is an effective mediator of this relationship.

This study, however, is not without some limitations. First, we utilized solely assessment tools based on self-report. Including performance-based ability tests and physiological indicators for the constructs in the study would provide additional evidence. Second, our data were cross-sectional and were collected in a limited geographic area in Valencia, Spain. To increase generalizability of results future research should utilize more representative sample of teachers. Therefore, further research should examine whether our findings may be replicated in other cultural contexts (Peña-Sarrionandi, Mikolajczak, et al., 2015). We also recommend considering a longitudinal design (Mérida-López & Extremera, 2017). Despite these limitations, our study provided important evidence and a greater insight was obtained as to the relationship between EI and teacher burnout and how this association may be mediated by positive and negative affect.

Conclusion

Teachers are confronted with interpersonal conflicts, motivational problems and personal challenges in their everyday practice, still little is known about the emotional aspects on teachers' experience (Pryce & Frederickson, 2013; Sutton et al., 2009). Our study expands previous research on the key role of EI and affect balance on important work-related outcomes such as burnout in the field of the teaching profession. Hence, our findings contributed to a better understating of EI and the possible mechanisms (positive and negative affect) by which EI may contribute to greater enthusiasm toward the job satisfaction and reduce burnout symptoms. For these reasons, the present study together with recent research on teachers' emotional skills and abilities (Gálvez-Iñiguez, 2018; Poulou, 2017), bear the witness to the need of prevention programs focusing on

developing emotional skills which might enhance positive health outcomes for teachers (Dolev & Leshem, 2017), including increases in subjective well-being (Ahola, Toppinen-Tanner, & Seppänen, 2017). Consequently, teachers may experience less work stress and greater job satisfaction, retire later from their profession, and be more self-efficient in the classroom (Hopman et al., 2018).

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**Study 6: Effects of an emotional-skill training to prevent burnout
syndrome in schoolteachers.**

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Effects of an emotional-skill training to prevent burnout syndrome in schoolteachers
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burnout en profesores]. *Ansiedad y Estrés*.

Introduction and Objectives

Work-related stress and emotional distress among schoolteachers are considered a serious concern in the educational context. Research has shown the beneficial effects of emotional abilities on burnout and psychological problems. Based on the ability model of emotional intelligence (Mayer, Caruso, & Salovey, 2016), we designed an emotional-skill training for schoolteacher intended to promote mental health and well-being.

Materials and Methods

The participants were 340 teachers (74% women), assigned randomly to experimental and control group. Data on burnout syndrome, emotional symptoms (depression, anxiety, stress), self-esteem and life-satisfaction were collected in three waves: before the training (T1), after the training (T2), and at six month follow up (T3). The training program consisted in five two-hour sessions, carried out during three months in groups of 15-20 teachers. Multivariate covariance analyses were carried out, followed by multiple hierarchical regression models.

Results

Results indicated that teachers, who participated in the training program, reduced burnout syndrome and emotional symptoms, while incrementing their self-esteem and life-satisfaction in comparison to the control group. These results at T2 were partially maintained at T3.

Conclusions

In light of these findings, burnout prevention programs based on emotional intelligence should be included in teachers professional development plans in order to promote their health and well-being.

Keywords

Emotional abilities, teacher burnout, intervention study, well-being, longitudinal

Introducción y Objetivo

El estrés laboral y el malestar emocional en los profesores están considerados una preocupación seria en el contexto educativo. La investigación muestra los beneficios de las habilidades emocionales sobre el burnout y los problemas psicológicos. Basado en el modelo de inteligencia emocional (Mayer; Caruso, & Salovey, 2016), diseñamos un programa de entrenamiento en habilidades emocionales para profesores con el objetivo de promover su salud mental y bienestar.

Material y Método

Los participantes fueron 340 profesores (74% mujeres), asignados aleatoriamente al grupo experimental y control. Los datos sobre el síndrome de burnout, síntomas emocionales (depresión, ansiedad, estrés), autoestima y satisfacción con la vida se recopilaron en tres fases: antes del programa (T1), después del programa (T2) y a los seis meses de seguimiento (T3). Consistió en cinco sesiones de dos horas, que se llevaron a cabo durante tres meses en grupos de 15-20 profesores. Se realizaron análisis de covarianza multivariados y modelos de regresión jerárquica múltiple.

Resultados

Los resultados indicaron que los profesores que participaron en la intervención disminuyeron su nivel de estrés laboral y de síntomas emocionales, aumentando su autoestima y satisfacción con la vida en comparación con el grupo control. Estos resultados en T2 se mantuvieron parcialmente en T3.

Conclusiones

A la luz de estos resultados, los programas de prevención del burnout basados en la inteligencia emocional deben incluirse en los planes de formación profesional para promover la salud y el bienestar de los profesores.

Palabras clave

Habilidades emocionales, burnout de los profesores, estudio de intervención, bienestar, longitudinal.

Introduction

A growing body of research in school settings has focused on teachers' physical and psychological problems due to work-related stress (burnout), which is common among educators in European countries (Bauer et al., 2006). In Spain, schoolteachers are one of the occupational groups most vulnerable to suffer from burnout, claiming an impairment of their mental health and emotional stability (Esteras, Chorot, & Sandín, 2014). Prevalence rates of teacher burnout vary considerably among studies, ranging between 8% and 19% when using a more rigid criterion for labeling a person as burned out (León-Rubio, León-Pérez, & Cantero, 2013). Although, burnout syndrome is a serious concern among male and female educators from all educational levels, stress levels are higher in teachers with teenage students (Mérida-López & Extremera, 2017).

Causes and consequences of burnout in schoolteachers

One of the main causes of burnout is the teacher-student relationship and its negative outcomes, such as an adverse classroom climate, students' misbehavior or teachers' perceived lack of self-efficacy in managing these disruptions (Hopman et al., 2018). Occupational stressors, such as poor coping resources, heavy workload and the scarce professional recognition are also potential burnout sources, especially when combined (Doménech, 2006). Hence, long-term stressful work conditions may have negative effects on teacher's health and well-being (Luceño-Moreno, Talavera-Velasco, Martín-García, & Martín, 2017).

It is a common believe that burnout causes mental health issues, such as depression or anxiety (Bauer et al., 2006). They can be triggered by stressful stimuli, in situations the individual feels unable to manage or lacks effective coping strategies, therefore experiencing emotional distress (Doménech, 2006). Research indicates that burnout mediates the relationship between work stress and emotional dysfunction

(Delhom, Gutierrez, Mayordomo, & Melendez, 2017). Unfortunately, the education system does not cover schoolteachers' needs as they frequently suffer psychological, social and economical problems (Hernández-Amorós & Urrea-Solano, 2017). For this reason, intervention programs become crucial in order to provide specific training and resources to alleviate burnout (Ahola, Toppinen-Tanner, & Seppänen, 2017).

Relationship with emotional intelligence

In recent years, studies of personal resources such as emotional intelligence have increased exponentially, evidencing the beneficial effects on burnout and negative mood states (Lavy & Eshet, 2018). Emotional intelligence theory (Mayer, Caruso, & Salovey, 2016) which describes the affective and cognitive mechanisms that process emotional information, considers four interrelated abilities: perceiving, expressing, understanding and managing emotions.

High Emotional intelligence provides emotional skills associated with increased well-being, job and life satisfaction, while low emotional intelligence associates with internalizing symptoms and low self-esteem (Mérida-López & Extremera, 2017). There are different mechanisms that have been hypothesized to underlie the relationship between emotional abilities and well-being (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). For instance, people who develop emotional awareness and regulation also improve their problem solving skills, experiencing less stress-related emotions (Mayer et al., 2016). In addition, emotional intelligence promotes mental health by developing coping strategies based on deliberate processing of emotions (Medrano, Muñoz-Navarro, & Cano-Vindel, 2016).

In relation to burnout, emotionally intelligent teachers have a sense of accomplishment and feel enthusiastic towards their work (Lavy & Eshet, 2018). Furthermore, high levels of emotional regulation prevent burnout probably due to the

feeling of control over stressful tasks at school and the use of constructive strategies to cope with them (Hopman et al., 2018). Thus, emotional-skills training may be helpful for teachers to cope with stress and to improve their work performance (Mérida-López & Extremera, 2017).

Intervention programs based on emotional intelligence

Emotion-based interventions that have been proposed in school settings in order to prevent burnout and promote well-being among teachers are scarce (Sánchez-Álvarez et al., 2016). More programs should focus on the development and training of emotional skills and abilities (Palomera, Briones, Gómez-Linares, & Vera, 2017). For instance, achieving efficacy in emotional regulation appears to be an effective skill for classroom management and teaching practice (Hernández-Amorós & Urrea-Solano, 2017). Exploring and expressing their feelings accurately is an indicator of less distress (Delhom et al., 2017). Furthermore, gaining emotional competence may foster teacher-student relationships, stress-tolerance and teaching satisfaction (Hopman et al., 2018). For these reasons, educators from all educational levels could benefit from emotional-skill training, preparing for their work from preschool to high school or professional grades (Castillo-Gualda, García, Pena, Galán, & Brackett, 2017; Lavy & Eshet, 2018; Palomera et al., 2017; Ulloa, Evans, & Jones, 2016).

Although literature supports the need to integrate emotional literacy in learning and teaching processes (Hernández-Amorós & Urrea-Solano, 2017), previous emotional training programs for teachers are diverse and vary in study design, target group and assessment methods (Hoffmann, Ivcevic, & Brackett, 2018). For instance, Ulloa et al. (2016) designed a training curriculum that consists of three sessions, which were aimed to enhance preschool teachers' emotional competence. Otherwise, Dolev & Leshem (2017) followed a two-year emotional development training (12 group and 12 individual

sessions) for 21 teachers in one secondary school in Israel. Both studies have methodological limitations, particularly the use of qualitative measures and small samples. In a quasi-experimental study, Palomera et al. (2017) examined the impact of a social and emotional learning program of 40 two-hour sessions, implemented in a pre-service teacher curriculum, using self-report data from 250 undergraduate students in pre-test, post-test assessment, with control groups. Similarly, Castillo-Gualda et al. (2017) conducted a study on a socio-emotional learning program (RULER) that consisted of eight three-hour sessions delivered over a 3-month period to a small sample of teachers from different educational levels. There is a significant gap in the reviewed literature regarding intervention programs designed for teachers. The existing studies present limitations and deficits in providing an adequate sample size and longitudinal data, including a follow-up.

Present study

The aim of this study was to assess the efficacy of an emotion-based training program to reduce burnout and improve psychological well-being in schoolteachers at the end of the program and after six months of follow-up. We hypothesized that the intervention 1) would decrease the level of emotional symptoms such as depression and anxiety, as well as burnout, and 2) would significantly enhance self-esteem and cognitive aspects of subjective well-being, specifically life satisfaction.

Methods

Participants

The participants were 340 schoolteachers, 74.04% women and 25.96% men, from private and public schools in autonomous community of Valencia, Spain. Teacher's age ranged between 22 and 63 years ($M = 42.64$, $SD = 9.00$). The participating teachers represent all school types of the Spanish educational system:

10.61% preschool or Kindergarten (*Guardería Infantil*), 27.27% elementary school (*Educación Primaria*), 25.76% secondary compulsory school (*Educación Secundaria*), 26.36% post-compulsory high school (*Bachillerato*), 7.27% professional grades (*Grado Profesional*), 2.73% school counselors (*Orientador*). Teaching experience among participants varied: 7.19% with 1-2 years of experience, 33.23% with 3-10 years of experience, 34.73% with 11-20 years of experience, 18.56% with 21-30 years of experience, and 6.29% with more than 30 years of experience. All teachers had the Spanish nationality.

Procedure

For this study, a quasi-experimental design was used with random assignment to experimental and control group. During the recruitment process, the emotional-skill training was offered to teachers as one of several professional training classes organized by the Center of Teacher's Permanent Professional Training of Valencia. Teachers, who were interested in the training program, filled in an online application. Inclusion criteria were for teachers to work in a school with children or adolescents. From the total sample, 135 teachers were randomly assigned to the intervention group. The control group, composed of 205 teachers, received a textbook or digital material about social emotional learning in the classroom as a gift but without face-to-face explanation. Participants were informed about confidentiality and anonymity of the collected data before they gave their consent to participate voluntarily in the study without receiving any economic reward. The t-test of independent samples and chi-square tests, at baseline, indicated that the experimental and control group did not differ significantly ($p > .05$) on age, gender, school type, students' educational level and years of experience, indicating a correct randomization.

Data were collected using online surveys in three moments from both groups: before the intervention program (T1), after the program was completed (T2) and at six months follow-up (T3). Of the initial 340 participants who responded to the first evaluation T1, data from 52.65% of the participants was lost in T2 and 43.48% in T3.

All procedures were conducted according to the standards of the Declaration of Helsinki (World Medical Association, 2013), with permission from the Department of Education, Culture and Sport of the Valencian Community and the Ethics Commission of the authors' Institution. The results of the study are presented following the indications of APA for quantitative research in psychology (Appelbaum et al., 2018).

Measures

Burnout Syndrome was measured with the Spanish Burnout Inventory (SBI, Gil-Monte, 2011). The 45-item questionnaire assesses work-related stress and complicated interpersonal relationships in the workplace, including four subscales: enthusiasm toward the job, psychological exhaustion, indolence, and guilt. Participants answered on a 5-point Likert scale (0=*never*; 4=*very frequently, every day*). The internal stability in this sample was satisfactory with Cronbach's α ranging between .82 and .88.

Emotional Symptoms were measured with the Spanish version of the Depression, Anxiety and Stress Scales (DASS; Lovibond & Lovibond, 1995; adapted and validated by Bados, Solanas, & Andrés, 2005), assessing the core symptoms of depression, anxiety and stress. Its short form consists of 21 items; scored from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). The internal consistency has been found to be satisfactory in previous studies (Bados et al., 2005), and in our sample α ranging between .89 and .91.

Self-esteem was measured with the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965), adapted for Spanish population by Atienza, Moreno, & Balaguer,

(2000). The instrument consists of 10 items, rated on a 4-point Likert scale (1=*strongly disagree*; 4=*strongly agree*). The questionnaire is one-dimensional and assesses positive and negative feelings about oneself. The Cronbach's α for the current sample was adequate .82.

Life satisfaction is considered the cognitive dimension of well-being and was assessed using the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; validated by Atienza, Pons, Balaguer, & García-Merita, 2000). The 5-item scale measures people's overall evaluation of their lives using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). The validity and internal consistency in the present study was satisfactory ($\alpha = .86$).

Intervention Program

The intervention program was based on the ability model of emotional intelligence (Mayer et al., 2016) and aimed to reduce work-related stress and enhance psychological well-being by developing emotional abilities and skills. A total of seven groups of 15-20 teachers participated in the seven training sessions of two hours each over three months. The first five sessions were devoted to group cohesion and to work on the four abilities of the emotional intelligence model. In the last two sessions the focus was on real world application of emotional abilities in their relationship with assertiveness, conflict resolution, self-esteem and empathy. All seven sessions followed the same methodology strategies, including 1) experiential dynamics such as visualization/meditation and role-playing exercises, 2) individual introspective and group debates, and 3) practice outside the training (see Schoeps, Postigo, & Montoya-Castilla, 2018 for more details).

Data analysis strategy

All the analyses were carried out with SPSS V 24.0. Before testing the hypothesis, descriptive analyses and analyses of variance (MANOVA, ANOVA) were performed to identify possible differences between the experimental and the control group at baseline (T1). Furthermore, analyses of covariance (MANCOVA, ANCOVA) were carried out to test the impact of the intervention at T2 and T3, controlling for T1 scores and teacher's educational level (covariables). The effect size (Cohen's *d*) was calculated to estimate the magnitude of the differences between groups.

In addition, multiple hierarchical regression analyses were performed to examine the effectiveness of the intervention program. We calculated the within-person change in all outcome variables from pre- to post-intervention (T2-T1), from pre-intervention to follow-up (T3-T1), and introduced these values as the dependent variables. In the first step, the baseline score and teacher's educational level (covariables) were entered. In the second step, the experimental condition (1 = *Experimental group*, 2 = *Control group*) was introduced as an independent variable. Statistically significant predictions based on the experimental condition, were interpreted as a significant change attributed to the intervention program.

Results

Group differences at baseline

Baseline scores showed significant differences between the intervention and the control group for the variables of *burnout* (*Wilks lambda*, $\lambda = .90$, $F_{(4)} = 8.97$, $p < .001$, $\eta^2 = .10$) and *emotional symptoms* (*Wilks lambda*, $\lambda = .89$, $F_{(3)} = 12.86$, $p < .001$, $\eta^2 = .11$). More specifically, the univariate contrasts indicate that participants in the experimental group obtained higher scores in excitement towards work, indolence and exhaustion, also in depression, anxiety and stress than the control group. However, no

significant differences between groups for the measures of *well-being* (*Wilks lambda*, $\lambda = 1.00$, $F_{(2)} = 0.05$, $p = .95$, $\eta^2 = .00$) were found.

Impact of intervention program

Results indicate significant differences for *burnout* (*Wilks lambda*, $\lambda = .94$, $F_{(4)} = 2.25$, $p = .06$, $\eta^2 = .05$) and *well-being* (*Wilks lambda*, $\lambda = .93$, $F_{(2)} = 5.24$, $p = .01$, $\eta^2 = .07$) at T2, while controlling for baseline scores and teacher's educational level. Differently, no overall differences were found for *emotional symptoms* at T2 (*Wilks lambda*, $\lambda = .96$, $F_{(3)} = 2.09$, $p = .10$, $\eta^2 = .04$). In particular, univariate contrasts reveal that the experimental group showed lower indolence, exhaustion, guilt and depression scores than the control group and higher life satisfaction and self-esteem at T2 (Table 1). The effect size was between moderate and high at T2. These differences at T2 were only partially maintained over six month at T3. The multivariate tests were only marginal significant for *burnout* (*Wilks lambda*, $\lambda = .91$, $F_{(4)} = 2.24$, $p = .06$, $\eta^2 = .09$), but no significant differences were found neither for *emotional symptoms* (*Wilks lambda*, $\lambda = .96$, $F_{(3)} = 1.21$, $p = .31$, $\eta^2 = .04$) nor for *well-being* (*Wilks lambda*, $\lambda = .96$, $F_{(2)} = 1.71$, $p = .19$, $\eta^2 = .04$). However, results of univariate contrasts showed significant differences between groups in indolence, exhaustion, guilt, and anxiety in the follow-up, with a moderate to large effect size and, controlling the effect of different educational levels (Table 1).

Table 1. Post-intervention and follow-up differences between intervention and control groups

		Experimental group	Control group	Cohen's <i>d</i>	ANCOVA	
		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)		<i>F</i>	<i>p</i>
Burnout						
Excitement	T1	3.67 (.77)	3.40 (.66)	.37		
	T2	3.45 (.57)	3.24 (.70)	.33	0.38	.54
	T3	3.54 (.52)	3.33 (.71)	.34	0.77	.38
Indolence	T1	1.16 (.63)	1.24 (.72)	-.12		
	T2	.84 (.50)	1.17 (.72)	-.55	12.30	.001
	T3	.79 (.49)	1.13 (.77)	-.52	5.04	.03
Exhaustion	T1	1.66 (1.02)	1.95 (1.10)	-.27		
	T2	1.46 (.87)	1.86 (.96)	-.43	3.95	.04
	T3	1.11 (.85)	1.84 (1.07)	-.75	4.35	.04
Guilt	T1	1.11 (.67)	1.13 (.66)	-.03		
	T2	.93 (.55)	1.13 (.74)	-.32	4.39	.04
	T3	.80 (.62)	1.03 (.73)	-.34	4.65	.03
Emotional Symptoms						
Depression	T1	7.57 (8.14)	4.60 (5.97)	.40		
	T2	3.55 (4.86)	4.49 (6.68)	-.17	3.81	.05
	T3	3.18 (5.08)	3.38 (4.95)	-.04	0.04	.84
Anxiety	T1	7.50 (8.50)	4.93 (5.33)	.35		
	T2	3.57 (4.82)	4.03 (5.59)	-.09	1.32	.25
	T3	3.02 (4.88)	4.08 (4.67)	-.22	3.52	.06
Stress	T1	12.73 (9.33)	10.92 (8.02)	.21		
	T2	8.68 (5.78)	9.07 (7.77)	-.06	0.47	.49
	T3	8.29 (6.83)	9.50 (7.71)	-.17	0.23	.63
Well-being						
Life satisfaction	T1	19.84 (3.17)	19.03 (3.40)	.24		
	T2	20.21 (3.11)	18.46 (3.65)	.52	6.62	.01
	T3	21.08 (3.05)	20.38 (3.69)	.21	1.41	.24
Self-esteem	T1	34.23 (4.51)	33.20 (4.97)	.22		
	T2	34.67 (4.41)	32.54 (4.90)	.46	6.24	.01
	T3	35.10 (4.32)	33.65 (5.70)	-.29	2.32	.13

Note. *M* = Mean, *SD*, Standard Derivation, *Cohen's d* = effect size, *F* = F ratio, *p* = probability, T1 = pre-intervention, T2 = post-intervention; T3 = six month follow up; pre-intervention scores and teachers' educational level were used as covariables.

Table 2. Predicting changes at post- intervention (T2) and follow-up (T3) in intervention group

Outcome variables	Regression Model T2				Regression Model T3			
	ΔR^2	ΔF	β	t	ΔR^2	ΔF	β	t
Burnout								
Excitement	.00	0.38	-.04	-0.62	.01	0.77	.08	0.88
Indolence	.05	12.30***	.23	3.51***	.04	5.04*	.20	2.24*
Exhaustion	.02	3.95*	.13	1.99*	.04	4.35*	.20	2.08*
Guilt	.02	4.39*	.14	2.09*	.04	4.65*	.20	2.16*
Emotional Symptoms								
Depression	.01	3.81*	.12	1.95*	.00	0.04	.02	0.19
Anxiety	.00	1.32	.06	1.15	.02	3.09*	.15	1.76*
Stress	.00	0.47	.04	0.69	.00	0.23	.04	0.48
Well-being satisfaction								
Life	.04	6.62**	-.19	-2.57**	.01	1.41	-.11	-1.19
Self-esteem	.03	6.24**	-.19	-2.50**	.02	2.32	-.15	-1.52

Note. ΔR^2 = change in R^2 ; ΔF = change in F ; β = regression coefficient; t = value of t-test statistic; First step: predictor = pre-intervention score and teachers' educational level (covariables); Second step: predictor = experimental condition; outcome variables: change scores T2-T1 and T3-T1 were used for the regression analyses. Standardized beta values were reported.

* $p < .05$. ** $p < .01$. *** $p < .001$

Hierarchical multiple regression analyses

Results revealed that the experimental condition significantly predicted the change in the outcome variables after at T2, controlling for baseline scores and teacher's educational level (Table 2). Specifically, participants in the experimental condition (value 1) increased significantly life satisfaction compared to those in the control condition (value 2), as indicated by a negative regression coefficient; hence, the lower the condition ($1 < 2$), the greater the change. For that reason, the participants from the intervention program presented a greater change in life satisfaction. In addition, positive regression coefficients in indolence, exhaustion, guilt and depression indicate that teachers from the intervention group reduced levels of work-related stress and emotional symptoms compared to the control group. Thus, in these outcome variables a negative change is desirable, hence the lower the condition ($1 < 2$), the more negative is the change. These results were maintained over six-month for indolence, exhaustion, guilt, and anxiety (Table 2).

Discussion

The aim of the present study was to examine the impact of an emotion-based intervention program designed to reduce burnout outcomes and improve well-being in schoolteachers from different educational levels. In relation to the first hypothesis, the program was effective in reducing emotional symptoms and burnout syndrome longitudinally. Teachers who participated in the training program reported less indifference toward the job, psychological exhaustion and feelings of guilt compared to the control group, both after the training ended and six months later. There was no significant change in enthusiasm toward work, indicating that teacher's motivation and school engagement maintained stable in both groups. Perhaps the teachers from this study were already passionate about their job and that is why they agreed to participate in the first place (Hernández-Amorós & Urrea-Solano, 2017). In addition, the intervention group showed a

significant decrease in depression at T2, and a marginal change in anxiety at T3 in comparison to the control group. However, no significant changes in perceived stress in the intervention group was observed. This might be due to the fact that perceived stress (person-related) and burnout (work-related stress) although similar there are not always bedmates (Bauer et al., 2006). Nevertheless, these results indicate that our emotional intervention program was effective as a short-term and long-term prevention program for burnout and emotional symptoms in a population as vulnerable as schoolteachers. The benefit of emotional interventions on teacher's work-related stress and psychological problems has been shown in previous studies, using different theoretical approaches and methodologies (e.g. Castillo-Gualda et al., 2017; Lavy & Eshet, 2018).

Furthermore, the results support the second hypothesis that the intervention program would be effective in enhancing participants' self-esteem and life satisfaction, although more time and specific training might be needed to maintain those changes over time. Participants from the training were more satisfied with their lives and felt self-worthier than teachers from the control group did. Although this result was only significant after the training not maintained over six months. The emotional support offered by the group members during the training might have been one of the main reasons for these positive findings (Doménech, 2006). However, once the training ended, the supporting network resolved and the effect disappeared (Mérida-López & Extremera, 2017). Furthermore, the intervention program was designed for duration of three months; it is possible that by including more sessions through the whole academic year, more stable changes could have been found. Regarding self-esteem, it relates to the sense that the teacher feels self-confident and competent managing his or her classroom (Palomera et al., 2017). The variety of teacher's educational level could explain why the changes in self-esteem were not maintained over time, since effective classroom management is more challenging for teachers working with adolescents, than working with

younger children (Hopman et al., 2018). Nevertheless, our results are in line with the literature on emotional intervention programs that can be beneficial to strengthen teacher's self-esteem and life satisfaction, which in turn enhance their psychological well-being (Ahola et al., 2017; Mérida-López & Extremera, 2017).

Our results support previous research that highlights the strong association between emotional intelligence and teacher burnout (Lavy & Eshet, 2018). Teachers, who were trained in emotional skills, may be less affected from burnout outcomes because they achieve a better perception, understanding and regulation of their own emotional reactions and those of others (Mayer et al., 2016). In addition, emotional intelligence appears to be a protective factor against psychological problems such as depression and anxiety (Delhom et al., 2017). Thus, the development of emotional abilities might reduce the risk of experiencing emotional symptoms by using more adaptive emotional regulation strategies and resolving emotional conflicts more effectively (Sánchez-Álvarez et al., 2016). Our findings also indicate that emotional training in teachers has a positive effect on life-satisfaction and self-esteem, probably due to an advantage in greater social competence, social support and network, which is their main source of emotional balance and well-being (Ahola et al., 2017). For these reasons, emotional training for teachers has an important role in preventing harmful mental health states and promoting their psychological well-being (Mérida-López & Extremera, 2017).

Study limitations

Although the results of this study are promising, they must be interpreted in light of some limitations. First, all data used in the study were self-reported, implying a bias of social desirability and increasing the likelihood that relationships would inflate due to the variance of the shared method. Second, online surveys were conducted to reduce costs and time, to increase the number of participants and to facilitate the assessment for the teachers.

Nevertheless, the dropout rates were considerable, especially in the control group. This might be due to the personal contact with the participants during the training was helpful to reduce the loss of respondents from the experimental group. Third, the intervention and control group showed significant differences in initial levels of burnout and emotional symptoms. These differences at baseline must be taken into account when interpreting group differences in later evaluations, after the intervention program was completed. Another limitation was that the participants in the study were mostly women, restricting the variability of the sample. However, this limitation reflects the reality of Spanish schools, where female teachers are the majority (Esteras et al., 2014). Finally, this study was conducted with a sample of Spanish schoolteachers, and the results may differ in other countries with different school systems and cultural contexts. Therefore, it would be advisable for future lines of research to use a cross-cultural design to replicate the results, as well as to apply and validate the intervention program with participants from multiple countries.

Conclusion and practical implications

Despite these limitations, this study makes an important contribution to the literature on interventions in emotional competence with longitudinal data. Our findings regarding the benefits of an emotional education program hold important implications for teachers and counselors, reducing work-related stress and emotional symptoms, enhancing self-esteem and life satisfaction. Considering that emotional skills and abilities are a predictor of good work performance, coping strategies, and well-being (Sánchez-Álvarez et al., 2016; Ulloa et al., 2016), the emotional education program may be a valuable intervention for educators' mental health (Luceño-Moreno et al., 2017).

Regarding practical implications, results from the present study demonstrate the need to acknowledge and promote teachers' emotional abilities during the workday to prevent burnout syndrome. Therefore, it is important to increase support among teachers, by

providing knowledge about emotional processes, training their emotional skills and regulation techniques, and facilitating a supportive context where teachers can discuss their emotions. To increase the likelihood of a successful intervention, future studies should tailor the program to participants' personal and professional needs, taking into account teacher-student relationship and occupational conditions (Dolev & Leshem, 2017). In light of these findings, emotional education intervention programs are appropriate for teachers and should be included in school education plans to increase self-efficacy and facilitate work success (Hoffmann et al., 2018).

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Chapter V. Discussion

Discussion

The overarching purpose of the present research was to provide further evidence about the benefits of developing emotional competence in students and teachers in order to enhance their psychological adjustment, mental health and well-being.

Therefore, the first specific objective of this research was to determine the development of emotional competence in relation to self-report measures of psychological adjustment and subjective well-being in adolescent students. Initially, it was necessary to adapt and validate a reliable measurement of perceived emotional competence in student population. Hence, the first hypothesis **H1.1** corresponds to the study of the psychometric properties of the Spanish version of the Emotional Skills and Competence Questionnaire (ESCQ).

H1.1: The Spanish version of the ESCQ-21 will replicate the original 3-factor structure and provide appropriate psychometric properties.

According to the results from the **study 1**, it appears that the objective 1 has been achieved completely. The new version of the ESCQ reduced to 21 items was successfully adapted and validated for use in an adolescent Spanish population. The ESCQ-21 showed good psychometric properties with good internal consistency and reliability indexes similar to those of the original scale (Takšić et al., 2009). In relation to **H1.1**, the exploratory and confirmatory factorial analyses that were carried out in this study, replicated the original three-factor structure: 1) perceive and understand emotion 2) express and label emotion, and 3) manage and regulate emotion. These results corroborate previous findings about the trifactorial structure of the original scale (Faria, et al., 2006; Faria & Lima-Santos, 2012; Takšić et al., 2009). In addition, the

abbreviated 21-item questionnaire met the criteria for convergent, predictive and incremental validity.

Furthermore, gender differences observed in the Spanish version are similar to those of the original scale (Takšić et al., 2009). The results coincide with previous studies revealing that females score higher in perception and comprehension of emotions, while males score higher in managing and regulating emotions (Schoeps et al., 2017). Previously, factorial invariance analyses indicate that the structure of the ESCQ-21 shows scalar invariance across gender groups, ruling out the possibility that these differences were instrument-related (Putnick & Bornstein, 2016).

The successful validation of the ESCQ-21 for adolescent populations enabled the further study of the association between students' perception of emotional competences with self-report psychological adjustment and well-being among. Consequently, the second hypothesis **H1.2** referred to the study of the impact of perceived emotional competence and self-esteem on self-report psychological adjustment.

H1.2: High levels of perceived emotional competence and self-esteem will be associated with less self-report psychological maladjustment, specifically emotional and behavioral problems.

Correspondingly, the results of **study 2** confirm that the ability to perceive, understand and manage emotional information in combination with high levels of self-esteem may reduce emotional symptoms and conduct problems among adolescents, controlling the effect of sex and age. More specifically, results from hierarchical regression analyses indicated that emotional regulation and management contributed to the prediction of socio-emotional functioning, while emotional perception and expression didn't have a significant impact on adolescents' outcome. Nevertheless,

developing emotion regulation strategies can improve psychological adjustment, as described in the literature (Donahue et al., 2014). Adolescents who manage their emotional impulses adequately will also experience greater control of environmental stressors, reducing the effect of negative emotions and enhancing the positive ones (Mayer et al., 2016). On the contrary, adolescents with lower ability to manage emotions would be less capable of controlling their impulses and negative mood states, which would explain the presence of more emotional symptoms and conduct problems (Cobos-Sánchez et al., 2017).

Furthermore, self-esteem was found to play a predominant role in the prediction of self-report psychological adjustment, especially emotional symptoms. Hence, young people with high self-esteem consider themselves capable of developing resources in the view of stressful events, which, in turn, facilitates the adjustment to changes and adversities in the environment more easily (Anto & Jayan, 2016). These results are in line with recent studies that have identified self-esteem as one of the mechanisms that underlies the link between socio-emotional variables relevant to youth development (resilience, attachment and peer relations) and psychological adjustment (Ju & Lee, 2018; Liu et al., 2014; Thompson et al., 2016). In future research, mediation analyses ought to identify the possible mediating effect of self-esteem on the relationship between emotional competences and psychological adjustment in adolescence.

In relation to the next hypothesis **H1.3**, the purpose was to study whether perceived emotional competence might influence life satisfaction during adolescence and if this association relationship is mediated by perceived stress.

H1.3: Perceived stress would function as mediator in the associations between perceived emotional competence and life satisfaction, thereby potential sex and age-specific differences might be expected.

The results from the **study 3** suggest that perceived stress is a considerable risk factor by restraining the positive influence of perceived emotional competence on adolescent's well-being. More specifically, perceived stress mediated the association between such competences and life satisfaction. That means that although students perceive emotions accurately and are able to express and identify them in a proper manner, they do not benefit in terms of life satisfaction then they perceive stress at the same time. In addition, students with high emotional management skills are more satisfied with life in general, although the negative effect of perceived stress diminishes the positive influence on life satisfaction.

These findings are in line with previous research that stressed a positive association between emotional competence and subjective well-being, particularly life satisfaction (Reina & Oliva, 2015; Sánchez-Álvarez et al., 2016). However, high levels of stress drop this relationship, which might lead to more vulnerability for negative health outcomes in adolescents who are undergoing a critical developmental stage (Goldbeck et al., 2007). Furthermore, results from Multigroup Structural Equation Modeling (Multigroup SEM) indicated that boys and girls of different ages were equally threatened by perceived stress as a risk factor concerning subjective well-being regardless the emotional skills and abilities they might have developed (Chui & Wong, 2016; Froh et al., 2009). Future studies might include additional environmental factors (e.g. family and peer relationships) in young people's lives, which might foster positive

developmental outcomes via proximal processes (Salisch et al., 2014; Taylor et al., 2017).

The abovementioned studies have provided evidence that emotional development is a significant protective factor and strength fostering self-report psychological adjustment and well-being among students. In addition these findings contribute to a better understanding of the mechanisms that are involved in the beneficial impact of emotional competencies on positive psychological outcomes. For these reasons, we designed and implemented a school-based intervention program for students. Thus, the hypothesis **H1.4** was centered on the analysis of the effectiveness of PREDEMA.

H1.4: Social-emotional intervention program PREDEMA would improve participants' perception of emotional competence, decrease cyberbullying and enhance subjective well-being, specifically life satisfaction.

Therefore, the specific objective for **study 4** was to determine the impact of a social-emotional intervention program, called PREDEMA and designed for adolescents in a school setting (Montoya-Castilla et al., 2016). The study used a quasi-experimental design with longitudinal data and randomized assignments of classrooms into intervention and control group. The results indicated that the program proved to be effective in developing students' perception of emotional competences, in reducing the incidence of cyberbullying as well as in promoting long-term subjective well-being, specifically life satisfaction. Thus, students who participated in the program, improved their ability to perceive, understand and regulate emotions, as well as they reported fewer threatening and humiliating behaviors via mobile phone and the Internet, which in turn improved their satisfaction with general aspects of their lives.

Furthermore, emotional competence mediated the effect of social-emotional intervention on life satisfaction. That is, as soon as adolescents were able to integrate their new knowledge and abilities into their emotional skill set, their subjective well-being also increased, appreciating the new resources and strategies they had learned to create a peaceful coexistence in the classroom and maintain positive relationships with peers (Geng, 2016). These findings provide a better understanding of the process and mechanisms that are involved in how emotional development promotes subjective well-being in adolescence. This is particularly relevant because the mere prevention of problematic and aggressive behaviors does not necessarily imply the presence of mental health and psychological adjustment in adolescents (Davis & Humphrey, 2012).

Furthermore, our findings are in line with the literature showing the positive effects of school-based SEL programs in developing emotional competencies and strategies in adolescents to better perceive, express and regulate emotional responses (Coelho et al., 2016; Taylor et al., 2017). In addition, the benefits of emotion-based interventions on bullying have been revealed in previous studies (Sarrionandia & Garaigordobil, 2016; Yeager et al., 2015) However these programs have used different theoretical approaches and methodologies when designing effective interventions to reduce both mobile phone and Internet aggressions as well as cybervictimization in the classroom.

Given the important impact that the teacher has on their students' learning and psychological outcomes, the promotion of psychological health and well-being of schoolteachers is relevant not only for their own sake but also for the success of students. Thus, the second specific objective of this dissertation was to study the perception of emotional intelligence in schoolteachers in relation to mental health

issues. In particular, the first hypothesis of this specific objective **H2.1** focused on the impact on work-related stress, one of the major health concerns among schoolteachers.

H2.1: Social Affectivity would mediate the interplay between perceived emotional intelligence and teacher burnout.

Correspondingly, the aim of **study 5** was to extend earlier findings by analyzing the mediating role of affectivity on the interplay between perceived emotional intelligence and burnout syndrome among schoolteachers. Results from Structural Equation Modeling (SEM) indicated that, as expected, positive affect mediated the relationship between EI and enthusiasm toward the job, while negative affect mediated the link between EI and negative symptoms of burnout syndrome. In particular, positive affect partially mediated the interplay between EI dimensions mood clarity and emotional repair with enthusiasm toward the job. In other words, teachers who understand their feelings well and are able to repair negative emotional states, are also more motivated with their work at school because there are able to elicit pleasant mood states at the same time (Vergara et al., 2015).

Similarly, negative affect fully mediated the association between mood clarity and emotional repair with psychological exhaustion, indolence and guilt. That means that although teacher perceive their mood accurately and are better at emotional repair, they might not be able to prevent burnout when they repeatedly experience unpleasant feelings such as stress (Rey et al., 2016). These results corroborate earlier findings indicating that affective balance mediated the relationship between EI and teacher burnout (Augusto-Landa et al., 2012; Brackett et al., 2010), indicating that higher EI appears to associate with more positive feelings and fewer negative feelings, consequently reducing the experience of work-related stress (Mérida-López &

Extremera, 2017). Nevertheless, negative affect seems to drop this relationship, which could lead to more vulnerability for negative health outcomes in teachers who are working in a stressful environment, dealing with interpersonal conflict inside and outside the classroom on a daily basis (Hopman et al., 2018; Lavy & Eshet, 2018; Skaalvik & Skaalvik, 2017).

Analogous to intervention study with student population, the hypothesis **H2.2** of **study 6** was related to test the efficacy of an emotion-based training program for schoolteacher to reduce their burnout symptoms and improve psychological well-being.

H2.2: Emotional-skill training would alleviate teachers' mental health problems (e.g. burnout) and foster subjective well-being (e.g. life satisfaction).

Similarly, this study was designed as quasi-experimental intervention with random assignment to experimental and control group, too. Results from multivariate covariance analyses, followed by hierarchical regression models indicated that teachers who participated in the training program reported less indifference toward the job, psychological exhaustion and feelings of guilt compared to the control group, both after the training ended (T2) and six months later (T3). There was no significant change in enthusiasm toward work, indicating that teacher's motivation and school engagement maintained stable in both groups. In addition, the intervention group showed a significant decrease in depression at T2, and a marginal change in anxiety at T3 in comparison to the control group. However, no significant changes in stress symptoms in the intervention group were observed. Finally, the intervention was effective in enhancing participants' self-esteem and life satisfaction, although more time and specific training might be needed to maintain those changes over time.

Our results support previous research that has stressed the benefit of emotional interventions on teacher's work-related stress and psychological problems, although using different theoretical approaches and methodologies (e.g. Castillo-Gualda et al., 2017; Lavy & Eshet, 2018). Likewise, our results are in line with the literature on emotional intervention programs that can be beneficial to strengthen teacher's self-esteem and life satisfaction, probably due to an advantage in greater social competence, social support and network, which is their main source of emotional balance and well-being (Ahola et al., 2017). For these reasons, emotional training for teachers has an important role in preventing harmful mental health states and promoting their psychological well-being (Mérida-López & Extremera, 2017).

In view of the results obtained by the six studies, all objectives have been successfully met and hypotheses have been confirmed. In summary, the ESCQ-21 is a reliable and valid tool for measuring perceived emotional competence in Spanish adolescent population. Furthermore, students as well as teachers benefit from well-developed emotional competencies. While emotional competence in adolescents was associated with self-report social-emotional adjustment and subjective well-being, in teachers' emotional intelligence predicted mental health outcomes. A couple of mediators, such as self-esteem, perceived stress and affectivity have been suggested that might explain the psychological mechanisms that underlie the link between emotional development, mental health and well-being. Finally, socio-emotional intervention programs have been shown their effectiveness for a wide range of positive outcomes in students and teachers. For instance, they may be considered valuable tools for preventing bullying among peers and alleviating teacher burnout.

These findings suggest a transformation of the initial theoretical and empirical model that was drawn from the literature review (Figure 3). This model, based on the

dissertation findings, stresses the importance of the different aspect of emotional competencies in students and teachers based on two distinctive but complementary theoretical frameworks. On the one hand, the ability-model of emotional intelligence (Mayer & Salovey, 1997) to the mental processes involved in the recognition, use, understanding, and management of emotions to solve problems and regulate behavior. On the other hand, the model of emotional competence (Saarni, 2000) is centered around the development of emotional skills from childhood through adolescence that are necessary for navigating the demands of the social environment. Furthermore, our findings support the empirical research that has documented the positive impact of perceived emotional competencies on well-being, which refers to the subjective experience of life-satisfaction and affectivity (Diener, 1984). Perceived stress has been found to be a potential mechanism underlying this association. This research has provided further evidence about the protective role of emotional competencies regarding different measurements of mental health, such as depression, anxiety and stress (burnout) among teachers. According to our findings, affectivity is an effective mediator of this relationship. The benefits of such competence on students' self-report psychological maladjustment, including conduct problems, emotional difficulties, problems with peer-relationships (bullying) and self-esteem have been replicated in the abovementioned studies. In addition, self-esteem was hypothesized to play a mediating role in the relation between emotional competence and psychological adjustment. Finally, demographic variables such as age, sex, culture and school/educational levels have emerged as significant moderators.

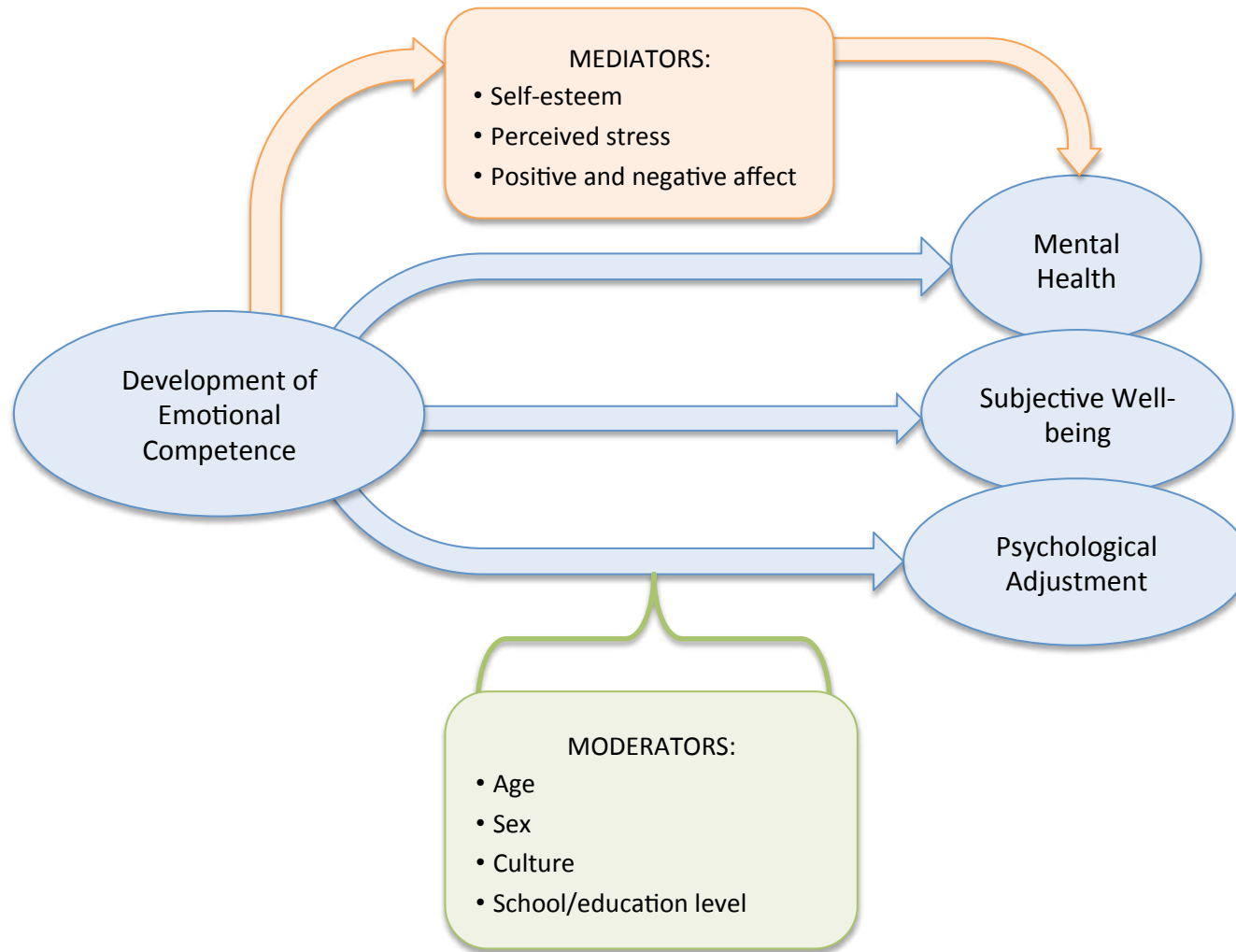


Figure 3. Theoretical and empirical model yielded from the dissertation findings.

5.4. Conclusions

Despite the limitations, the present multi-paper research has broadened the existing scientific understanding of the relationship between emotional competencies and different aspects of psychological adjustment, mental health and well-being among students and teachers. In addition, this research has provided additional evidence on the effectiveness of emotional education programs in schools.

Regarding the integrative approach of this research, the specific contributions of presented studies can be grouped as following: 1) assessment of perceived emotional competence, 2) study of the mechanisms that explain the relationship between perceived emotional competencies and self-report socio-emotional adjustment, subjective well-being and mental health, and 3) evaluation of the short and long-term effectiveness of school-based social and emotional interventions.

In particular, as a contribution to the self-assessment of perceived emotional competence, the Spanish version of the ESCQ-21 has been found to be a valid and reliable self-report measurement for adolescents. This opens new opportunities for researchers and professionals, especially from Spain, to compare their results with those of studies conducted in different cultures and countries, expanding scientific knowledge internationally. Furthermore, the ESCQ-21 could be useful tool to assess the effects of SEL programs, which aim to improve student's emotional and social abilities.

Second, this research contributes to the study of potential mechanisms that may explain how emotional competence arouses positive outcomes in the individual. For instance, a couple of mediators, such as self-esteem, perceived stress and affectivity have been suggested that might explain the psychological structure that underlie the link between emotional development, mental health and well-being. On the one hand, low levels of self-esteem and high levels of perceived stress seem to be significant risk

factors that might drop the beneficial impact of emotional competences on positive psychological outcomes, such as socio-emotional adjustment and well-being. Therefore, more attention and should be given to the assessment and promotion of healthy youth development. On the other hand, the present dissertation contributes to a better understating of the possible mechanisms of affectivity by which emotional competence may contribute to greater enthusiasm toward the job satisfaction and reduce burnout symptoms in schoolteachers. For these reasons, the presented findings from the study on teachers' emotional skills together with the previous findings from students' emotional development, bear the witness to the need of emotion-based intervention programs to enhance positive health outcomes and increases subjective well-being, taking into account mediator and moderator factors.

Finally, this dissertation has provided additional evidence on the effectiveness of school-based interventions in emotional development among students and teachers with longitudinal data. These findings regarding the benefits of developing emotional competence hold important implications for students as well as teachers. Considering that emotional competencies are a predictor of good academic and professional performance, psychological adjustment and well-being, the here presented programs may be a valuable for mental health intervention in school settings.

In view of the significance of emotions for school life, this dissertation integrates both student's and teacher's perspective into one model of emotional functioning in a dynamic school contexts. While most studies examine emotional competence on an individual level, this research opens the focus to a broader ecological study of emotions in the classroom, where teachers and students interact on a daily basis. Therefore, In order to understand adolescents' emotional development in the school setting, it is essential to consider the role of the teacher as facilitator and emotional role model of

their students. Hence, when schools embrace and support the emotions of educators and their students, they create a learning environment that is safe, caring, well-managed, and motivating.

Furthermore, the present dissertation pointed out the potential next steps to further investigations on the benefits of emotional competence in school settings, as well as providing recommendations for planning and implementing a socio-emotional intervention program with effective and successful outcomes.

We consider that this multi-paper thesis makes a significant contribution to the emerging field of social and emotional learning and hope it will be an inspiration for further research in this field.

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