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TESIS DOCTORAL

Mindfulness en el trabajo: análisis multinivel desde una perspectiva interpersonal

Mindfulness at work: multilevel analysis from an interpersonal perspective

MEMORIA PARA OPTAR AL GRADO DE DOCTOR

PRESENTADA POR

Gerardo Montes Maroto

Directores

Francisco Gil Rodríguez
Alfredo Rodríguez Muñoz
Mirko Antino

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Autor:

Gerardo Montes-Maroto

Directores:

Francisco Gil Rodríguez

Alfredo Rodríguez-Muñoz

Mirko Antino

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por darme esta preciosa vida.

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Si con la cuerda de la atención
atamos firmemente la mente,
se desvanecerán todos los miedos
y cosecharemos todas las virtudes.

If, with mindfulness' rope,
The elephant of mind is tethered all around,
Our fears will come to nothing,
Every virtue drop into our hands

Shantideva, *La práctica del bodisatva* (2008, p.83)

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ÍNDICE DE CONTENIDOS/TABLE OF CONTENTS

ÍNDICE DE TABLAS/LIST OF TABLES

ÍNDICE DE FIGURAS/LIST OF FIGURES

Summary

Mindfulness refers to paying full attention to the present moment (Brown & Ryan, 2003). At work, mindfulness has become a fruitful area for intervention and investigation (Hyland, Lee, & Mills, 2015). A recent review showed that mindful employees are an organizational asset, for they show more engagement, vitality and performance (Good et al., 2016). There are personal benefits too: mindfulness at work is associated with emotion regulation, health and lower stress (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). However, the impact on other people's outcomes is almost unknown (Creswell, 2017). The only exceptions are that leaders' mindfulness was related to employees' performance (Reb, Narayanan, & Chaturvedi, 2014), and employees' mindfulness to clients' satisfaction (Beach et al., 2013). No research has investigated the crossover of mindfulness at work beyond this. Moreover, psychological states at work are not static, but spill over to the home domain and cross over to the employee's partner (Bakker & Demerouti, 2013). Emerging evidence has supported the spillover of mindfulness from work to home (e.g., Hülsheger, Alberts, Feinholdt, & Lang, 2013), but has neglected its crossover to the romantic partner. In parallel, team mindfulness was recently introduced as a team emergent state that reflects the degree of attentiveness and non-judgment that characterize members' interactions, and was associated with lower team conflict and individual counterproductive behaviors (Yu & Zellmer-Bruhn, 2017). Nevertheless, no more research has been carried on this topic, even though team states are a critical factor for team performance (Marks, Mathieu, & Zaccaro, 2001), and especially when dealing with diverse teams (van Knippenberg, De Dreu, & Homan, 2004; Thatcher & Patel, 2011).

The general aim of this thesis is to study the interpersonal associations of mindfulness at work. The specific objectives concern the type of social relation involved: 1) romantic couples, 2) coworker dyads and 3) demographically diverse teams. First, we used a daily diary design with dual-earner romantic couples and found that employees' daily levels of mindfulness at work was related to their daily happiness at home, their partners' relationship satisfaction and their report of employees' lower work-family conflict. Daily employees' happiness partially mediated these relations. Second, we studied coworker dyads using a daily diary design, and found that coworker's daily mindfulness was related to employees' positive affect. Additionally, employees' positive affect partially mediated the relation between coworkers' mindfulness and employees' relaxation at home. Third, we used an experimental design and induced team mindfulness to counteract an activated demographic faultline. We hypothesized that team mindfulness would improve the team's affective and

cognitive states, especially its transactive memory system. Team mindfulness decreased the team's negative affect, increased intersubgroup trust and fostered the elaboration of task-relevant information during a decision-making task, which resulted in higher team performance.

These findings lead us to conclude that mindfulness at work is an interpersonal phenomenon that goes beyond the work context. Its conceptualization as a fluctuating state, instead of as a trait, allowed us to test this. Moreover, mindfulness works as a key personal resource that fosters the acquisition, conservation and recovery of other resources. This allows for a more skillful resource use throughout the day, resulting in employees' and close others' well-being at work and at home. Improved emotional experiences account for these relations: individual and team mindfulness are related to more happiness, positive affect, trust and lower negative affect. As a consequence, mindfulness benefits the organization, for it provides employees with resources that are later used in behaviors and processes that result in performance. Our findings extend the theoretical literature and offer practical implications on mindfulness and its positive interpersonal impact.

Resumen

Mindfulness consiste en estar completamente atento al momento presente (Brown y Ryan, 2003). En el ámbito laboral, el mindfulness se ha convertido en un fructífero área de intervención e investigación (Hyland, Lee y Mills, 2015). Una revisión reciente mostró que los empleados con mayor mindfulness son una ventaja organizacional, ya que muestran mayor *engagement*, vitalidad y rendimiento (Good et al., 2016). También hay beneficios personales: el mindfulness en el trabajo se ha asociado con la regulación emocional, la salud y menor estrés (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). Sin embargo, su impacto sobre las variables de otras personas es casi desconocido (Creswell, 2017). Las únicas excepciones son que el mindfulness del líder se relacionaba con el rendimiento de los empleados (Reb, Narayanan, & Chaturvedi, 2014), y el mindfulness de los empleados con la satisfacción de los clientes (Beach et al., 2013). Ninguna otra investigación ha estudiado la transmisión interpersonal del mindfulness. Además, los estados psicológicos en el trabajo no son estáticos, sino que se extienden al hogar y se extienden a la pareja del empleado (Bakker y Demerouti, 2013). Un creciente número de hallazgos ha apoyado la extensión (*spillover*) del mindfulness del trabajo a casa (ej. Hülsheger, Alberts, Feinholdt, y Lang, 2013), pero no ha incluido su cruce hacia la pareja sentimental. En paralelo, Yu y Zellmer-Bruhn (2017) han introducido el mindfulness de equipo como un estado emergente del equipo que refleja el grado de atención y no juicio que caracterizan las interacciones de sus miembros, y que se ha asociado con menor conflicto en el equipo y conductas contraproducentes individuales. Sin embargo, no ha habido más estudios al respecto, a pesar de que los estados del equipo son un aspecto crítico para el rendimiento (Marks, Mathieu, y Zaccaro, 2001), especialmente en equipos diversos (van Knippenberg, De Dreu, & Homan, 2004; Thatcher & Patel, 2011).

El propósito general de esta tesis es estudiar las asociaciones interpersonales del mindfulness en el trabajo. Los objetivos específicos se refieren al tipo de relación social implicada: 1) parejas sentimentales, 2) díadas de trabajadores y 3) equipos demográficamente diversos. En primer lugar, utilizamos un diseño de estudio de diario con parejas sentimentales con los dos miembros laboralmente activos, y encontramos que los niveles diarios de mindfulness en el trabajo del empleado tenían una relación positiva con su felicidad en casa, la satisfacción con la relación de su pareja y con su informe de que el empleado tenía menos conflicto trabajo-familia. La felicidad diaria de los empleados mediaba parcialmente estas relaciones. En segundo lugar, estudiamos díadas de compañeros utilizando un diseño de diario, y encontramos que el mindfulness diario del compañero tenía

una relación positiva con el afecto positivo diario del empleado. Además, el afecto positivo mediaba parcialmente la relación entre el mindfulness del compañero y la relajación del empleado en casa. Por último, utilizamos un diseño experimental en el que indujimos mindfulness de equipo para contrarrestar una falla demográfica activada. Hipotetizamos que el mindfulness de equipo mejoraría los estados afectivos y cognitivos del equipo, especialmente su sistema de memoria transactiva. El mindfulness de equipo redujo el afecto negativo, aumentó la confianza entre subgrupos y promovió la elaboración de la información relevante a la tarea durante una tarea de toma de decisiones, lo que resultó en mayor rendimiento del equipo.

Estos hallazgos nos llevan a concluir que el mindfulness en el trabajo es un fenómeno interpersonal que va más allá del contexto laboral. Su conceptualización como un estado fluctuante, en vez de como un rasgo, nos permitió ratificar esta afirmación. Además, el mindfulness funciona como un recurso personal clave que promueve la adquisición, conservación y recuperación de otros recursos. Esto permite un uso de los recursos más eficaz que resulta en el bienestar del empleado y sus personas cercanas tanto en el trabajo como en casa. La mejora de las variables emocionales explica estas relaciones: el mindfulness individual y de equipo se relaciona con mayor felicidad, afecto positivo, confianza y menor afecto negativo. Como consecuencia, el mindfulness también tiene provecho organizacional, ya que dota a los empleados de recursos personales con los que posteriormente implicarse en conductas y procesos que dan lugar a un mayor rendimiento. Nuestros resultados amplían la literatura teórica y ofrecen implicaciones prácticas sobre el mindfulness y su impacto interpersonal positivo.

Chapter 1

Introduction

(This chapter is written in Spanish.)

1.1. El mindfulness en el trabajo

El *mindfulness* o atención plena se ha convertido en fructífero área de investigación e intervención en el ámbito laboral (Hyland, Lee y Mills, 2015). De ser un fenómeno estudiado exclusivamente por la Psicología Clínica o la Neuropsicología, la atención plena ha pasado a convertirse en uno de los temas más relevantes en la Psicología de las Organizaciones en los últimos años (Good et al., 2016). Grandes empresas como Google, Target y General Mills han introducido programas basados en mindfulness para sus empleados (Schaufenbuel, 2015), un movimiento enmarcado dentro de la llamada "revolución *mindful*" (Pickert, 2014). Solo en Estados Unidos, el 13% de los trabajadores han participado en algún programa de mindfulness (Olano et al., 2015), mientras que el Parlamento del Reino Unido ha albergado una sesión respecto a sus beneficios en diferentes contextos, entre ellos el laboral (Mindfulness All-Party Parliamentary Group, 2015).

Las empresas españolas también han empezado a incorporar el mindfulness (Oliver, 2017). Su estudio académico, sin embargo, no ha recibido un interés proporcional. El creciente número de investigaciones españolas (e.g., Montero-Marín et al., 2015; Atanes et al., 2015) está considerablemente limitado en cuanto a rigor metodológico e innovación conceptual se refiere. Las investigaciones internacionales, aunque más numerosas, comparten algunas de estas limitaciones, que recientemente han sido destacadas a nivel académico (Van Dam et al., 2018) y popular (Van Dam y Haslam, 2018). Una limitación al estudio del mindfulness especialmente llamativa es la adopción casi uniforme de la perspectiva individual, dejando de lado su potencial impacto interpersonal (Creswell, 2017). Esta falta de estudios es especialmente relevante en el contexto laboral, donde gran parte del trabajo se hace con otros empleados. Por lo tanto, el momento histórico que vivimos requiere aportar estudios empíricos rigurosos que respondan a las necesidades de los empleados, sus familias y las organizaciones. Sus resultados permitirán esclarecer cómo el mindfulness, una capacidad atencional individual, puede tener un impacto en trabajadores y familias, convirtiéndose en un fenómeno social.

1.1.1. Origen, definición y delimitación conceptual

La popularidad actual del mindfulness se remonta al programa de reducción del estrés diseñado por el Dr. Jon Kabat-Zinn en la Universidad de Massachussets a finales de los años 70. El programa de Reducción de Estrés Basado en la Atención Plena (REBAP) constituyó la columna vertebral de *Vivir con plenitud las crisis* (*Full Catastrophe Living*; Kabat-Zinn, 1990), donde por primera vez se articulaba la práctica del mindfulness y se sistematizaban sus principios. Sin embargo, el inicio de su investigación académica en Psicología no empezó hasta la publicación de *Terapia cognitiva de la depresión basada en la consciencia plena* (Segal, Williams y Teasdale, 2002). Desde entonces, psicólogos de todas las subdisciplinas han investigado sus efectos en diferentes ámbitos: neurocientífico (Tang, Hölzel y Posner, 2015), educativo (Britton et al., 2014) clínico (Germer, Siegel y Fulton, 2005), personalidad (Brown y Ryan, 2003) y organizacional (Dane, 2011).

La palabra 'mindfulness' es la traducción de *sati*, cuyo significado en pali es '*recordar*', '*memoria*' o '*recolección*' (Davids, 1881). *Sati* tiene tanto la connotación de permanecer enfocado en algo que está ocurriendo en el presente como la de memoria prospectiva (recordar enfocarse en algo) (Ṭhānissaro, 2012). Su contexto original es el canon budista pali, en el que se reúnen los discursos *(suttas)* del Buda histórico (Ñanamoli y Bodhi, 2009). En sus líneas, la función de *sati* es mantener la mente enfocada en un objeto o tema particular. Mediante su contemplación prolongada, el practicante puede reducir gradualmente su malestar psicológico, desarrollar sus capacidades cognitivas y aumentar su bienestar (Wallace, 2011). El *Sutta de los fundamentos de la atención plena (Satipatthana sutta)* establece los objetos de atención que, combinados con la experiencia intuitiva sobre cómo carecen de existencia inherente, llevan a la erradicación del sufrimiento. Los cuatro objetos de atención recomendados son 1) las sensaciones físicas, 2) las impresiones (agradable, desagradable, neutro), 3) los procesos mentales y 4) los fenómenos (Wallace, 2011). Este tipo de mindfulness se denomina mindfulness *correcto*, porque su objeto de atención lleva al estado libre de sufrimiento, la Iluminación de un Buda (Anālayo, 2018). Por el contrario, el Buda categoriza como mindfulness *incorrecto* aquel que no lleva a la Iluminación, sino a las emociones aflictivas y al malestar general (Ñanamoli y Bodhi, 2009).

El mindfulness contemporáneo consiste en prestar atención de manera intencional y con aceptación a la experiencia presente (Kabat-Zinn, 1990). El ejemplo más popular consiste en comer con conciencia una uva pasa. La atención se enfoca en los aspectos sensoriales de la uva (forma, color, tacto, peso, etc.), al tiempo que se mantiene una actitud de apertura ante todo lo que vaya surgiendo durante el ejercicio. Por ejemplo, si aparecen

pensamientos que distraigan, uno debe darse cuenta de ellos y devolver su atención al presente. Lo mismo ocurre con las distracciones externas, como sonidos o movimientos. Este estado atencional es una capacidad inherente a todo ser humano, y se puede aplicar a cualquier experiencia del día a día (Kabat-Zinn, 2001).

El mindfulness contemporáneo carece de dos propiedades de la definición budista original. La primera es la connotación de memoria prospectiva, ya que se centra casi exclusivamente en el aspecto de atención al presente (Ṭhānissaro, 2012). La segunda es la sustitución de los cuatro objetos de atención por "el momento presente". Purser y Milillo (2015) han argumentado que este desplazamiento resultó de una lectura demasiado literal de las enseñanzas introductorias sobre *sati* que dieron los maestros budistas orientales en los años sesenta, y que terminaron por introducirse en el libro de Kabat-Zinn (1990). Por lo tanto, la atención plena al presente no es una técnica budista, sino su práctica respecto a los objetos correctos con el fin de lograr la Iluminación (Anālayo, 2018).

La definición original de Kabat-Zinn (1990) fue seguida por las de otros investigadores, que la re-elaboraron poniendo más o menos énfasis en los componentes no atencionales (Van Dam et al., 2018, dando lugar a la proliferación de diferentes conceptualizaciones e instrumentos de medida con niveles variables de relación entre sí (Grossman y Van Dam, 2011). Para algunos autores, el mindfulness es unifactorial, y solo consiste en prestar atención al presente (Brown y Ryan, 2003). Otra línea lo conceptualiza como multificatorial, y añade a la atención al presente factores como la aceptación (Bishop et al., 2004), el etiquetado de emociones y el no juicio ante las experiencias internas (Baer et al., 2006). (Chiesa, 2013). Del mismo modo, los investigadores de Psicología de las Organizaciones también encuentran sus trabajos enmarcados entre estas dos conceptualizaciones (Dane, 2011; Glomb, Duffy, Bono y Yang, 2011).

La multiplicidad de definiciones y conceptualizaciones del mindfulness es una de las mayores amenazas para su estudio (Grossman y Van Dam, 2011). Por ello, es fundamental establecer desde un primer momento qué definición de mindfulness se utiliza para establecer unos cimientos teóricos sólidos e inequívocos (Jamieson y Tuckey, 2017). En este trabajo se utiliza el modelo de un factor por tres motivos. En primer lugar, estar *completamente* atento al presente incluye implícitamente el componente de aceptación. En otras palabras, tan pronto como aparece un juicio sobre lo que *debería ser* el presente, la atención pasa a enfocarse en el futuro. En el ejemplo de la uva pasa, la atención plena a su sabor domina la experiencia, lo que no deja lugar a juicios o expectativas. Por este motivo, prescindir de la aceptación como elemento nuclear hace que la definición sea menos redundante (Brown y

Ryan, 2004). En segundo lugar, el modelo unifactorial es el más utilizado en la investigación con poblaciones no clínicas (Tomlinson, Yousaf, Vittersø y Jones, 2018) y ha sido recomendado para muestras laborales sin experiencia previa en mindfulness como la empleada en esta investigación (Sutcliffe, Vogus y Dane, 2016). Por último, el instrumento utilizado para medirlo es robusto a nivel psicométrico (la *Mindfulness Attention Awareness Scale*; Brown y Ryan, 2003). Teniendo en cuenta estas razones, definimos el mindfulness como "estar atento y consciente de lo que está ocurriendo en el presente" (Brown y Ryan, 2003, p. 822). En el ámbito laboral, Dane (2011) complementa esta definición añadiendo que los "[…] fenómenos del momento presente […] ocurren tanto externa como internamente" (p. 1000). Así, la atención plena consiste en permanecer completamente consciente de lo que sea que esté ocurriendo de forma interna (pensamientos, emociones o sensaciones físicas) y externa (sonidos, formas, sabores, etc.).

En la mayoría de las investigaciones, la atención plena se ha conceptualizado como un rasgo psicológico similar a uno de personalidad (Chiesa, 2013. Así, tanto las investigaciones que usan el modelo unifactorial como el multifactorial han evaluado el mindfulness como la *tendencia, disposición* o *rasgo* general a permanecer consciente del presente (Mesmer-Magnus, Manapragada, Viswesvaran y Allen, 2017). Esta conceptualización entiende el mindfulness como una capacidad intrínsecamente humana (cf. Kabat-Zinn, 1990). La revisión más reciente de la literatura ha revelado la relación positiva entre mindfulness rasgo y la regulación emocional, los procesos cognitivos adaptativos y una menor sintomatología psicopatológica (Tomlinson et al., 2018).

Al igual que otros rasgos de personalidad como el afecto (George, 1996), el mindfulness rasgo puede ser evaluado a nivel de estado (Dane, 2011; Glomb et al., 2011). En este sentido, tanto la definición de Brown y Ryan (2003) como la de Dane (2011) señalan explícitamente que el mindfulness es un *estado* de atención plena al momento presente. El enfoque rasgo/estado del mindfulness ha sido aceptado como complementario, a pesar de que en la investigación predomine el uso del rasgo (Tuckey, Sonnentag y Bryan, 2018). El mindfulness estado se refiere al carácter fluctuante de la atención al presente a lo largo del día (Glomb et al., 2011). La validez del enfoque rasgo/estado ha sido apoyado por datos empíricos. En primer lugar, se ha encontrado que aproximadamente el 62% de la varianza en las fluctuaciones del mindfulness ocurre a nivel de rasgo y un 38% a nivel de estado (e.g., Hülsheger, Alberts, Feinholdt y Lang, 2013). En segundo lugar, el mindfulness estado puede ser incrementado temporalmente mediante inducciones sistematizadas (e.g., Long y Christian, 2015). Finalmente, mindfulness rasgo y estado tienen una relación

moderadamente fuerte a nivel estadístico (Brown y Ryan, 2003). Sin embargo, ambas rasgo y estado tienen diferente poder predictivo sobre otras variables, como la calidad del sueño (Hülsheger et al., 2014).

El mindfulness también se ha conceptualizado como una *intervención* para reducir el estrés, mejorar el rendimiento y fomentar el bienestar mediante el desarrollo intencional del mismo (Creswell, 2017). Estas intervenciones toman como modelo el programa REBAP de ocho semanas de Kabat-Zinn (1990), y cuyas esiones presenciales incluyen formación teórica, prácticas de meditación, dinámicas de grupo y tareas recomendadas para mantener el entrenamiento en casa (Creswell, 2017). Este y otros programas han sido adaptados al medio organizacional, por lo que los programas y las sesiones tienden a ser más cortos, y su administración puede ser facilitada por un instructor o auto-administrada online (e.g., Hülsheger et al., 2013). Las revisiones más recientes apoyan la existencia de mejoras significativas en los participantes, especialmente en variables de bienestar y salud (Jamieson y Tuckey, 2017; Lomas et al., 2017). Dentro de estos programas, la *meditación* mindfulness constituye el elemento fundamental para desarrollar la atención plena de los participantes (Hülsheger et al., 2013). La meditación mindfulness consiste en generar de manera intencional estados de atención plena hacia un objeto durante un período corto de tiempo. Practicada con regularidad, la meditación incrementa la disposición general a permanecer atento en otros contextos y situaciones (Kiken, Garland, Bluth, Palsson y Gaylord, 2015). La meditación sobre las sensaciones corporales (Ditto, Eclache y Goldman, 2006), la respiración (Hölzel et al., 2007) y la de campo abierto (Lutz, Slagter, Dunne y Davidson, 2008) son ejemplos de meditaciones mindfulness.

Es indispensable establecer una definición clara de la atención plena para no confundirla con otros constructos, especialmente con aquellos que también se refieren a procesos atencionales (Mesmer-Magnus et al., 2017). Los tres que merecen consideración son el mindfulness conceptual, la absorción y el *flow*.

El *mindfulness conceptual*[1] se define como "un estado mental activo caracterizado por hacer distinciones nuevas [en lo que ocurre en el entorno] que resultan en 1) estar situado en el presente, 2) ser más consciente del contexto y la perspectiva y 3) estar guiado (pero no gobernado) por reglas y rutinas" (Langer, 2014, p. 11). Esta línea de investigación es previa al del mindfulness atencional (i.e., Langer, 1989) y está consolidada desde hace más de 20 años (e.g., Pirson, Langer, Bodner y Zilcha-Mano, 2012). Aunque ambas

[1] El término original de Langer (1989) también es *mindfulness*. El "*conceptual*" añadido cumple la función de facilitar la exposición de las diferencias con el *mindfulness* "*atencional*" del que trata este trabajo.

conceptualizaciones del mindfulness comparten hasta cierto punto el enfoque de la atención en el momento presente, la de Langer difiere de la atencional en tres aspectos. En primer lugar, se basa en elaborar y hacer diferencias, opuesto al enfoque puramente atencional y no conceptual del mindfulness (Brown, Ryan y Creswell, 2007). En segundo lugar, es el resultado de un proceso discursivo de elaboración de distinciones, mientras que el mindfulness atencional es el resultado de una intención de permanecer presente (Brown y Ryan, 2003). Por último, está guiado por rutinas, por lo que es opuesto a la desautomatización que conlleva el mindfulness (v. 1.1.2.). Por tanto, el mindfulness conceptual es un proceso mental marcadamente diferente al manejado aquí y no deben ser confundidos.

La *absorción*, en segundo lugar, consiste en "estar concentrado en un rol, y se refiere a la intensidad del enfoque en el rol" (Rothbard, 2001, p. 656). El énfasis en la atención enfocada de la absorción es similar al del mindfulness. Sin embargo, la absorción la limita a un solo rol (p. ej., el laboral), mientras que la atención plena la amplía a otros fenómenos externos ajenos al rol (p. ej., el contexto familiar) y a fenómenos internos como las emociones (Dane, 2011). Los datos empíricos apoyan esta diferenciación conceptual, ya que se encontró que no existía una relación significativa entre mindfulness y absorción (Brown y Ryan, 2003) y que en algunos casos era incluso negativa (Baer, Smith y Allen, 2004).

Por último, el *flow* se refiere a un estado mental que surge espontáneamente durante una actividad óptimamente desafiante. Se caracteriza por una percepción alterada del tiempo, alta concentración, sensación de maestría y una fusión de la conciencia con la tarea, resultando en una pérdida de auto-referencialidad ("haciendo" en vez de "*yo* estoy haciendo esto") (Nakamura y Csikszentmihalyi, 2009). Aunque el elemento de atención es común entre ambos conceptos, la asociación con situaciones desafiantes y especialmente la pérdida de auto-referencialidad del flow son ajenas al mindfulness (Parker, Watson, Nelson, Epel y Siegel, 2015). El sujeto *mindful* permanece consciente de los fenómenos externos sin perder de vista su propia individualidad, especialmente sus procesos cognitivos y emocionales. Esta distinción conceptual ha sido apoyada por los estudios empíricos de Sheldon, Prentice y Halusic (2015), que encontraron que los estados de mindfulness y flow eran experiencialmente incompatibles. Concretamente, el mindfulness tenía una relación negativa con el componente de absorción del flow y no tenía relación con el componente de maestría percibida.

Resumen: el mindfulness consiste en prestar atención al momento presente, tanto a fenómenos internos como externos. Se ha conceptualizado como un rasgo de personalidad, un estado transitorio y una intervención centrada en su desarrollo. Aunque comparte elementos con otros constructos similares, el mindfulness constituye un fenómeno teórica y empíricamente diferenciado.

1.1.2. Procesos psicológicos asociados

El mindfulness es un estado atencional completamente enfocado en los contenidos de la experiencia presente. Sin embargo, este modo de prestar atención se ha asociado con una serie de componentes actitudinales secundarios y permiten explicar sus efectos beneficiosos (Kabat-Zinn, 1990).

Ser consciente de los procesos mentales facilita cambiar la relación con ellos. Específicamente, la *desidentificación* consiste en ver los fenómenos mentales como experiencias transitorias, sin quedar absorto en su contenido (Shapiro, Carlson, Astin y Freedman, 2006). Lo que antes era el "sujeto" (el contenido del pensamiento) ahora se vuelve "objeto" (un fenómeno percibido por la atención). Este cambio de perspectiva es opuesto a la fusión cognitiva, en la que la atención y el objeto mental se funden en una sola experiencia, con las consiguientes consecuencias emocionales (Hayes, Strosahl y Wilson, 1999). La desidentificación consiste en experimentar los fenómenos internos como un componente más del momento presente, sin necesidad de modificar o suprimir su contenido (Bishop et al., 2004). Esto, a su vez, favorece ver dichos fenómenos internos como meros eventos mentales, en vez de como una representación fiel de la realidad (Feldman, Greeson y Senville, 2010). El distanciamiento producido entre la atención y sus contenidos tiene dos consecuencias teóricas. La primera es que se crea una separación entre el ego (y su valor) y los eventos que experimenta (Glomb et al., 2011). Una alta identificación del ego con una situación negativa (interna o externa) conlleva una amenaza al valor personal (Kernis, Paradise, Whitaker, Wheatman y Goldman, 2000), mientras que la desidentificación se ha vinculado con la felicidad (Dambrun y Ricard, 2011). La segunda es que la desidentificación reduce la rumiación e inhibe procesos de elaboración secundaria (Bishop et al., 2004). Una vez se toma consciencia del fenómeno interno, y especialmente cuando ha sido identificado como una distracción, se devuelve la atención a la tarea presente, previniendo la proliferación de pensamientos. La revisión más reciente de la literatura al respecto ha encontrado que la desidentificación ocurría tanto durante intervenciones basadas en mindfulness como en inducciones de meditación (Levin, Luoma y Haeger, 2015).

La atención plena a las experiencias internas también favorece tomar mejores decisiones sobre su manejo. La *automaticidad* psicológica (modelos mentales habituales y recuerdos recurrentes de experiencias previas) influye en gran medida la percepción de las experiencias cotidianas (Siegel, 2007). Aunque los automatismos ofrecen un beneficio adaptativo al permitir dar respuestas más rápidas, su presencia inhibe la toma de consciencia intencional del presente (Bargh, 1994). Los automatismos psicológicos a lo largo del día se han asociado con la infelicidad (Killingsworth y Gilbert, 2010) y con conductas desadaptativas (Wilson et al., 2014). La atención plena y desidentificada permite ser consciente de los automatismos sin necesidad de actuar en base ellos. Ser consciente de que un patrón psicológico es *una* opción (y no necesariamente la única), facilita elegir si se debe actuar de una manera diferente. Por lo tanto, el mindfulness conlleva pasar de un procesamiento heurístico y automático a uno más sistemático y desautomatizado (Chaiken, 1980; Glomb et al., 2011). Como resultado, existe una mayor flexibilidad cognitiva con la que elegir entre un número mayor de posibilidades más allá de los patrones habituales (Siegel, 2010).

Resumen: la atención plena influye en la manera en la que se perciben y gestionan las experiencias internas, favoreciendo una toma de distancia de ellas (desidentificación) y la ruptura de los automatismos emocionales y conductuales (desautomatización).

1.1.3. Impacto en procesos humanos básicos[2,3]

Antes de examinar la relación del mindfulness con las variables organizacionales, es necesario entender qué influencia tiene sobre los procesos básicos del individuo. El impacto del mindfulness se puede observar en diferentes dominios: atencional, cognitivo, emocional, conductual y fisiológico

1.1.3.1. Atención

La mente humana tiende a estar distraída aproximadamente la mitad de las horas de vigilia (Killingsworth y Gilbert, 2010). Sin embargo, la atención plena consiste en enfocar y mantener *intencionalmente* la atención en el momento presente (Brown y Ryan, 2003). Este aspecto de voluntariedad concuerda con los hallazgos respecto a las mejoras en tres aspectos atencionales: *control*, *estabilidad* y *eficiencia*.

[2] Este y el siguiente apartado están adaptados de Good et al. (2016).
[3] Este apartado describe hallazgos sobre el mindfulness fuera (o al menos, no explícitamente dentro) del contexto laboral.

En primer lugar, el *control atencional* se refiere a la capacidad de dirigir la atención hacia un objeto cuando existen distractores (Ocasio, 2011). Los estudios con practicantes de meditación muestran que se distraen con menos facilidad (Tang et al., 2007), incluso cuando las distracciones son de tipo emotivo (Allen et al., 2012). La evidencia sugiere que el mecanismo explicativo es la reducción en los hábitos a la hora de dirigir la atención (v. 1.1.2), disminuyendo la posibilidad de enfocarse en distracciones (Wadlinger y Isaacowitz, 2011).

En segundo lugar, el mindfulness está asociado con mayor *estabilidad atencional*, definida como la capacidad de detectar señales inesperadas durante períodos prolongados de tiempo (Sarter, Givens y Bruno, 2001). El mindfulness rasgo se ha asociado negativamente con la divagación mental, tanto cuando existe un entrenamiento previo (Brewer et al., 2011) como cuando no (Mrazek, Smallwood y Schooler, 2012). Cuando se les evalúa con medidas objetivas, los participantes entrenados son capaces de permanecer durante más tiempo en un estado vigilante, tanto en tareas visuales (MacLean et al., 2010) como auditivas (Lutz et al., 2009).

Por último, la atención plena está relacionada con la *eficiencia atencional*, definida como el uso económico de recursos atencionales (Neubauer y Fink, 2009). Debido a la menor susceptibilidad a las distracciones, la atención permanece enfocada con mayor facilidad en el objeto, consumiendo menos recursos para ello. Los meditadores han mostrado menor activación en las zonas asociadas con el control ejecutivo (Kozasa et al., 2012), especialmente aquellos con años de práctica (Brefczynski-Lewis, Lutz, Schaefer, Levinson y Davidson, 2007). Los datos obtenidos en la tarea del parpadeo atencional con meditadores recién salidos de un retiro de práctica han apoyado esta noción. La tarea del parpadeo atencional consiste en presentar rápidamente una cadena estímulos (p. ej., números) y pedir que el sujeto identifique dos estímulos diana (p. ej., letras). Cuando la separación temporal entre las dos dianas es demasiado pequeña, los participantes reportan no percibir la segunda (Shapiro, Arnell y Raymond, 1997). Las medidas de los potenciales evocados de los meditadores mostraron que la presencia de la primera diana conllevaba menos activación. Esto, a su vez, se reflejaba en una mejora en el rendimiento en la tarea después de participar en el retiro (Slagter et al., 2007; Slagter, Lutz, Greischar, Nieuwenhuis y Davidson, 2009).

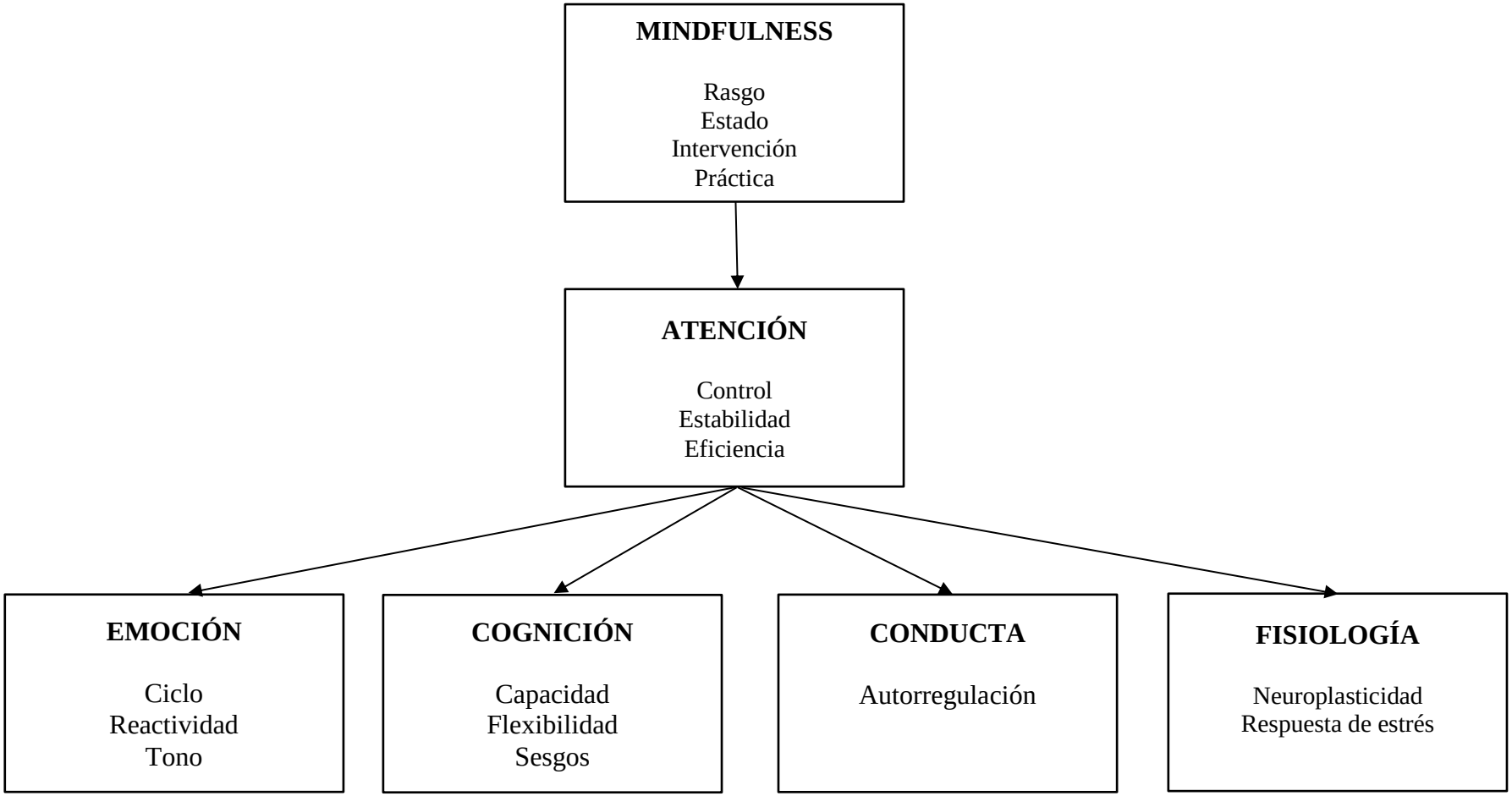
1.1.3.2. Emoción

En el plano afectivo, las evidencias apuntan a que el mindfulness afecta al *ciclo*, la *reactividad* y el *tono* de la experiencia emocional (Desbordes et al., 2014). En primer lugar, el entrenamiento en atención plena ha demostrado reducir el *ciclo* o tiempo necesario para recuperarse de una experiencia emocional negativa inducida experimentalmente. Además, en este proceso se gastaban menos recursos cognitivos que mediante la reinterpretación intelectual del evento (Keng, Robins, Smoski, Dagenbach y Leary, 2013). Por otra parte, Brown, Weinstein y Creswell (2012) encontraron que el mindfulness rasgo predecía un menor nivel de cortisol en la saliva tras la exposición a un evento socialmente estresante, así como menor ansiedad y afecto negativo.

En segundo lugar, la atención plena parece estar relacionada con una menor *reactividad* ante los estímulos emocionales. Este patrón ocurre tanto ante eventos negativos como positivos. Por ejemplo, el mindfulness rasgo se ha asociado con un menor afecto negativo después de un evento estresante (Arch y Craske, 2010), así como con una menor activación de las áreas del cerebro implicadas en el procesamiento de amenazas, tras la exposición a caras expresando emociones negativas como el enfado y el miedo (Creswell, Way, Eisenberger y Lieberman, 2007). Por otra parte, el mindfulness rasgo de practicantes novicios y experimentados en meditación también estaba asociado con una menor reactividad emocional ante estímulos positivos (Brown, Goodman y Inzlicht, 2013; Taylor et al., 2011).

Por último, el mindfulness se ha asociado con el *tono* emocional, es decir, lo habitual que resultan las emociones positivas o negativas. Debido al enfoque en el "aquí y el ahora" y el distanciamiento psicológico hacia los contenidos mentales, el mindfulness puede prevenir las consecuencias emocionales negativas de las divagaciones mentales automáticas. Tres meta-análisis apoyan este razonamiento, mostrando que el mindfulness rasgo está relacionado con mayor afecto positivo y menor afecto negativo (Eberth y Sedlmeier, 2012; Giluk, 2009; Mesmer-Magnus et al., 2017).

Figura 1.1. *Mecanismo e impacto del mindfulness en procesos humanos básicos*



1.1.3.3. Cognición

La relación positiva entre la atención plena y el rendimiento cognitivo está bien establecida (e.g., van Vugt, 2015). En esta área, los hallazgos se pueden dividir en tres áreas: *capacidad*, *flexibilidad* y *sesgos*.

La memoria de trabajo es uno de los indicadores más utilizados de la *capacidad cognitiva*. Su función es hacer de soporte para retener y procesar información a corto plazo, así como para enlazarla con formas de cognición más complejas (Baddeley, 1992). Los resultados de una serie de intervenciones en diferentes poblaciones (estudiantes, profesores y soldados) han sugerido que la atención plena mejora la memoria de trabajo (Roeser et al., 2013). Otro indicador de la capacidad cognitiva es la inteligencia fluida, definida como la capacidad de solucionar problemas noveles sin haber recibido información previa (Jaeggi, Buschkuehl, Jonides y Perrig, 2008). La práctica breve (Tang et al., 2007) y sostenida durante años (Gard et al., 2014) del mindfulness se ha visto asociada con su mejora.

La *flexibilidad cognitiva* es la capacidad de producir nuevas perspectivas y respuestas que apoyen la adaptación a un entorno cambiante (Walsh, 1995). Los estudios con intervenciones basadas en mindfulness han encontrado un mayor uso de la intuición para resolver problemas (Ostafin y Kassman, 2012) y la búsqueda de nuevas perspectivas cuando se agotaban las opciones posibles (Ding et al., 2015). Además, la experiencia en meditación se ha asociado con la creatividad y el pensamiento divergente (Colzato, Szapora y Hommel, 2012).

Los *sesgos cognitivos* son errores en el procesamiento de la información que se desvían de una percepción racional y objetiva de la realidad (Haselton, Nettle y Andrews, 2005). El énfasis en el presente, la desidentificación de los pensamientos y la ruptura de los automatismos sugieren que el mindfulness puede asociarse con menos sesgos cognitivos. La evidencia experimental apunta en esta dirección. Por ejemplo, en el juego del ultimátum, un participante hace una oferta de dinero a otro; si este la acepta, ambos se quedan con el reparto, pero si la rechaza, ninguno gana nada. Según la teoría de la racionalidad, al receptor le conviene aceptar cualquier oferta que no sea cero, pero la respuesta normal es rechazar propuestas que excedan una ganancia del 80% para quien propone (Gurth, Schmittenberger y Schwarze, 1982). Sin embargo, era el doble de probable que los meditadores expertos tomaran la decisión económicamente más racional cuando la propuesta presentada era injusta (Kirk, Downar y Montague, 2011). El análisis neuropsicológico mostró que los meditadores activaban áreas diferentes del cerebro comparados con los controles, lo que les permitía desligar la experiencia emocional negativa de su conducta. Por otra parte, la

inducción breve de un estado de mindfulness, puede alterar la formación de sesgos. En esta línea, Kiken y Shook (2011) encontraron que los participantes en la condición de meditación mostraban menos sesgos de negatividad cuando tenían que clasificar estímulos positivos y negativos debido a que categorizaban los estímulos positivos como tal. Posteriormente, Hafenbrack, Kinias y Barsade (2014) hallaron que tanto el mindfulness rasgo como el mindfulness inducido experimentalmente estaban relacionados con menos errores de decisión asociados con la falacia de los costos "hundidos", que consiste en continuar tomando una decisión que apoye una inversión de dinero o cualquier otro recurso (Arkes y Blumer, 1985).

En cuanto a sesgos sociales, Lueke y Gibson (2015) encontraron que cuanto mayor era el estado de mindfulness inducido experimentalmente, menores eran los sesgos implícitos hacia la raza y la edad. En un estudio posterior, estos investigadores utilizaron como tarea experimental el juego de confianza (*Trust Game*). Esta tarea está diseñada para evaluar la relación entre las actitudes raciales negativas y la distribución de recursos económicos entre los jugadores, proporcionando una medida conductual del sesgo cognitivo (Stanley, Sokol-Hessner, Banaji y Phelps, 2011). Los investigadores asignaron a los participantes a una inducción breve de mindfulness o un control, y encontraron que los sujetos que habían meditado mostraban menos conductas de discriminación hacia los compañeros de otra raza (Lueke y Gibson, 2016). Más recientemente se encontró que una inducción breve de mindfulness era efectiva en reducir el sesgo de correspondencia (la tendencia a sobreatribuir las causas de una conducta a la persona por encima de factores contextuales; Ross, 1977) (Hopthrow, Hooper, Mahmood, Meier y Weger, 2017).

1.1.3.4.Conducta

La *autorregulación conductual* es uno de los beneficios del mindfulness (Glomb et al., 2011). Esta, a su vez, tiene su antecedente en la autorregulación de pensamientos y emociones mediante la desidentificación y la reducción de automatismos psicológicos señalada en la sección anterior. Good et al. (2016) argumentan que la toma de consciencia de los patrones psicológicos posibilita la aparición de un espacio entre el estímulo mental (el automatismo) y la conducta asociada. Esto aumentaría la probabilidad de tomar una decisión consciente en vez de una automática. De manera acorde, los practicantes de meditación muestran más activación en las zonas cerebrales implicadas en la regulación voluntaria de pensamientos y conductas (Fox et al., 2016).

La evidencia empírica hallada en el área de las adicciones respalda estas afirmaciones. Por ejemplo, la práctica del mindfulness se ha asociado con la ruptura entre el evento mental del ansia por fumar (*craving*) y la conducta automática de fumar (Elwafi, Witkiewitz, Mallik, Thornhill y Brewer, 2013), así como una reducción en dicha ansia (Westbrook et al., 2011). En esta misma línea, Tang, Tang y Posner (2013) entrenaron a dos grupos de fumadores en meditación o en relajación. Los meditadores mostraron una reducción significativa del 60% de su consumo comparados con los controles. En estado de descanso, el escáner cerebral mostraba que los meditadores tenían una mayor activación en las zonas relacionadas con el auto-control (corteza anterior cingulada y prefrontal). De manera similar, un estado de atención plena reducía el atractivo de alimentos poco sanos cuando se experimentaba hambre, resultando en la elección de opciones más sanas (Papies, Pronk, Keesman y Barsalou, 2015).

1.1.3.5. Fisiología

La relación del mindfulness con la *respuesta del estrés* es una de las líneas de investigación más establecidas. Las evidencias indican que el mindfulness está asociado con cambios en varias partes del sistema nervioso (central y autonómico) encargados de la regulación del estrés. La amígdala, por ejemplo, es una de las estructuras más importantes en el sistema nervioso central para procesar estímulos emocionales y desencadenar la respuesta del estrés (Arnsten, 2009). En el caso de personas con mayores niveles de mindfulness, la amígdala muestra menor volumen, actividad basal y conectividad funcional con otras zonas cerebrales asociadas con el estrés (Creswell y Lindsay, 2014; Taren et al., 2015). A nivel del sistema nervioso autónomo, se ha encontrado que un entrenamiento en mindfulness era efectivo en reducir la presión arterial tras un evento estresante (Nyklíček, Mommersteeg, Van Beugen, Ramakers y Van Boxtel, 2013). De manera complementaria, Ditto, Eclache y Goldman (2006) encontraron que el grupo de meditación tenía una mayor activación parasimpática (relajante) que los controles.

Por otra parte, el mindfulness también se ha asociado con la *neuroplasticidad*. La revisión y el meta-análisis más recientes han mostrado que las diferentes meditaciones de mindfulness están asociadas con cambios significativos en zonas cerebrales implicadas en la auto-regulación mental y conductual, la auto-conciencia, la regulación de la atención y la meta-conciencia (Fox et al., 2016; Tang et al., 2015). En esta línea, Sato et al. (2012) han afirmado que las regiones cerebrales características de los practicantes de mindfulness pueden ser identificadas por medio de escáneres con facilidad.

Resumen: la atención plena se ha relacionado con mejoras significativas en diferentes ámbitos del funcionamiento humano. Específicamente, se ha vinculado a mejoras atencionales (mayor control, estabilidad y eficiencia), emocionales (recuperación más rápida de emociones negativas, menor reactividad emocional y tono afectivo más positivo), cognitivas (mayor flexibilidad y capacidad, así como menos sesgos perceptivos y sociales), conductuales (autorregulación) y fisiológicas (menor reactividad al estrés y cambios significativos en diferentes áreas cerebrales).

1.1.4. Antecedentes personales y laborales del mindfulness[4]

La mayoría de los estudios en el área han conceptualizado y evaluado el mindfulness como un rasgo de personalidad relativamente estable (Tuckey et al., 2018). Esta situación ha limitado la posibilidad de estudiar otras variables, especialmente organizacionales, que puedan afectarla (Reb, Narayanan y Ho, 2015). El meta-análisis más reciente sobre mindfulness rasgo pone esto de relieve: el mindfulness se utiliza como variable predictora de otras, pero no al revés (Tomlinson et al., 2018). Los estudios que han encontrado variables que predecían la atención plena se clasifican a continuación.

1.1.4.1. Intervenciones basadas en mindfulness

El mindfulness, además de una disposición y un estado, ha sido conceptualizado como una intervención. En este caso, los participantes practican técnicas de meditación de manera regular que les permiten desarrollar estados de atención plena de manera intensiva. A largo plazo, dichos estados predicen un aumento en los niveles de mindfulness rasgo (Kiken et al., 2015). Un meta-análisis de 88 intervenciones con población general respalda esta afirmación, ya que se halló que existían tamaños del efecto moderados en el aumento del mindfulness rasgo antes y después de una intervención (Quaglia, Braun, Freeman, McDaniel y Brown, 2016). De manera complementaria, Bergomi, Tschacher y Kupper (2015) encontraron que el mayor predictor del mindfulness era la frecuencia de la práctica meditativa.

En el ámbito laboral, el 85% de las intervenciones aumentaban significativamente el mindfulness general o sus facetas (frente al 10% que no y un 5% que no lo especificaban). Sin embargo, el 45% del total de estudios sobre intervenciones no incluían una evaluación del cambio de mindfulness (Jamieson y Tuckey, 2017). Más específicamente, una revisión

[4] Esta sección se basa en el esquema de Sutcliffe et al. (2016).

de la literatura sobre intervenciones en educadores encontró que el 79% de las intervenciones resultaban en aumentos significativos del mindfulness pre-post intervención, frente a un 8% sin cambios y un 5% de empeoramiento (Lomas et al., 2017).

En un rango más breve, otros investigadores organizacionales han utilizado una única inducción para generar con éxito el estado de atención plena antes de una tarea experimental: el ejercicio de la uva pasa (v. 1.1) (Reb y Narayanan, 2014), atención plena a la respiración (Hafenbrack et al., 2014), las sensaciones físicas (Ostafin y Kassman, 2015) y la experiencia emocional (Cleirigh y Greaney, 2015).

La única excepción en cuanto al contenido de la intervención es el estudio de Fredrickson, Cohn, Coffey, Pek y Finkel (2008). El programa aplicado *no* estaba centrado en desarrollar mindfulness, sino sentimientos de calidez y bondad hacia otros. Tras 9 semanas de intervención, se encontró que los participantes del programa habían aumentado significativamente sus niveles de atención plena. Estas ganancias se mantuvieron en un seguimiento posterior, independientemente de si se había mantenido o no la práctica meditativa (Cohn y Fredrickson, 2010)

1.1.4.2. Rasgos

El mindfulness rasgo está asociado con otros factores de personalidad. En un meta-análisis de 29 estudios, Giluk (2009) encontró que el mindfulness rasgo tenía las asociaciones significativas más fuertes (y negativas) con el neuroticismo y el afecto negativo. Estudios posteriores han demostrado que el neuroticismo es un predictor inverso del mindfulness (Feltman, Robinson y Ode, 2009; Fetterman, Robinson, Ode y Gordon, 2010). En este sentido, también se ha encontrado que la ansiedad rasgo predice negativamente el mindfulness rasgo (Walsh, Balint, Smolira, Fredericksen y Madsen, 2009).

Una línea de investigación paralela ha encontrado que la pasión predecía el mindfulness. La pasión se define como un fuerte interés hacia una actividad muy valorada y en la que se invierte una cantidad significativa de tiempo a diario (Vallerand, 2015). Así, la forma armoniosa de la pasión (satisfecha con la actividad en sí, sin buscar recompensas) era un predictor positivo significativo del mindfulness, mientras que cuando era obsesiva (forzada por contingencias, como la auto-estima o la aceptación social) era un predictor negativo (St-Louis, Verner-Filion, Bergeron y Vallerand, 2018).

Más recientemente, Mesmer-Magnus et al. (2017) hicieron un meta-análisis de 270 estudios independientes con población trabajadora con el fin de hallar las correlaciones entre el mindfulness y variables de bienestar personal y laboral. Los resultados mostraron que

existía una relación positiva (presentada en orden decreciente de intensidad) con la regulación emocional (que incluía el afecto positivo, tono afectivo agradable y emociones positivas), la eficacia/confianza (incluyendo eficacia, confianza, auto-aceptación y auto-estima), la salud mental (bienestar, flexibilidad psicológica y preocupación), la satisfacción vital (p. ej.,, la calidad de vida) y la salud física (salud general, tasa cardíaca, calidad del sueño, fatiga y otros síntomas). También se encontró que tenía una relación negativa con el estrés vital percibido, las emociones negativas (afecto negativo, tono afectivo desagradable, miedo y emociones negativas) y variables asociadas con la depresión y la ansiedad. Todas estas relaciones (excepto la salud física) eran estadísticamente generalizables. Estos hallazgos han sido corroborados por la revisión sistemática de la literatura sobre mindfulness rasgo y la salud mental en población no clínica de Tomlinson et al. (2018). En ella, el mindfulness tenía una relación positiva con factores emocionales (especialmente menor estrés percibido y mayor bienestar) y procesos cognitivos (menor rumiación y mejores estrategias de afrontamiento, entre otros), así como una relación negativa con la depresión.

Debe tenerse presente que la mayoría de estos resultados, aunque indicativos, han sido hallados mediante correlaciones. Por lo tanto, no es posible afirmar que causen (o sean una consecuencia de) el mindfulness. Es posible, por ejemplo, que la salud mental sea un antecedente del mindfulness: una persona psicológicamente sana encontrará más fácil permanecer enfocada en el presente en vez de quedar atrapada en rumiaciones y patrones emocionales dañinos. Sin embargo, la relación se vuelve menos intuitiva en el caso de variables como la confianza, la salud física o el afecto positivo: ¿permanecer en el presente predice una mayor autoconfianza, o una mayor autoconfianza lleva a estar más enfocado en el presente? De este modo, es posible que el mindfulness no solo esté relacionado con otros rasgos de personalidad, sino que pueda ser explicado por su presencia.

1.1.4.3. Experiencia laboral

Aunque una mayor experiencia meditativa se ha vinculado con mayor facilidad parar permanecer atento al presente (Brefczynski-Lewis et al., 2007), la relación entre experiencia *laboral* y atención plena no es concluyente. Por ejemplo, la divagación mental automática se ha asociado con haber invertido más tiempo del necesario en entrenarse en una tarea (Smallwood y Schooler, 2006). Por otra parte, un estudio con paramédicos austriacos encontró que a medida que su experiencia aumentaba, su mindfulness también lo hacía. Sin embargo, a partir un cierto nivel de experiencia, la atención plena empezaba a declinar (Mitmansgruber, Beck y Schüßler, 2008). El estudio de Dane (2013) eliminó esta suerte de

"techo" entre mindfulness y experiencia laboral. Utilizando una muestra de abogados, el autor encontró que los más experimentados tenían un foco atencional más amplio, incluían más estímulos de la sala de juicios (las reacciones de los miembros del jurado, las insinuaciones del juez, las expresiones del contrario) y eran más conscientes de los eventos que podían utilizarse a su favor. Por otra parte, Zhang y Wu (2014) encontraron que una mayor experiencia laboral moderaba la relación entre el mindfulness rasgo de los trabajadores y sus conductas de seguridad en una planta de energía nuclear. Por ello, la experiencia laboral permanece como un factor de influencia, pero se desconoce bajo qué condiciones precisas.

1.1.4.4. Factores organizacionales

La atención plena es un fenómeno psicológico y su desarrollo se ha vinculado a su entrenamiento individual. Por ello, la mayoría de los estudios no han considerado factores contextuales que puedan influir su aparición. En este sentido, y tal y como sugiere Hülsheger (2015), las preguntas de investigación que guían la mayoría de la investigación se pueden resumir en: "¿Cuáles son las consecuencias relacionadas con el trabajo del mindfulness del empleado, y cómo se puede incrementar el mindfulness individual mediante entrenamiento?*"* (p. 678). Sin embargo, la misma autora señala que diferentes factores contextuales pueden afectar al mindfulness del empleado, como las políticas y el clima de la organización.

La creciente literatura al respecto apoya la influencia contextual sobre la atención plena. Zhang, Ding, Li y Wu (2013) encontraron que la complejidad de la tarea moderaba la relación entre el mindfulness rasgo y el rendimiento de los operarios de una planta de energía nuclear. En otras palabras, la relación positiva entre la atención plena y el rendimiento era mayor en los empleados con tareas más difíciles, mientras no era significativa en las tareas más simples. Los hallazgos respecto a cómo las demandas profesionales fomentan el uso de recursos (e.g., Bakker, Hakanen, Demerouti y Xanthopoulou, 2007) sugieren que, además de ser un moderador, la complejidad de la tarea también podría ser un antecedente de la atención plena. La sobrecarga de trabajo y las demandas laborales psicológicas eran un predictor negativo del mindfulness (Hülsheger, Walkowiak y Thommes, 2018; Lawrie, Tuckey y Dollard, 2018). De modo similar, Reb et al. (2015) hallaron que las limitaciones organizacionales (p.ej. entrenamiento inadecuado, falta de materiales) predecían negativamente la atención plena, mientras que tanto la rutinidad de la tarea como las limitaciones organizacionales estaban relacionadas con la divagación mental. Según estos

autores, un entorno laboral limitante obliga al empleado a invertir sus recursos en afrontar los obstáculos y carencias presentes, evitando su inversión en mantener su atención plena. Por el contrario, el control laboral predecía el mindfulness, especialmente cuando existía un clima de seguridad psicológica en la empresa (Lawrie et al., 2018). En el plano tecnológico, Woodlief (2017) encontró que estar implicado con el *smartphone* tanto cognitiva (pensar constantemente en él) como conductualmente (su uso) era un predictor negativo del mindfulness. Aunque estos resultados se obtuvieron con estudiantes universitarios, su relevancia para el contexto laboral es clara debido al uso del *smartphone* como herramienta de trabajo (Perlow, 2012).

1.1.4.5. Otros factores

Algunos estudios han encontrado predictores del mindfulness que no encajan dentro de las categorías previas. Los dos casos son el engagement estado y la edad (estudiada en un contexto no organizacional).

Un reciente estudio de diario con 104 trabajadores de universidad investigó la relación entre el mindfulness y el engagement en su nivel estado. Para ello, los participantes informaron sobre estas variables en tres ocasiones a lo largo de su jornada laboral (antes, durante y al término) durante diez días laborales. Los resultados revelaron que el engagement estado era un predictor del mindfulness estado en un momento posterior (Tuckey et al., 2018). Por otra parte, se ha encontrado que la edad también era una variable predictora de la atención plena: tener entre 60 y 91 años predecía significativamente el mindfulness rasgo (en comparación con aquellos entre 25 y 35 años). Además, el poder predictor de la edad se mantenía cuando se controlaban los niveles de afecto positivo (Shook, Ford, Strough, Delaney y Barker, 2017).

Resumen: los antecedentes laborales más comunes del mindfulness son las intervenciones y las inducciones breves. Entre los factores contextuales se encuentran las demandas laborales, las limitaciones organizacionales, la implicación cognitiva y conductual con el *smartphone* y el engagement estado. En términos de disposiciones, la pasión por una actividad y el neuroticismo eran predictores significativos del mindfulness rasgo.

1.1.5. Impacto del mindfulness en variables individuales del empleado

Debido a su asociación positiva con las variables atencionales, cognitivas, emocionales, conductuales y fisiológicas señaladas anteriormente, la aplicación e investigación del mindfulness en el trabajo se han convertido en áreas fructíferas tanto para investigadores como empresas. Los hallazgos, referidos a las variables individuales del empleado, se pueden agrupar en dos grandes categorías: rendimiento y bienestar.

1.1.5.1. Rendimiento

El meta-análisis más reciente ha mostrado que el mindfulness tenía una relación positiva con el rendimiento (Mesmer-Magnus et al., 2017). Además, el mindfulness rasgo explicaba un 10% más de la varianza del rendimiento laboral que si solo se consideraba el esfuerzo en el trabajo. Esta asociación se ha visto en un rango de profesiones, desde camareros estadounidenses (Dane y Brummel, 2014) a trabajadores de Singapur (Reb, Narayanan y Chaturvedi, 2014). Además, la relación entre mindfulness y rendimiento se ha replicado con estudiantes de posgrado, en quienes se encontró una asociación positiva entre mindfulness rasgo y rendimiento académico (Shao y Skarlicki, 2009).

Las intervenciones basadas en mindfulness también han mostrado este patrón de resultados. Por ejemplo, después de un programa de 8 semanas de entrenamiento en meditación, el rendimiento de los empleados (evaluado por los supervisores) aumentó en comparación al grupo control (Shonin, van Gordon, Dunn, Singh y Griffiths, 2014). Por otra parte, una inducción breve de atención plena hizo que quienes la habían recibido pidieran un porcentaje más alto en una tarea de negociación, así como que se sintieran más satisfechos con los resultados y el proceso de negociación (Reb y Narayanan, 2014).

El mindfulness rasgo también se ha asociado con conductas de prevención de riesgos laborales. Zhang et al. (2013) encontraron que existía una asociación positiva entre la atención y el rendimiento de seguridad en los operarios implicados en tareas complejas en una planta de energía. Estos resultados fueron elaboraros en el estudio posterior de Zhang y Wu (2014), en el que encontraron que la relación entre el mindfulness rasgo y las conductas de seguridad era más elevada cuando los trabajadores tenían más experiencia en la tarea o eran más inteligentes. Recientemente, Valley y Stallones (2017) replicaron estas relaciones, encontrando una relación significativa entre mindfulness y conductas de seguridad en una muestra de trabajadores de un hospital.

La atención plena también se ha asociado con conductas no vinculadas al rol y que contribuyen al mejor funcionamiento y rendimiento de la empresa. Por ejemplo,

Krishnakumar y Robinson (2015) encontraron que la relación negativa existente entre el mindfulness y las conductas desadaptativas y el maquiavelismo laboral estaba mediada por una reducción de los sentimientos de hostilidad. Resultados similares se han encontrado utilizando una metodología experimental. Así, los participantes a los que se inducía un estado de mindfulness antes de una situación de injusticia reportaban experimentar menos emociones negativas y rumiación, lo que se manifestaba en un número menor de conductas revanchistas (Long y Christian, 2015). De manera complementaria, Reb et al. (2015) encontraron que el mindfulness rasgo de los empleados predecía más conductas de ciudadanía organizacional y menos conductas de desviación reportadas por su supervisor.

En el ámbito clínico, el mindfulness de los trabajadores también se ha vinculado con una mejora en los pacientes. Por ejemplo, los usuarios de un centro de salud reportaron un aumento en sus niveles de felicidad después de una intervención basada en mindfulness sobre el personal (Singh et al., 2004). Estos resultados fueron extendidos en el ámbito psicoterapéutico. Grepmair et al. (2007) encontraron que, después de que los terapeutas participaran en un entrenamiento en meditación de 9 semanas, los pacientes experimentaron una reducción significativa de sus síntomas (ansiedad, hostilidad, pensamientos paranoides).

1.1.5.2. Bienestar

El bienestar laboral se ha definido como "la calidad general de la experiencia y funcionamiento del empleado en el trabajo" (Grant, Christianson y Price, 2007, p. 52). Su presencia se ha visto asociada con variables organizacionales como mayor rendimiento, salud física y psicológica y menor cambio de empresa (Danna y Griffin, 1999).

El meta-análisis de Mesmer-Magnus et al. (2017) encontró que el mindfulness rasgo de los empleados tenía una relación positiva con el bienestar físico y mental, la regulación emocional y la satisfacción con la vida y el trabajo. Sin embargo, se encontró que las asociaciones más intensas eran las negativas con variables de malestar: *burnout*, estrés percibido, depresión y emociones negativas. En este sentido, el mindfulness rasgo explicaba un 12% más de la varianza del burnout que si solo se utilizaba el estrés percibido. En la población general, el meta-análisis de Tomlinson et al. (2018) también ha demostrado la existencia de una fuerte asociación entre el mindfulness rasgo y el bienestar psicológico.

Más específicamente, el bienestar se ha dividido entre bienestar hedónico (basado en la gratificación inmediata de los sentidos y las recompensas) y bienestar eudamónico (basado en el logro de metas personales y el desarrollo de relaciones personales significativas) (Ryan y Deci, 2001). A nivel hedónico, tanto el mindfulness rasgo como intervención se han

asociado con una mejor calidad del sueño (Hülsheger et al., 2014; Hülsheger, Feinholdt y Nübold, 2015; Wolever et al., 2012) y, como estado, con un mayor "saboreo" de experiencias agradables (Meier, Noll y Molokwu, 2017). Sin embargo, la atención plena se ha asociado más consistentemente al bienestar eudamónico. En el ámbito laboral, el mindfulness se ha relacionado con el engagement, el optimismo, la esperanza y las emociones positivas (Malinowski y Lim, 2015), la satisfacción de necesidades psicológicas básicas (Reb et al., 2015), el funcionamiento auténtico (Leroy, Anseel, Dimitrova y Sels, 2013) y la vitalidad (Allen y Kiburz, 2012).

Resumen: la atención plena en el trabajo está asociada con un mayor rendimiento general y con conductas de seguridad y pro-organizacionales. Sus beneficios también se han encontrado para el empleado, especialmente en menores niveles de burnout y estrés y mayores de bienestar hedónico (p.ej. calidad de sueño) y eudamónico (p. ej., engagement).

1.1.6. Mindfulness en las relaciones interpersonales

El creciente número de estudios sobre mindfulness en el trabajo se ha enfocado principalmente en variables relacionadas con el empleado. Sus efectos interpersonales, sin embargo, han recibido una atención empírica menor (Good et al., 2016; Creswell, 2017).

Semejante situación resulta sorprendente a la luz de los hallazgos vinculando el mindfulness con indicadores de relaciones sociales de calidad. Por ejemplo, la atención plena se ha asociado con sentimientos de interconexión hacia otras personas (Brown et al., 2007; Trautwein, Naranjo y Schmidt, 2014), mejor escucha atenta (Moll, Frolic y Key, 2015) y mayores niveles de empatía, especialmente en la toma de perspectiva (Krasner et al., 2009; Birnie, Speca y Carlson, 2010) y la preocupación emocional (Rimes y Wingrove, 2011). Además, el mindfulness rasgo se ha asociado con menor ansiedad social (Dekeyser, Raes, Leijssen, Leysen y Dewulf, 2008) y sentimientos de soledad (Creswell et al., 2012).

El entrenamiento en mindfulness también se ha asociado con un aumento de la *compasión* hacia otros, definida como la toma de conciencia del malestar de otros y el deseo (manifestado o no en acto) de aliviarlo (Jazaieri et al., 2014). En un estudio experimental, los participantes que habían recibido 8 semanas de entrenamiento en meditación eran significativamente más proclives a ceder su asiento a una persona visiblemente dolorida y en muletas (Condon, Desbordes, Miller y DeSteno, 2013). Estos resultados fueron replicados por Lim, Condon y DeSteno (2015). Ante una persona en muletas, los participantes de un entrenamiento en mindfulness cedían su asiento significativamente más que los de la condición de entrenamiento cognitivo. Por otra parte, el mindfulness rasgo se ha asociado

con mayores puntuaciones en metas compasivas (Stewart, Ahrens y Gunthert, 2018) y valores prosociales (Nai, Narayanan, Tan, Sim y Reb, 2016) (para evidencia contraria, ver Kreplin, Farias y Brazil, 2018).

1.1.6.1. Estudios con parejas sentimentales

La literatura sobre parejas románticas engloba la mayor parte de estudios sobre los efectos interpersonales del mindfulness. Así, por ejemplo, se ha encontrado que el mindfulness de los miembros se asociaba con menor conflicto en la pareja (Hertz, Laurent y Laurent, 2015; Laurent, Laurent, Hertz, Egan-Wright y Granger, 2013), así como con mayor cercanía y aceptación hacia el otro miembro (Carson, Carson, Gil y Beaucom, 2004). El meta-análisis más reciente ha encontrado que el mindfulness en parejas estaba relacionado positivamente con la satisfacción con la relación (McGill, Adler-Baeder y Rodríguez, 2016). Sin embargo, apenas se ha examinado cómo se relaciona el mindfulness *de un miembro* con las variables *del otro.* El estudio pionero al respecto encontró que, durante una situación de conflicto inducida experimentalmente, mayores niveles de mindfulness en las mujeres estaban significativamente asociados con menor enfado en los hombres (Barnes, Brown, Krusemark, Campbell y Rogge, 2007). El segundo (y último) estudio encontró que, aunque cuatro de los cinco factores del mindfulness estaban relacionados con la satisfacción con la relación *propia*, solo uno de ellos lo estaba *con la satisfacción del otro miembro* de la pareja (Lenger, Gordon y Nguyen, 2017).

Las parejas con dificultades de salud también parecen beneficiarse de la atención plena. Así, que la pareja de un paciente de cáncer tuviera mayor nivel de mindfulness rasgo estaba relacionado con que el miembro enfermo percibiera mayor apoyo (Williams y Cano, 2014). Esta asociación también parece existir en la dirección opuesta. Tras una intervención para parejas con un miembro enfermo, Birnie, Garland y Carlson (2010) encontraron una relación negativa entre el mindfulness del paciente y el malestar emocional de su pareja. En su revisión de la literatura, Karremans, Schellekens y Kappen (2015) sugieren que estas asociaciones se deben a que los miembros con más mindfulness manejan mejor el estrés y tienen conductas (sacrificio), motivaciones (perdón) y concepciones (más favorables) hacia la relación y el otro miembro, haciendo que este perciba menor estrés y mayor apoyo.

Estos hallazgos, aunque indicativos, presentan dos limitaciones para el propósito de este trabajo. En primer lugar, la mitad de la investigación que ha tenido en cuenta al otro miembro ha utilizado un diseño observacional, lo que no permite sacar conclusiones sobre causalidad o evolución temporal (Lenger et al., 2017; Williams y Cano, 2014). En segundo

lugar, el diseño experimental de Birnie et al. (2010) aportó evidencia respecto al beneficio de la intervención en mindfulness para parejas, pero su reducido tamaño muestral (20 parejas) hace que sus hallazgos no sean generalizables. Por último, todos los estudios se hicieron en un contexto (el sentimental), lo que excluye la influencia del mindfulness en otros contextos y momentos del día puede tener sobre el bienestar de la pareja.

1.1.6.2. Mindfulness interpersonal en el trabajo

El meta-análisis de Mesmer-Magnus et al. (2017) sobre mindfulness y las variables sociales de los empleados sugiere que también está relacionado con las variables de otros empleados. Así, los resultados mostraban una relación positiva entre el mindfulness y la satisfacción con las relaciones laborales y negativa con el conflicto interpersonal y el ostracismo laboral. De manera más explícita, algunos investigadores ya han empezado a explorar la relación entre mindfulness y variables de otros empleados. Los escasos hallazgos interpersonales hasta la fecha se pueden dividir en dos tipos: *díadas* y *equipos*.

1.1.6.3.1. Mindfulness interpersonal en el trabajo: díadas

La relación entre el mindfulness del *líder y sus empleados* solo ha sido evaluada por tres estudios. El estudio seminal de Reb et al. (2014) encontró que la atención plena de los líderes estaba significativamente asociada con el rendimiento general, el rendimiento del rol, las conductas de ciudadanía organizacional, y tenía una relación negativa con las conductas de desviación de los empleados. La satisfacción de las necesidades psicológicas (competencia, autonomía y pertenencia) mediaba completa o parcialmente la relación entre el mindfulness del líder y el rendimiento general, el rendimiento de rol, la satisfacción laboral y las conductas de ciudadanía organizacional del empleado. Sin embargo, el mindfulness del líder no solo está relacionado con las variables de los empleados, sino también con la percepción que tienen de él. Así, Waldron y Ebbeck (2015) encontraron en un estudio con equipos de extinción de incendios forestales que el mindfulness del supervisor estaba directamente relacionado con la percepción de competencia que tenían de él sus seguidores. Por último, tres estudios de Schuh, Zheng, Xin y Fernández (2017) con líderes y empleados de China y Estados Unidos revelaron que la adopción de conductas de justicia procedimental por parte de los líderes mediaba la relación entre su mindfulness y el rendimiento de los empleados. Estas conductas, a su vez, estaban relacionadas con un menor agotamiento emocional de los empleados, lo que repercutía en un mejor rendimiento.

El mindfulness del *empleado* también se ha relacionado con las variables de los *clientes*. Los escasos estudios evaluando esta relación se han hecho con intervenciones en el área sanitaria. Por ejemplo, una intervención de mindfulness para cuidadores de personas con discapacidad severa se asoció con un aumento significativo en la felicidad de sus pacientes (Singh et al., 2004). Otra intervención con médicos se asoció con que sus pacientes reportaban mayor satisfacción general y con la calidad de la comunicación con los facultativos (Beach et al., 2013). En el contexto psicoterapéutico, los pacientes de psicólogos en prácticas que habían recibido una intervención de mindfulness experimentaron una reducción significativa de los síntomas de los pacientes que trataban (Grepmair et al., 2007).

La relación entre variables del *empleado* durante horas de trabajo con las de su *pareja* en el hogar ha sido ampliamente estudiada en la literatura organizacional (Bakker y Demerouti, 2013). En la literatura de mindfulness los contextos laboral y sentimental se han investigado mayoritariamente por separado. La potencial relación e influencia entre ambos, sin embargo, es un tema inexplorado. Algunos estudios apuntan en esta dirección. Por ejemplo, Allen y Kiburz (2012) encontraron que el mindfulness rasgo estaba relacionado con un mayor equilibrio trabajo-familia. Este hallazgo observacional ha sido complementado por estudios utilizando intervenciones basadas en mindfulness. Tras aplicar sendas intervenciones de mindfulness, Michel, Bosch y Rexroth (2014) y Kiburz, Allen y French (2017) encontraron que los empleados de ambos estudios reportaban menor conflicto trabajo-familia y mayor satisfacción con el equilibrio entre el trabajo y la familia.

La emergente línea sobre mindfulness en díadas presenta algunas limitaciones. En primer lugar, el tamaño muestral de algunos estudios es tan reducido que solo resulta indicativo, no generalizable: 3 cuidadores en el grupo experimental de Singh et al. (2004) y 9 en el de Grepmair et al., (2007). En segundo lugar, el uso del diseño observacional no permite hacer inferencias respecto a causalidad o desarrollo temporal (Waldron y Ebbeck, 2015; Beach et al., 2013). Sin embargo, la limitación más importante es la ausencia de datos respecto a la relación del mindfulness con personas cercanas. Los resultados de Reb et al. (2014) y Schuh et al. (2017) apoyan la su asociación entre el líder y los empleados, pero no entre empleados del mismo rango y que compartan la mayoría de horas juntos. Los hallazgos de Reb et al. (2015) sugieren esta dirección, ya que una inducción de mindfulness a parejas de negociadores resultaba en la obtención de resultados integradores para ambas partes. Por otra parte, los resultados sobre conciliación trabajo-familia de Allen y Kiburz (2012), Michel et al. (2014), y Kiburz et al. (2017) apoyan la posibilidad de que la pareja

se beneficie del mindfulness del empleado, pero ninguno incluyó sus variables. Por lo tanto, la relación del mindfulness del empleado con las variables de su compañero de trabajo y su pareja son dos temas hasta ahora ignorados en la literatura.

1.1.6.3.2. Mindfulness interpersonal en el trabajo: equipos

El alto dinamismo y complejidad del entorno laboral contemporáneo hacen de los equipos de trabajo las unidades básicas de las que dependen las organizaciones para lograr sus objetivos (Edmonson, 1999; DeShon, Kozlowski, Schmidt, Milner y Wiechmann, 2004). Así, es común estudiar las variables laborales tanto al nivel individual como al grupal. Algunos ejemplos son la inteligencia emocional del equipo (Druskat y Wolff, 2001), el engagement de equipo (Costa, Passos y Bakker, 2014) y el afecto de equipo (Barsade y Knight, 2015).

El mindfulness como constructo grupal es, con diferencia, el ámbito de estudio más reciente y menos estudiado. En el área sobre mindfulness en el trabajo solo hay tres estudios que hayan examinado desde una perspectiva multinivel la relación entre mindfulness y variables de equipo, pero cada uno presenta importantes limitaciones. El primero evaluaba el impacto de una intervención de tres sesiones en un equipo multidisciplinar de un hospital psiquiátrico. Tras su aplicación, la amabilidad con las familias (*family friendliness*) del equipo aumentó en todas las etapas del tratamiento, tanto inmediatamente después de la intervención como en cada uno de los seis meses posteriores (Singh et al., 2002). El segundo estudio aplicó una intervención de mentoría basada en mindfulness a equipos multidisciplinares en una residencia psiquiátrica. Los resultados mostraron mejoras en las reuniones grupales, mayor respeto y escucha activa y discusiones más centradas en los pacientes y la colaboración, efectos que se mantuvieron hasta un año después (Singh, Singh, Sabaawi, Myers y Wahler, 2006). Más recientemente, Cleirigh y Greaney (2015) utilizaron un diseño experimental con grupo control, sometiendo a los equipos a 1) una inducción de 10 minutos de mindfulness o 2) un control activo (dos extractos educativos de un programa de radio). Tras esto, cada equipo tenía que generar una lista ordenada de ítems respecto a su utilidad para sobrevivir en una hipotética situación extrema, de cuya comparación con una lista elaborada por un experto se derivó la puntuación de rendimiento global. Los resultados mostraron que, comparados con los controles, los equipos en la inducción de mindfulness tenían un mayor rendimiento y cohesión social. Los hallazgos de estos tres estudios son prometedores.

Sin embargo, las limitaciones metodológicas de estos estudios reducen significativamente lo generalizables que pueden ser. En primer lugar, un tamaño muestral de equipos muy reducido: uno (Singh et al., 2012), tres (Singh et al., 2006), o sin definir (Cleirigh y Greaney). En segundo lugar, no se utilizaron grupos controles con los que contrastar la eficacia de la intervención (Singh et al., 2002; Singh et al., 2006). En tercer lugar, no se examinó el papel de variables mediadoras (estados emergentes y procesos de equipo) entre el mindfulness y los resultados. Cleirigh y Greney (2015) propusieron y evaluaron la cohesión social como mediador, y encontraron que tenía una relación positiva en los grupos asignados a la inducción de mindfulness. Sin embargo, no se testó su potencial papel mediador en la relación de la atención plena con el rendimiento grupal. Por último, el mindfulness no se conceptualizó como una variable del equipo, sino individual. La única excepción está en la literatura de parejas sentimentales. Wachs y Cordova (2007) obtuvieron una puntuación de mindfulness rasgo global de la pareja mediante la agregación del mindfulness rasgo de ambas partes. Dicho constructo se vio asociado con una mayor calidad global de la relación y con mayores habilidades emocionales (p.ej., identificación y comunicación de emociones). Sin embargo, el mindfulness de la pareja no se estableció en base a un modelo teórico respecto a su emergencia como fenómeno multinivel, sino a la necesidad de establecer relaciones estadísticas con variables típicamente asociadas con el nivel de análisis de la pareja (por ejemplo, la relación con la satisfacción). Ante esta importante laguna en la literatura, Hülsheger (2015) ha llamado a que se investigue con rigor si existe el mindfulness como fenómeno grupal, así como los factores que pueden favorecer su emergencia.

El mindfulness como fenómeno multinivel y de equipo ha sido introducido por Yu y Zellmer-Bruhn (2017). El mindfulness de equipo (*team mindfulness*) es la "creencia compartida entre los miembros del equipo de que las interacciones del equipo están caracterizadas por consciencia y atención a eventos presentes y por un procesamiento experiencial y no enjuiciador de las experiencias intra-equipo" (p. 8). En base a esta definición, el mindfulness de equipo obedece a la conceptualización multifactorial de la atención plena, cuyos elementos nucleares son la atención al presente y el no juicio. En otras palabras, la presencia y el no juicio son aquí elementos que definen las interacciones sociales, y no los estados atencionales de los miembros (como ocurre con el mindfulness individual). El mindfulness de equipo es un estado emergente, ya que se origina en el afecto, cognición y conductas de los miembros, se ve amplificada por sus interacciones y se manifiesta a un nivel de análisis superior (el colectivo) (Kozlowski y Klein, 2000). Aunque son los

individuos los que interactúan con atención plena y sin juicios, el paso del tiempo hace que este tipo de interacción se vuelva habitual en el equipo. A la larga, el hábito que caracteriza al equipo influencia las percepciones individuales sobre cómo es el equipo, lo que da lugar a la aparición del mindfulness de equipo (Morgeson y Hoffman, 1999). El mindfulness de equipo, a su vez, refuerza las interacciones entre los miembros, creando un ciclo de influencia mutuo (van Knippenberg, van Ginkel y Homan, 2013). Por lo tanto, el mindfulness de equipo no es una agregación de puntuaciones individuales de mindfulness, sino un fenómeno diferente tanto conceptual como empíricamente. De hecho, Yu y Zellmer-Bruhn (2017) no encontraron relación significativa entre el mindfulness de equipo y una agregación grupal de las puntuaciones de mindfulness individual. Sin embargo, sí que la hallaron entre el mindfulness del equipo y las puntuaciones individuales de los miembros, lo que sugiere que, si los miembros son más "*mindful*", es posible que su equipo también lo sea.

Con el fin de evaluar su utilidad en la mejora de las dinámicas de equipo, Yu y Zellmer-Bruhn (2017) evaluaron 44 equipos de estudiantes estadounidenses de posgrado en variables grupales e individuales a lo largo de tres momentos diferentes del curso. Los resultados mostraron que el mindfulness de equipo tenía una asociación negativa y significativa con el conflicto relacional, y reducía la intensidad de la relación entre el conflicto de tarea y el conflicto de relación. También se encontró que el mindfulness de equipo ejercía una moderación multinivel, ya que aminoraba la relación positiva entre el conflicto de tarea (una variable de equipo) y las conductas de difamación (una variable individual). Estos hallazgos fueron replicados en un segundo estudio con 48 equipos de una organización sanitaria china.

A la luz de estos resultados, el mindfulness de equipo ha surgido como un nuevo e innovador ámbito de investigación, ya que se ha demostrado su validez como constructo a nivel de equipo más allá de la mera agregación de datos individuales, su poder predictivo y su capacidad para moderar las dinámicas negativas laborales, tanto a nivel individual como del equipo.

Algunos términos aparentemente relacionados con el mindfulness y sus potenciales efectos interpersonales están siendo utilizados en otras líneas de investigación. Sin embargo, y como se muestra a continuación, el parecido es solo nominal. Con el fin de aclarar las diferencias existentes con estas otras líneas y delimitar el mindfulness de equipo, distinguimos entre los constructos de mindfulness *colectivo*, mindfulness *social* y *atención compartida*.

El *mindfulness colectivo* (Weick, Sutcliffe y Obstefeld, 1999) es un constructo multinivel relacionado con la gestión organizacional. Esta conceptualización expande el concepto de mindfulness de Langer (1989), y se compone de cinco procesos interrelacionados que operan a diferentes niveles de la organización: 1) cuidado e interés por los errores; 2) evitación de interpretaciones simplificadas; 3) compromiso con la resiliencia ante la adversidad; 4) actuar de acuerdo al grado de maestría y 5) un mayor cuidado hacia las operaciones (Sutcliffe et al., 2016). En otras palabras, el mindfulness colectivo consiste en estar altamente consciente del contexto organizacional, permitiendo así entender su complejidad y ser más sensible hacia cualquier interferencia que pueda ser un obstáculo para los objetivos, junto con la capacidad de actuar en base a esta información (Weick et al., 1999). El mindfulness colectivo ocurre cuando diferentes niveles de la empresa (cultura organizacional, líderes, encargados, trabajadores) están implicados en prácticas sociales (como la comunicación y la acción basada en información) que mantienen la atención en el contexto organizacional y minimizan los factores distractores (Sutcliffe et al., 2016). Las organizaciones con mayor mindfulness colectivo se han asociado con mayor fiabilidad organizacional (Weick y Roberts, 1993), respuestas más efectivas durante desastres (Bigley y Roberts, 2001) y, en el ámbito sanitario, con menos errores de medicación y caídas de pacientes (Ausserhofer et al., 2013; Vogus y Sutcliffe, 2007). La definición y los hallazgos empíricos ratifican la concepción multinivel del mindfulness colectivo. Sin embargo, el énfasis en el uso de procesos cognitivos abstractos (como la búsqueda de errores y la elaboración de explicaciones complejas) lo aleja conceptualmente del mindfulness de equipo, basado en interacciones grupales caracterizadas por atención ausencia de juicios, ambos procesos no conceptuales.

En segundo lugar, el mindfulness social consiste en salvaguardar "el control de otras personas sobre sus opciones conductuales en situaciones de interdependencia" (Van Doesum, van Lange y van Lange, 2013, p. 86). Este fenómeno ocurre durante situaciones de toma de decisiones en las que la elección de una opción limita el número de opciones distintas disponibles para la siguiente persona en elegir. En otras palabras, la persona con más mindfulness social escogerá la opción que permita que la siguiente persona tenga el mismo número de opciones diferentes que cuando al primero se le presentaron todas las opciones. En una serie de estudios, Van Doesum et al. (2013) encontraron que un mayor mindfulness social estaba asociado con los rasgos de personalidad de amabilidad y honestidad-humildad, mayor empatía, orientación de valores enfocada hacia otros y a ser percibidos dignos de confianza. Más recientemente, el mindfulness social ha sido utilizado

como marco teórico para entender cómo la perspectiva empática o el recuerdo de una acción prosocial mitigan los efectos del maltrato del cliente al empleado (Song et al., 2017). Conceptualmente, el mindfulness social comparte con el mindfulness de equipo la atención al presente y la preocupación por el bienestar de otros. Sin embargo, sus diferencias radican en que el mindfulness social 1) es un fenómeno individual (ocurriendo en un contexto social) y 2) solo se da en situaciones de toma de decisiones. Además, no existe una relación estadística entre el mindfulness y el mindfulness social (Van Doesum et al., 2013).

Por último, la *atención compartida* se define como la percepción de un objeto externo desde una perspectiva de "nosotros estamos percibiendo" (Shteynberg, 2015). En este estado mental, la persona presta atención a un fenómeno al tiempo que es consciente de que otras personas similares también están prestando atención. Por lo tanto, la atención compartida hace referencia a un proceso individual de atención con dos objetos: el objeto externo y la percepción de que otros similares también están prestando atención. Asistir a un partido de fútbol, un concierto o una manifestación son ejemplos de situaciones con atención compartida. La creciente literatura al respecto ha encontrado que este fenómeno aumentaba la infusión del afecto (i.e., la influencia de elementos emocionales de la información sobre el proceso de deliberación; Forgas, 1995) durante la formación de actitudes (Shteynberg, Hirsh, Galinsky y Knight, 2014), fomentaba el aprendizaje social (Shteynberg y Apfelbaum, 2013) e intensificaba tanto las emociones positivas como las negativas, incrementando pensamientos y conductas congruentes (Shteynberg et al., 2014). La atención compartida y el mindfulness de equipo comparten atención al presente y la conciencia de que otras personas próximas están en este estado atencional. Sin embargo, se diferencian en que la atención compartida 1) es un estado individual y 2) no incluye elementos actitudinales respecto a la relación con las otras personas. Por lo tanto, la atención compartida es un fenómeno diferente del mindfulness de equipo tanto a nivel conceptual como de análisis.

Resumen: La mayoría de los estudios sobre mindfulness interpersonal se han llevado a cabo con parejas sentimentales, en las que su presencia en un miembro se asociaba con menor malestar emocional en el otro. En el ámbito laboral, la escasa evidencia apunta a que el mindfulness de un trabajador se relaciona con mejoras en las variables de quienes le rodean (p. ej., mindfulness del líder y rendimiento del empleado, mindfulness del empleado y satisfacción de los pacientes). Sin embargo, la mayoría de estos hallazgos están limitados por su reducido tamaño muestral. Por otra parte, la relación entre el mindfulness del empleado y las variables de la pareja sentimental o del compañero de trabajo permanece inexplorada, a pesar de ser las personas con las que más interactúa durante el día. Por otra

parte, el mindfulness de equipo se define como la creencia compartida por los miembros de que sus interacciones dentro del equipo están caracterizadas por atención plena y ausencia de juicios. Su presencia modera las dinámicas de conflicto negativo, así como su impacto sobre los miembros. A pesar de su potencial, solo un estudio ha investigado su impacto en los procesos y resultados del equipo.

1.2. Evaluación del mindfulness en el trabajo

La multiplicidad de definiciones y conceptualizaciones del mindfulness ha generado una proliferación de instrumentos de medida. En el ámbito del trabajo, el mindfulness rasgo se ha evaluado con más de media docena de instrumentos: la *Cognitive and Affective Mindfulness Scale-Revised* (CAMS-R; Feldman, Hayes, Kumar, Greeson y Laurenceau, 2007), la *Freiburg Mindfulness Inventory* (FMI; Walach, Buchheld, Buttenmuller, Kleinknecht y Schmidt, 2006), la *Kentucky Inventory of Mindfulness Scale* (KIMS; Baer, Smith y Allen, 2004), el *Mindfulness Process Questionnaire* (MPQ; Erisman y Roemer, 2012), la *Philadelphia Mindfulness Scale* (PHLMS; Cardaciotto, Herbert, Forman, Moitra y Farrow, 2008) y el *Southampton Mindfulness Questionnaire* (SMQ; Chadwick et al., 2008). El meta-análisis de Mesmer-Magnus et al. (2017) encontró que, además de estas, las dos escalas más utilizadas eran la *Mindfulness Attention and Awareness Scale* (MAAS; Brown y Ryan, 2003) y el *Five Facet Mindfulness Questionnaire* (FFMQ; Baer, Smith, Hopkins, Krietemeyer y Toney, 2006). Estas dos escalas representan los dos enfoques para conceptualizar mindfulness: unifactorial (MAAS) y multifactorial (FFMQ).

La elección de conceptualizar la atención plena como un fenómeno unifactorial convierte la MAAS en el instrumento de referencia para evaluar a los participantes de los estudios. La MAAS (Brown y Ryan, 2003) es una escala de 15 ítems que describe diferentes *experiencias de distracción* durante las actividades cotidianas. Algunos ejemplos de ítems son “Podría sentir una emoción y no ser consciente de ella hasta más tarde”, “Hago las actividades con prisas, sin estar realmente atento a ellas” y “Me encuentro absorto acerca del futuro o el pasado”. Las respuestas se dan en un sistema Likert (1 = “casi siempre” a 6 = “casi nunca”) y son codificadas posteriormente a la inversa. El motivo de esta formulación negativa es que los estados de atención plena son menos comunes que los de distracción (Brown y Ryan, 2003). Así, usar una formulación positiva haría más probable un sesgo de sobreestimación, ya que es más fácil ser consciente de algo que habitualmente no está presente (atención plena) (Packer, 2002) (para una crítica de este sistema, v. Grossman y Van Dam, 2011). Las excelentes propiedades psicométricas de la MAAS se han comprobado

con estudiantes universitarios y adultos de la población general (Brown y Ryan, 2003). En cuanto a su uso, Sutcliffe et al. (2016) la recomiendan para evaluar la atención plena como 1) rasgo, 2) unifactorial y 3) en poblaciones sin experiencia previa en mindfulness. La MAAS se diseñó para evaluar poblaciones que desconocieran la atención plena y la meditación, por lo que no es el mejor instrumento para evaluar a meditadores o aquellos más familiarizados con el concepto de atención plena (e.g., Christopher, Charoensuk, Gilbert, Neary y Pearce, 2009). La revisión más reciente apoya estas recomendaciones, ya que la MAAS ha sido el instrumento más utilizado con muestras no clínicas (Tomlinson et al., 2018). En España, la traducción de la MAAS ha sido validada satisfactoriamente en población clínica y no clínica por Soler et al. (2012). La MAAS también ha sido traducida y validada a otros idiomas, como el francés (Jermann et al., 2009), el alemán (Michalak, Heidenreich, Ströhle y Nachtigall, 2008) y el chino (Deng et al., 2012).

La MAAS presenta una versión modificada y de menor extensión para evaluar el mindfulness estado. Esto la convierte en la única opción a la hora de evaluar la atención plena como estado unifactorial, ya que las otras dos escalas disponibles solo lo hacen como multifactorial. Así, la *Toronto Mindfulness Scale* (TOMS; Lau et al., 2006) evalúa el mindfulness estado como curiosidad y desidentificación hacia la experiencia presente, y está recomendada para practicantes de meditación (Sutcliffe et al., 2016). Por otra parte, la *State Mindfulness Scale* (SMS; Tanay y Bernstein, 2013) mide la atención plena a la mente (emociones y pensamientos) y al cuerpo (sensaciones térmicas, de contacto, movimiento), y su uso se recomienda para contextos no meditativos (Sutcliffe et al., 2016).

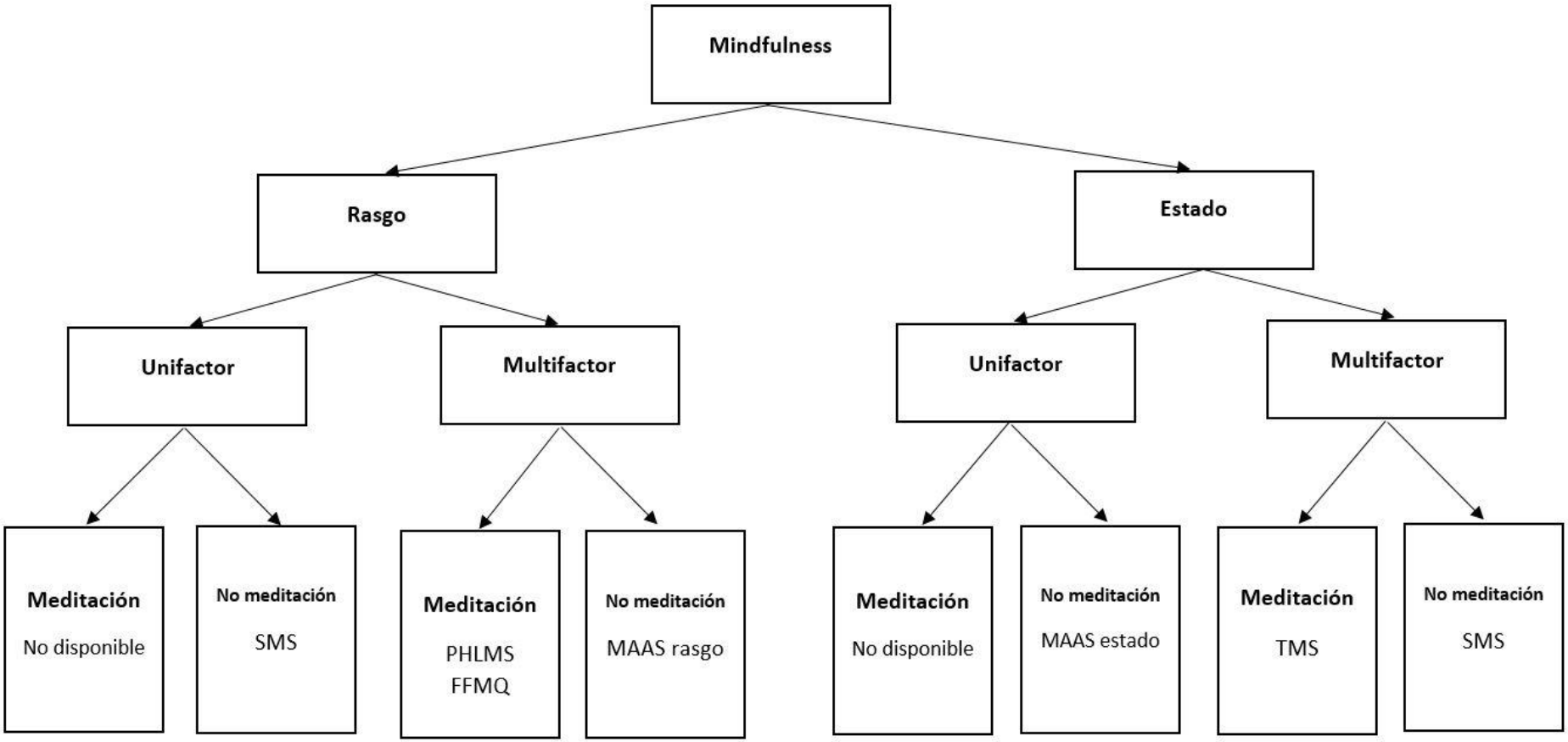
La MAAS estado mide la "experiencia subjetiva central del mindfulness como atención y consciencia presentes" (Brown y Ryan, 2003, p. 825). Está compuesta por 5 ítems de MAAS rasgo escogidos en base a lo generalizable de su contenido a otras situaciones. La MAAS estado describe una serie de conductas asociadas con la distracción, pero referidas al momento inmediatamente precedente. Ejemplos de sus ítems son "He hecho trabajos o tareas automáticamente, sin darme cuenta de lo que estaba haciendo", "Me ha resultado difícil estar centrado en lo que estaba pasando en el presente" y "He hecho las actividades con prisas, sin estar realmente atento a ellas". Las afirmaciones se evalúan en formato Likert (de 0 = "en absoluto" hasta 6 = "mucho") sin necesidad de invertirlas posteriormente. En el contexto laboral, Hülsheger et al. (2013) han sido los pioneros en introducir esta herramienta para evaluar a los participantes de sus estudios de diario. Para ello, los empleados debían responder a los ítems pensando en la jornada laboral que acababa de concluir. Estudios de diario posteriores han seguido esta aplicación del MAAS estado (Haun, Nübold y Bauer,

2018; Hülsheger et al., 2014; Hülsheger et al., 2015; Hülsheger et al., 2018; Lawrie et al., 2018; Tuckey et al., 2018).

El mindfulness de equipo solo ha sido evaluado con el instrumento desarrollado por los autores que introdujeron el constructo (Yu y Zellmer-Bruhn, 2017). La *Team Mindfulness Scale* (TMS) consiste en 10 ítems extraídos de la MAAS y otras escalas multifactoriales. De acuerdo a la conceptualización bifactorial del mindfulness de equipo, los ítems se dividen equitativamente entre aquellos referidos a la atención plena al presente y los de no juicio. Todos los ítems describen maneras de lidiar con las tareas, la información y los miembros, y se responden en una escala Likert (1 = muy en desacuerdo a 5 = muy de acuerdo). De ellos, 7 ítems están formulados de manera invertida. Algunos ejemplos del factor de presencia son "El equipo se apresura en las actividades sin estar realmente atento a ellas" y "El equipo se preocupa por el futuro o el pasado", mientras que el factor de no juicio está representado por ítems como "Algunos de los pensamientos o emociones del equipo son inapropiados" y "El equipo es amistoso con los miembros cuando las cosas van mal". A la hora de evaluar el mindfulness como variable de equipo, la escala utiliza el criterio del giro referencial: los miembros indican sus percepciones individuales del fenómeno de equipo, que posteriormente son agregadas a nivel de equipo. La escala ha sido validada utilizando estudiantes estadounidenses de posgrado, y los resultados apoyaron su fiabilidad y su distribución bifactorial. También demostró validez externa, ya que se relacionó con otras variables emergentes de equipo como la seguridad psicológica y la controversia constructiva.

Resumen: la *Mindfulness Attention Awareness Scale* es la escala de elección en este trabajo, ya que su uso se ha recomendado para la evaluación del mindfulness unifactorial en el contexto laboral con poblaciones no especializadas y sin experiencia en meditación. Además, su versión rasgo y estado han sido ampliamente utilizados en el contexto laboral y con poblaciones generales (para una comparación de escalas, v. Figura 1.2). La *Team Mindfulness Scale* es la única escala que actualmente mide el constructo de mindfulness de equipo, y sus propiedades psicométricas han resultado satisfactorias

Figura 1.2. *Opciones de evaluación del mindfulness individual en el trabajo (Sutcliffe, Vogus y Dane, 2016)*



Nota. MAAS = *Mindfulness Attention Awareness Scale*; FMI = *Freiburg Mindfulness Inventory*; FFMQ: *Five Facet Mindfulness Questionnaire*; TMS = *Toronto Mindfulness Scale;* SMS = *State Mindfulness Scal*

1.3. Modelos teóricos aplicados al mindfulness en el trabajo

La relación del mindfulness en el trabajo con el rendimiento y el bienestar ha recibido un creciente apoyo empírico durante la última década (Good et al, 2016; Mesmer-Magnus et al., 2017). Sin embargo, la literatura no ha sido tan consistente en el uso de marcos teóricos que expliquen el "por qué" y el "cómo" del impacto positivo del mindfulness en el trabajo (Glomb et al., 2011, p. 116). El objetivo de esta sección es presentar los modelos más utilizados y que permiten comprender mejor los mecanismos detrás de los resultados.

1.3.1. La teoría de la conservación de recursos (Conservation of Resources Theory; Hobfoll, 1989)

La teoría de la conservación de recursos (COR) surgió como un marco explicativo del fenómeno del estrés (Hobfoll, 1989). Su fundamento es que el individuo busca activamente lograr sus metas y conseguir sus objetivos. Para ello trata de mantener (conservar) los recursos a su disposición y aumentarlos. Inicialmente, los recursos se definían como "aquellos objetos, características personales, condiciones o energías que son valorados [en sí mismos como objetivos] por el individuo o que sirven como medios para lograr esos objetos, características personales, condiciones o energías" (p. 516). De este modo, fenómenos tan aparentemente dispares como el tiempo libre, la auto-disciplina y la satisfacción vital se consideran recursos (Hobfoll, 2001). Sin embargo, y debido al creciente uso del concepto de recurso en el ámbito laboral, su definición se ha expandido para subrayar su naturaleza contextual (Hobfoll, Halbesleben, Neveu y Westman, 2018). Así, un recurso se define como cualquier cosa que permita al individuo lograr sus metas (Halbesleben, Neveu, Paustian-Underdahl y Westman, 2014). Por ejemplo, el apoyo social se suele considerar como un recurso (e.g. Halbesleben, 2006), pero deja de serlo si resulta inútil o problemático (e.g., Beehr, Bowling y Bennett, 2010). Además, la teoría COR presenta una serie de principios sobre las dinámicas de los recursos. El principio de la primacía de las pérdidas se refiere a que la pérdida (real o anticipada) de recursos es percibida como más importante que su ganancia. Por otra parte, el principio de la inversión señala que se deben invertir recursos para poder ganar otros, recuperar los perdidos o proteger los actuales de potenciales amenazas. Por último, los recursos no son fenómenos independientes, sino que su presencia está asociada con otros recursos y condiciones contextuales que los favorezcan (Hobfoll et al., 2018).

Respecto a su categorización, ten Brummelhuis y Bakker (2012) sintetizaron la literatura previa (e.g., Hobfoll, 2002) y clasificaron los tipos de recursos en base a dos dimensiones. La primera se refiere al origen del recurso, contextual o personal. Los recursos contextuales están presentes en el medio social del individuo (p. ej., su apoyo social, el mobiliario ergonómico o el matrimonio). Los recursos personales son parte del individuo y están a su disposición inmediata (p. ej., rasgos de personalidad, el tiempo y la energía). La segunda dimensión para clasificar los recursos es su transitoriedad: estructurales o volátiles. Los recursos estructurales pueden ser utilizados a lo largo de períodos extensos de tiempo sin agotarse (p. ej., una red de amistades estable o una casa). En cambio, los recursos volátiles son temporales (van y vienen, como los estados de ánimo y la atención) o no es posible acceder a ellos de nuevo tras ser usados (p. ej., tiempo).

De la combinación de estas dimensiones surgen cuatro subtipos de recursos: 1) contextuales estructurales (objetos o condiciones, como un hogar o un empleo), 2) estructurales volátiles (apoyo social, como el respeto, consejos o afecto recibido), 3) personales estructurales (recursos constructivos, como la salud, conocimientos o habilidades) y 4) personales volátiles (energías, como la física, cognitiva y atencional o el tiempo). Además, los autores añaden dos tipos especiales de recursos. El primero son los macro-recursos, presentes en el ámbito económico, social y cultural del individuo, que facilitan (o dificultan) el uso de otros recursos. Por ejemplo, las políticas sobre guarderías y escolarización públicas permiten que ambos miembros de la pareja no tengan que invertir recursos económicos y temporales en contratar a cuidadores privados o encargarse ellos mismos de la crianza. El segundo tipo de recursos especiales es de especial interés en este trabajo. Los recursos personales clave permiten seleccionar, gestionar y aplicar con mayor eficiencia otros recursos. Algunos ejemplos son el optimismo, el estatus social y la intensidad con la que se persiguen los objetivos, ya que todos ellos permiten movilizar recursos personales o contextuales para logar las propias metas.

La utilización de los recursos (su inversión) es imprescindible a la hora de conservarlos, aumentarlos o recuperarse de una pérdida. Por ejemplo, con el fin de obtener dinero es necesario invertir tiempo, energía física y cognitiva (recursos personales volátiles) junto con la implementación de conocimientos y habilidades laborales (recursos personales estructurales). Sin embargo, la inversión prolongada de los recursos volátiles los disminuirá considerablemente. Así, más tarde será necesario invertir más tiempo y un hogar (recurso estructural) para descansar y recuperar las energías. La adquisición o pérdida de recursos no son fenómenos aislados, sino que se asocian respectivamente con más ganancias o más

pérdidas en lo que se han llamado espirales de ganancia o pérdida de recursos (Hobfoll, 2001). De este modo, un mayor número de recursos permite experimentar mayores ganancias, mientras que un número limitado se asocia con pérdidas.

La atención plena se considera como un recurso personal clave por tres motivos. En primer lugar, el mindfulness implica una actitud de aceptación, lo que permite que el empleado sea verdaderamente consciente de su nivel actual de recursos (y no el que debería ser o le gustaría). Esto le llevará a buscar fuentes alternativas de recursos ante una situación de carencia. En segundo lugar, la atención plena y abierta a los elementos de la experiencia facilita la toma de consciencia de recursos alternativos que de otra manera (estando absorto en el futuro o el pasado) habrían pasado desapercibidos. Por último, las actitudes de aceptación y no juicio hacia las experiencias internas facilitan una mejor gestión emocional de las emociones negativas asociadas con la pérdida de recursos, previniendo más pérdidas (Kroon, Menting y Van Woerkom, 2015). Estas propuestas han sido apoyadas por Eatough (2015), que afirma que el mindfulness puede ayudar a prevenir los efectos del estrés mediante la promoción de otros recursos personales como la auto-eficacia, la esperanza y la empatía.

Los hallazgos empíricos sugieren que, tras una pérdida significativa, el mindfulness facilita la adquisición de nuevos recursos. Por ejemplo, se ha encontrado que el mindfulness rasgo moderaba la relación entre las experiencias de relajación durante períodos de descanso y el vigor posterior (Marzuq y Drach-Zahavy, 2012). En otras palabras, el estar plenamente presente (recurso personal clave) durante la experiencia relajante (recurso contextual) era lo que facilitaba que más tarde se transformara en vigor (recurso personal). En esta línea, un estudio longitudinal con 105 estudiantes universitarios chinos encontró que el aumento de la atención plena durante los exámenes se asociaba con una disminución de los niveles de cortisol y de los síntomas de ansiedad al terminar los exámenes (Hou, Ng y Wan, 2015). De modo similar, el mindfulness se ha propuesto como estrategia para que los líderes recuperen energías y adquieran recursos tras una inversión prolongada (Reb, Sim, Chintakananda y Bhave, 2015). Más recientemente, el mindfulness rasgo de los empleados moderaba la relación positiva entre el afecto negativo desactivado y las conductas innovadoras (Montani, Dagenais-Desmarais, Giorgi y Grégoire, 2018). Basándose en los postulados de la teoría COR, estos autores argumentan que la atención plena permite 1) conservar recursos que habitualmente se pierden en rumiaciones cognitivas características del afecto negativo (mediante la desidentificación de las experiencias internas) y 2) reorientar la atención para utilizar dichos recursos para producir conductas más innovadoras.

La práctica del mindfulness se ha asociado con la conservación de recursos. Un estudio observacional con 147 trabajadores tailandeses encontró que los que practicaban meditación con regularidad tendían a experimentar menos burnout (asociado con un agotamiento grave de los recursos personales) y a adoptar estrategias de afrontamiento más efectivas (Charoensukmongkol, 2013). En esta línea, Hülsheger et al. (2013) hallaron que, tras una intervención, mayores niveles de mindfulness durante las horas de trabajo estaban asociados con un menor agotamiento emocional por la tarde en casa. Estos resultados se pueden entender como un resultado del ahorro de recursos a la hora de lidiar con las demandas emocionales del trabajo, especialmente la actuación superficial. Mientras que lidiar con estas demandas con auto-control y auto-regulación conductual suele estar asociado con el agotamiento (Baumeister, Bratslavsky, Muraven y Tice, 1998), el mindfulness se ha asociado con la vitalidad y la energía (Brown y Ryan, 2003). Por lo tanto, ser capaz de permanecer plenamente presente durante situaciones emocionalmente exigentes sin quedar atrapado en procesos cognitivos y afectivos automáticos tiene como resultado una menor pérdida de recursos.

Resumen: la atención plena es un recurso personal clave que facilita la selección y aplicación eficiente de otros recursos de orden inferior. Así, el mindfulness ayuda a conservar recursos ante situaciones emocionalmente exigentes, encontrar y utilizar otros recursos (personales o laborales) y promover la recuperación de recursos tras una pérdida, favoreciendo aprovechar las experiencias de recuperación.

1.3.2. El modelo de los recursos trabajo-hogar (Work-Home Resources Model; ten Brummelhuis y Bakker, 2012)

Los procesos de ganancia y pérdida descritos por la teoría COR pueden aplicarse a la interacción entre el ámbito laboral y el familiar. Del mismo modo que los recursos tienen una relación de interdependencia con otros recursos y elementos ambientales, las consecuencias de su ganancia o pérdida no se limitan a un solo contexto. Esto es de especial relevancia para los empleados, que habitualmente tienen que compaginar los retos planteados en el trabajo con las necesidades del contexto personal y/o familiar. Como consecuencia de esto, la pérdida o ganancia de recursos en un contexto es experimentado en el otro, y viceversa (Edwards y Rothbard, 2000). La transmisión intra-individual de experiencias (p. ej., estados de ánimo, conductas, recursos) de un contexto a otro se denomina *efecto spillover* (Bakker y Demerouti, 2013). El *spillover* es un proceso ampliamente estudiado, y se ha comprobado que ocurre tanto en variables laborales positivas

como el engagement (Rodríguez-Muñoz, Sanz-Vergel, Demerouti y Bakker, 2014) y el apoyo laboral (Ferguson, Carlson y Kacmar, 2015), como negativas como el estrés (Buck y Neff, 2012) y los conflictos interpersonales (Martínez-Corts, Demerouti, Bakker y Boz, 2005).

La presencia de demandas o recursos en un contexto (v. modelo demandas-recursos) no solo está asociada con problemas o mejoras para el individuo en ese contexto, sino también en otros. Así, ten Brummelhuis y Bakker (2012) proponen que el conflicto trabajo-familia ocurre cuando las demandas contextuales presentes en el contexto laboral llevan a la pérdida de recursos personales, que se manifiestan como menos bienestar en el contexto familiar. El conflicto familia-trabajo, por otra parte, ocurre cuando las demandas del contexto familiar disminuyen significativamente los recursos personales, afectando negativamente a un peor rendimiento en el contexto laboral. De manera complementaria, el enriquecimiento trabajo-familia o familia-trabajo sucede cuando los recursos presentes en un contexto (laboral o familiar) aumentan los recursos personales y mejoran las experiencias en el otro ámbito. Ejemplos de recursos contextuales, tanto en el trabajo como en casa, son el apoyo social (de compañeros y supervisores, o de la familia) y la autonomía para decidir cuándo se llevan a cabo las tareas. Los recursos personales (v. 1.2.1.) se refieren a aquellos atributos físicos (salud y energía), psicológicos (atención), intelectuales (conocimientos) y materiales (recursos económicos) que ayudan a desempeñar exitosamente un resultado. Sin embargo, son los recursos personales clave (que facilitan la selección y aplicación de otros recursos) los que determinan que una persona sea capaz de afrontar con éxito las demandas laborales con un número de recursos a su alcance. A estos recursos personales clave se añaden los macro-recursos, presentes en la cultura laboral nacional, el nivel de riqueza y las políticas de empresa sobre la conciliación familiar. El conflicto trabajo-familia es más posible entre trabajadores con menos recursos personales clave, mientras que el enriquecimiento trabajo-familia tenderá a suceder más entre empleados con alto nivel de estos recursos. A nivel temporal, el conflicto trabajo-familia y el enriquecimiento trabajo-familia a corto plazo tienen que ver con la presencia de demandas y recursos contextuales volátiles que disminuyen o aumentan los recursos volátiles del empleado, llevándole a experimentar empeoramientos o mejoras a diario en casa. A largo plazo, la presencia de demandas y recursos estructurales está asociada con la pérdida de recursos personales estructurales, traduciéndose en un spillover de empeoramiento o mejora a largo plazo entre el trabajo y casa.

El spillover no es un fenómeno individual. Tal y como argumentan Bakker y Demerouti (2013), el spillover de estados y conductas tiene repercusiones sobre las personas próximas. Mientras que el spillover se refiere a la transmisión *intra*personal de estados y conductas de un contexto a otro, el *crossover* se refiere a la transmisión *inter*personal de estados y conductas dentro del mismo contexto (Westman, 2001). El enfoque más extendido ha estudiado este fenómeno de manera que el spillover ocurre primero, mientras que el *crossover* hacia la persona sucede después (Bakker y Demerouti, 2013). Por ejemplo, la vitalidad adquirida durante las horas laborales puede transmitirse a la pareja por la tarde, mientras hacen juntos una actividad de ocio. Sin embargo, también es posible que ocurra primero el *crossover* en un contexto y se extienda a otro.

La investigación sobre el spillover del mindfulness apoya estas propuestas. Por ejemplo, un estudio observacional de Allen y Kiburz (2012) encontró que los trabajadores con mayores niveles de mindfulness rasgo reportaban un mayor equilibrio trabajo-familia. Esta relación estaba mediada por mayor vitalidad y calidad de sueño. Dos intervenciones con empleados encontraron que los participantes del grupo experimental tenían menor conflicto trabajo-familia y familia-trabajo, así como más desconexión psicológica (Kiburz et al., 2017; Michel et al., 2014). Posteriormente, Zivnuska, Kacmar, Ferguson y Carlson (2015) replicaron estos resultados, encontrando que el mindfulness rasgo estaba significativamente asociado tanto con el equilibrio trabajo-familia como con el engagement laboral. La relación con ambas variables es interesante, ya que el engagement y el conflicto trabajo-familia están significativamente asociados (Halbesleben, Harvey y Bolino, 2009). Los estudios de diario han apoyado el efecto de spillover del mindfulness en el trabajo a casa: mayores niveles de mindfulness durante la jornada laboral estaban asociados con menor agotamiento emocional (Hülsheger et al., 2013) y mayor calidad y duración del sueño (Hülsheger et al., 2015) al finalizar el día. Más recientemente, Haun et al. (2018) encontraron que el mindfulness en el trabajo atenuaba la relación negativa entre demandas emocionales y cuantitativas a dario (i.e., carga de trabajo) y la desconexión psicológica por la noche. Estos hallazgos apoyan la propuesta de que el mindfulness es un recurso que segmenta y racionaliza la inversión de recursos, permitiendo un desempeño óptimo en el trabajo al tiempo que no limita el rendimiento en casa (Michel et al., 2014).

El *crossover* del mindfulness solo se ha encontrado entre personas en un mismo contexto. En este sentido, y como se ha indicado en el apartado sobre mindfulness interpersonal, el crossover de mindfulness se ha encontrado entre parejas sentimentales (p. ej., Barnes et al., 2007; Birnie et al., 2010; Lenger et al., 2017). En el ámbito laboral, se ha

encontrado que el mindfulness del líder tenía un efecto *crossover* sobre las variables de sus empleados (Reb et al., 2014; Waldron y Ebbeck, 2015; Schuh et al., 2017) y el personal sanitario y sus pacientes (Beach et al., 2013, Grepmair et al., 2017, Singh et al., 2002). Sin embargo, el efecto spillover-crossover del mindfulness es una laguna en la literatura, ya que ningún estudio hasta la fecha ha investigado cómo el mindfulness en un contexto se relaciona con las variables de bienestar de otra persona en un contexto diferente.

Resumen: la atención plena es un recurso personal clave que facilita una mejor inversión de recursos. Esta inversión no está limitada a un solo contexto (p. ej., el laboral), sino que repercute en otros (p. ej., el familiar). El mejor uso de los recursos del empleado con más atención plena también puede influir a otros alrededor, ya que hay una mayor abundancia de recursos que invertir en ellos.

1.3.3. El modelo de las demandas-recursos laborales (Job Demands-Resources Model; Demerouti, Bakker, Nachreiner y Schaufeli, 2001)

El modelo de las demandas-recursos laborales surgió ante la necesidad de entender el síndrome del quemado o burnout (Demerouti et al., 2001). De acuerdo a este modelo, un desequilibrio entre las demandas laborales y los recursos a disposición del empleado para afrontarlas da lugar a un deterioro de su salud. Las demandas laborales se definen como todas aquellas situaciones físicas, intelectuales, sociales u organizacionales que requieren que el empleado invierta un esfuerzo físico o psicológico sostenido. Por el contrario, los recursos laborales son todas aquellas situaciones físicas, intelectuales, sociales u organizacionales que permiten que el empleado afronte con éxito las demandas laborales, reduzca su impacto negativo y fomente su desarrollo personal. En su conceptualización original, los autores se enfocaban en lo que la teoría COR denomina recursos contextuales: organizacionales (p. ej., variedad de tareas, control del trabajo, participación en la toma de decisiones) y sociales (apoyo recibido de compañeros, amigos y familiares). De este modo, un exceso de demandas laborales que no esté compensado con los suficientes recursos laborales llevará a la pérdida de los recursos personales del empleado. Si esta situación se prolonga en el tiempo, llevará al agotamiento de sus recursos y al burnout en un proceso de disfunción energética y pérdida de salud.

En una elaboración posterior, Schaufeli y Bakker (2004) expandieron esta conceptualización para incluir un proceso motivacional dentro de la ecuación de las demandas y recursos laborales. La carencia de recursos laborales motiva al empleado a alejarse de las demandas como una manera de prevenir pérdidas de recursos personales

(Demerouti et al., 2001). Sin embargo, la abundancia de recursos laborales llevará tanto al interés por lograr los objetivos (motivación extrínseca) como al fomento de un proceso de auto-superación (motivación intrínseca). Este proceso se asocia a la satisfacción de necesidades psicológicas básicas como la autonomía, la competencia y los sentimientos de pertenencia (Ryan y Deci, 2000). Por ejemplo, el apoyo social es un recurso laboral que previene el aislamiento, lo que evita el proceso de disfunción energética asociado con el aislamiento. Al mismo tiempo, el apoyo social también provee de herramientas con las que lograr los objetivos y satisface la necesidad de pertenencia, favoreciendo el proceso motivador. Por lo tanto, mientras que la abundancia de demandas laborales se asocia con el síndrome del quemado, el agotamiento y los problemas de salud, la abundancia de recursos laborales se asocia con el bienestar, el engagement y el rendimiento (Schaufeli y Bakker, 2004)

Los empleados también pueden lidiar con las demandas por sí mismos. Los recursos personales son las creencias respecto a cuánto control tiene el empleado sobre su entorno (Bakker y Demerouti, 2017). Al igual que su contrapartida laboral, la función de los recursos personales es lograr los objetivos y promover el desarrollo del individuo (Schaufeli y Taris, 2014). Además, los recursos personales interactúan con los laborales, fomentando la motivación y la salud, al tiempo que atenúan el impacto de las demandas laborales (Bakker y Demerouti, 2017). Esta definición de recurso personal es congruente con la de la teoría COR (Halbesleben et al., 2014), y en especial con la de los recursos personales clave (que permiten manejar otros recursos para tener un mejor desempeño; ten Brummelhuis y Bakker, 2012). De acuerdo a la evidencia hallada bajo el marco del modelo de demandas-recursos, los recursos personales están o bien directamente relacionados con el bienestar (p. ej., competencias emocionales) o bien afectando la manera en la que los empleados se relacionan con las demandas y aprovechan los recursos laborales (Schaufeli y Taris, 2014). Por ejemplo, Bakker y Sanz-Vergel (2013) mostraron que la autoeficacia y el optimismo tenían una relación positiva con el engagement cuando las demandas desafiantes laborales eran altas. Sin embargo, cuando las demandas laborales eran obstaculizadoras, pero aparecían en menor nivel, los recursos personales se asociaban con el florecimiento (*flourishing*) personal. En esta línea, Xanthopoulou, Bakker y Fischbach (2013) encontraron que la autoeficacia tenía una relación positiva con el engagement cuando las demandas emocionales eran elevadas. De manera complementaria, cuando la autoeficacia era baja, las demandas emocionales tenían una relación negativa con el engagement. Estos resultados ponen de relieve que la

percepción del empleado (un recurso personal) afecta a su manera de aprovechar los recursos a su disposición en el entorno laboral.

La relación entre el mindfulness y el modelo de demandas-recursos se viene apuntando desde hace más de una década. Así, se ha encontrado que tanto la atención plena rasgo como las intervenciones están asociadas con niveles menores de burnout (Cohen-Katz, Wiley, Capuano, Baker y Shapiro, 2005; Flook, Goldberg, Pinger, Bonus y Davidson, 2013; Krasner et al., 2009). Sin embargo, la atención plena como un recurso personal dentro del modelo de recursos-demandas no se estudió explícitamente hasta el estudio observacional de Taylor y Millear (2016). Utilizando una muestra de 381 trabajadores australianos, se encontró que el mindfulness era un predictor significativo de los diferentes aspectos del burnout cuando se controlaba la influencia de las demandas (alta carga de trabajo) y los recursos (optimismo) laborales. Concretamente, se encontró que el no juicio y la no reacción hacia las experiencias internas predecían significativamente el agotamiento emocional, que la consciencia de los fenómenos alrededor y el no juicio predecían el cinismo y que la consciencia de los fenómenos circundantes predecía una menor pérdida de eficacia profesional.

Más recientemente, Grover, Teo, Pick y Roche (2017) han elaborado el rol del mindfulness como recurso personal. Según estos autores, el beneficio del mindfulness radica en modificar la percepción de las demandas. El enfoque en el presente permite priorizar las demandas, facilitando una inversión más hábil de recursos. Por otra parte, un elemento fundamental del mindfulness es la atención plena y desidentificada a las emociones (Shapiro et al., 2006). Esta actitud permite gestionar las reacciones emocionales sin contribuir a su intensificación (Bishop et al., 2004), por lo que las demandas emocionales pueden ser mejor gestionadas. Como consecuencia, una mejor gestión de las demandas emocionales estará relacionada con una menor respuesta de estrés, ya que la desidentificación emocional previene el desencadenamiento automático de la reacción de estrés. Los resultados del estudio observacional que llevaron a cabo con 415 enfermeras australianas apoyaron sus argumentos: el mindfulness tenía una relación negativa con las demandas emocionales percibidas y el estrés. Además, el mindfulness moderaba la relación negativa entre ambas. Curiosamente, también se encontró que el control laboral (un recurso laboral), no moderaba esta relación. Estos resultados, en la línea de lo propuesto por Vilardaga et al. (2011), sugieren que la atención plena puede ser un recurso con un impacto mayor que otros recursos contextuales. Más recientemente, Lawrie et al. (2018) han relacionado el mindfulness con otros elementos clave del modelo de demandas-recursos. Utilizando un estudio de diario,

estos autores encontraron que las demandas psicológicas laborales tenían una relación negativa con el mindfulness del empleado, mientras que el control laboral (un recurso personal) era un predictor positivo del mindfulness, especialmente cuando existía un clima de seguridad psicológica. Las demandas psicológicas, al requerir que el empleado invierta recursos para afrontarlas, dificultan el mantenimiento voluntario y sostenido de la atención plena. Sin embargo, la posibilidad de influenciar el contexto laboral de acuerdo a las propias necesidades se asocia con una mayor capacidad cognitiva, que a su vez puede utilizarse en trabajar con atención plena. Esta relación se acentúa cuando existe un clima de seguridad psicológica que indica que es seguro invertir recursos personales.

Resumen: el mindfulness puede entenderse como un recurso personal que regule el impacto negativo de las demandas laborales sobre el individuo, tanto mediante una reevaluación más favorable de las demandas, como de un mejor aprovechamiento de los recursos laborales. Estas propuestas han encontrado su apoyo empírico en multitud de estudios vinculando la atención plena con menores niveles de burnout y estrés laboral.

1.3.4. La teoría de ampliación y construcción de las emociones positivas (Broaden-and-Build Theory of Positive Emotions; Fredrickson, 2013)

La teoría de la ampliación y construcción de las emociones positivas (Fredrickson, 2001, 2013) propone que las emociones positivas cumplen un importante papel adaptativo. Por una parte, las emociones positivas *amplían* el repertorio cognitivo, conductual y atencional del individuo, haciéndole tomar consciencia de opciones no disponibles previamente. Los experimentos clásicos de inducción de emociones positivas de Alice Isen apoyan esta propuesta. Los participantes a los que había inducido un estado emocional positivo demostraban ser más creativos (Isen, Daubman y Nowicki, 1987), estar más abiertos a la información (Estrada, Isen y Young, 1997) y tener mayor preferencia por la variedad de opciones (Kahn y Isen, 1993). Dentro del marco de esta teoría, la inducción de emociones positivas hacía desaparecer completamente el sesgo de la raza propia en la percepción de caras (Johnson y Fredrickson, 2005), formular más opciones conductuales ante una situación social hipotética (Fredrickson y Branigan, 2005), tener mayor conexión y comprensión de las acciones de otros (Waugh y Fredrickson, 2006) y tener mayor empatía y compasión hacia otra persona culturalmente diferente (Nelson, 2009).

Las emociones positivas también asientan o *construyen* los recursos obtenidos durante la ampliación, facilitando su uso a largo plazo. Además, los recursos acumulados a largo plazo fomentan experimentar más emociones positivas en una dinámica de espiral

ascendente (Garland et al., 2010). Estudios correlacionales han encontrado que las personas que experimentan más emociones positivas sienten más conexión social hacia otros (Mauss et al., 2011), tienen más recursos (Lyubomirsky, King y Diener, 2005) y son más resilientes (Fredrickson, Tugade, Waugh y Larkin, 2003). De manera complementaria, Gable, Gonzaga, y Strachmnan (2006) encontraron que cuantos más intercambios positivos diarios había entre los miembros de una pareja, más aumentaban sus recursos relacionales al cabo de dos meses. En esta línea, experimentar emociones positivas a diario se ha relacionado con una mayor resiliencia y satisfacción vital a largo plazo (Cohn, Fredrickson, Brown, Mikels y Conway, 2009).

La teoría de la ampliación y construcción complementa las teorías previas. En la teoría COR, las emociones positivas son recursos porque: 1) son valoradas en sí mismas (Hobfoll, 2001), 2) permiten la consecución de metas (Halbesleben et al., 2014) y 3) obedecen la lógica de las caravanas de recursos y las espirales de ganancia (Hobfoll, 2001). En el modelo de recursos-demandas laborales, las emociones positivas son recursos personales porque favorecen la gestión de las demandas laborales mediante los procesos de ampliación y construcción de recursos (Salanova, Bakker y Llorens, 2006). Por último, las emociones positivas no están ceñidas a un solo contexto (p. ej., laboral), sino que tienen un efecto *spillover* sobre otros (p. ej., familiar) (Rodríguez-Muñoz et al., 2014).

Varios meta-análisis han mostrado la relación entre atención plena y emociones positivas (Giluk, 2009; Mesmer-Magnus et al., 2017). El estudio más influyente sobre meditación y su potencial para ampliar y construir recursos personales fue llevado a cabo por Fredrickson et al. (2008). En una muestra de 202 empleados de una empresa informática, los autores llevaron a cabo una intervención en la que la mitad de los participantes participaron en un taller de 9 semanas sobre meditación de bondad-amorosa o estuvieron en lista de espera. La meditación de bondad-amorosa es una práctica en la que se desarrollan de manera voluntaria y sostenida sentimientos de cariño, cercanía y amabilidad hacia sí mismos, seres queridos y personas distantes o conflictivas (Shalzberg, 1995). Los resultados mostraron que la práctica diaria producía un mayor número de emociones positivas a diario, lo que se asociaba con un aumento de los recursos personales, entre los que se encontraba el mindfulness. Estos recursos predecían un aumento de la satisfacción y menos síntomas de depresión en una medición posterior. En una evaluación 15 meses después de la intervención, Cohn y Fredrickson (2010) hallaron que los participantes que habían practicado meditación con regularidad continuaban experimentando un mayor número de emociones positivas y de recursos personales (incluyendo mindfulness) que los que habían

dejado la práctica. Estos últimos, sin embargo, habían mantenido los recursos desarrollados durante la intervención. El aumento del mindfulness en proporción a las emociones positivas, así como su conceptualización como recurso personal, apuntan a la vinculación del mindfulness con en el proceso de construcción a largo plazo de recursos personales.

La relación entre mindfulness, emociones positivas y desarrollo de recursos ha sido sugerida por otros estudios. En un estudio observacional con 299 trabajadores, Malinowski y Lim (2015) encontraron que existía una doble mediación completa entre el mindfulness y el bienestar personal y laboral. Así, el mindfulness estaba relacionado con el afecto positivo, que a su vez lo estaba con el capital psicológico (optimismo, resiliencia, esperanza y auto-eficacia). Es interesante señalar que, aunque una de las facetas del mindfulness (no reaccionar) se relacionaba con el capital psicológico, las relaciones más intensas se daban entre el afecto positivo y el capital psicológico. Más recientemente, Tuckey et al. (2018) encontraron que el engagement predecía estados de mindfulness posteriores durante la jornada laboral. Utilizando la teoría de la ampliación y construcción, los autores argumentaron que el engagement apoya el desarrollo de otros recursos, como el mindfulness.

Resumen: la relación entre el mindfulness y otros recursos puede estar mediada por las emociones y el afecto positivo. Mediante la atención al presente, la desidentificación y la ruptura de automatismos, se facilita la experiencia de emociones positivas que amplían el repertorio cognitivo y conductual de recursos a disposición del empleado. A su vez, estos recursos se asientan o construyen a largo plazo, pudiendo ser usados en un momento posterior.

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Chapter 2

Aims and General Overview

The aim of the present chapter is to present an overview of the objectives and structure of this dissertation. Chapter 1 reviewed the most relevant literature on mindfulness and its application in the work context, as well as the most useful theories for understanding its effects on employees. A growing body of research indicates that mindfulness is associated with a wide range of employee and organizational outcomes, especially health, well-being and performance (Good et al., 2016; Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). However, most of these studies have focused on individual outcomes, neglecting its potential interpersonal effects (Creswell, 2017). Besides their scarce number, the interpersonal findings that do exist (e.g., Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Beach et al., 2013) have been confined to one domain, either the work or (especially) the family context. On the other hand, research acknowledging the spillover of mindfulness (Hülsheger, Alberts, Feinholdt, & Lang, 2013; Hülsheger et al., 2014) has been conducted on single individuals, missing the crossover effects it may also carry to the other context. Specifically, there is no research about the relation between mindfulness at work and the colleague and the romantic couple's outcomes, both at work and at home.

Moreover, team mindfulness has recently been conceptualized as a team-level phenomenon (Yu & Zellmer-Bruhn, 2017). The initial findings are promising, for they show the role of team mindfulness in reducing team conflict and team members' harmful behaviors. However, no other studies have investigated team mindfulness and its relation with other team-level variables, such as team diversity, team affect and team performance.

Finally, both scholars and researchers have raised questions about the "*why*" and "*how*" of the benefits of mindfulness (Glomb, Duffy, Bono, & Tang, 2011, p. 116). So far, emotional and cognitive regulation processes have been proposed to account for this benefits (Good et al., 2016). However, these findings have been made mainly conceptualizing mindfulness as a trait, but not as a state. Given the high within-person variance of state mindfulness throughout the day (Brown & Ryan, 2003), more research is needed to assess the moment-to-moment process implicated in the beneficial associations of mindfulness.

This thesis addresses the aforementioned gaps with three empirical studies. The overall objective is to explore the interpersonal impact that an individual or a team's mindfulness can have on the well-being, health and performance of closely related others, both at work and at home. We also seek to integrate within-person dynamics of mindfulness to this approach in order to gain a more nuanced understanding of its moment-by-moment interactions with other variables of interest.

First, Chapter 3 extends the nascent line of research on mindfulness and work-family relations (Allen & Kiburz, 2012; Kiburz, Allen, & French, 2017). To do this, we will assess dual-earner romantic couples in their levels of mindfulness, work-family conflict and relationship satisfaction over the course of 5 working days. Although previous research has found a positive relation between these variables (e.g., Allen & Kiburz, 2012; McGill, Adler-Baeder, & Rodríguez, 2016), none of them have done it from a within-person approach. Moreover, we will use the partner's report of relationship satisfaction, which will enable us to assess the crossover of the employee's mindfulness during work hours to the partner's relationship satisfaction. Additionally, we will examine daily happiness of the employee as the mediator of these relations.

Chapter 4 investigates the crossover of mindfulness in coworkers and its spillover to home. Previous research has found a positive relation between the leader's mindfulness and the employee's outcomes (Reb, Narayanan, & Chaturvedi, 2014) as well as between the employee's mindfulness and the satisfaction of patients (Beach et al., 2013). However, these studies have not addressed the crossover of mindfulness between same-level coworkers nor the posterior spillover to the home domain. We will investigate this gap using a sample of coworker dyads and assessing them during 5 working days in their positive affect, relaxation and organizational citizenship behaviors (OCB). Such outcomes have been previously associated with mindfulness (Giluk, 2009; Marzuq & Drach-Zahavy, 2012; Hülsheger et al., 2014), but not from an interpersonal (from employee to employee) or intercontextual (from work to home) perspective.

Chapter 5 examines the role of team mindfulness in reducing the negative impact of activated faultlines (hypothetical lines based on diversity attributes that divide a group into one or more subgroups; Lau & Murnighan, 1998). For this purpose, we will use an experimental design to induce team mindfulness (or active control) in a sample of four-person teams made of undergraduate students performing a decision-making task with distributed information. We propose that team mindfulness will be related to better performance through an improvement in the team's affective states (team negative affect, intersubgroup trust), cognitive states (cognitive integration and transactive memory system) and elaboration of task-relevant information. By doing so, we integrate three different literatures: team mindfulness (Yu & Zellmer-Bruhn, 2017), team affect (Barsade & Knight, 2015) and team faultlines (Thatcher & Patel, 2012).

Finally, Chapter 6 summarizes all the findings from previous chapters. Additionally, we discuss the main theoretical and practical contributions of our results, as well as the methodological limitations. We conclude providing possible directions for future research. Table 2.1. summarizes the content of the chapters, providing information about the research design, sample used and specific contribution made by each study to the field of mindfulness in organizations

Table 2.1. *Summary of the studies*

Study	*Aim*	*Sample*	*Design*	*Contributions*
Chapter 3. Mindfulness in Dual-Earner Couples	Study the association between daily mindfulness at work and well-being at home, both employee and partner-reported.	60 dual-earner couples (n = 120 subjects) working in Spain	Daily diary study with 2 measurements per day (after work and before bed) during five consecutive working days.	Expands the temporal and individual approach to the benefits of mindfulness at work. Mindfulness spillover is experienced by the employee in personal and interpersonal variables. Additionally, mindfulness crosses over to the partner's well-being variables.
Chapter 4. Mindfulness in Coworker Dyads	Investigate the daily crossover of mindfulness from one employee to another, as well as the latter's daily well-being and extra-role performance.	63 coworker dyads (n = 126 subjects) working in Spain	Daily diary study with 2 measurements per day (after work and before bed) during five consecutive working days.	Links the coworker's mindfulness to the employee's positive affect at work and relaxation at home. Employee's positive affect at work predicts next day's extra-role performance through relaxation at home
Chapter 5. Mindfulness in Teams	Examine team mindfulness as a strategy for reducing the negative impact of an activated diversity faultline..	58 4-persons teams (n = 232 subjects) of undergraduate students (opposite gender and major).	Experimental study with randomized allocation of teams to a mindfulness or mind wandering induction.	Shows the viability of team mindfulness as a strategy to improve performance through better team affect and trust. Integrates three literatures on teams: mindfulness, affect and faultlines.

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Chapter 3

Mindfulness in Dual-Earner Couples

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3.1. Abstract

The current daily diary study among 60 dual-earner couples examined whether daily levels of mindfulness at work were associated with both the employees and their partners' well-being. Based on the spillover-crossover model, we hypothesized that on days when the employees' state mindfulness at work was higher, it would spill over to the home domain in the form of an increased state happiness at the end of the day and decreased work to family conflict. Furthermore, we hypothesized a crossover of mindfulness at work between the members of the couple, so that the partners of employees who were highly mindful at work would be more satisfied with their relationship. We examined all our hypotheses from a daily, within-person perspective. Participants filled in an online diary survey during five consecutive working days (N = 120 participants and N = 600 occasions). The results of the multilevel analyses showed a spillover effect from the employees' state mindfulness at work to their state happiness and their spouses' report of the employees' work-family conflict. Moreover, we also found a crossover effect between mindfulness at work and spouses' relationship satisfaction. Finally, results supported a partial mediation model in which daily mindfulness at work was positively related to the daily spouses' relationship satisfaction and negatively to employees' spouse-reported work-family conflict through the employees' daily happiness levels. Therefore, these findings suggest that mindfulness at work influences not only the employee, but also affects the family domain by reducing strain at home and increasing relationship satisfaction.

Keywords: Mindfulness; Happiness; Work-family conflict; Diary research; Relationship satisfaction

3.2. Introduction

Mindfulness has been described as the ability to be fully attentive and aware to present experiences and events (Brown et al. 2007)[1]. Research has highlighted a wide range of positive work-related outcomes associated to the practice of mindfulness, such as stress reduction, improvements on job performance and team cohesion, and better client-rated relationship quality (see Good et al. 2016). However, although the topic of mindfulness is gaining the attention of both organizations and researchers, little is known empirically about the interpersonal/relational outcomes of mindfulness at work, how this positive experience can spill over to the home domain and affect the outcomes of employees' significant others (i.e., family).. In this field, work-family conflict (WFC) is conceptualized as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell 1985, p. 77). On the positive side, relationship satisfaction is defined as an interpersonal evaluation of the positivity of feelings for one's partner and attraction to the relationship (Rusbult and Buunk 1993).

Traditionally, mindfulness has been analyzed as a between-person (individual differences) phenomenon. In such between-individual approaches, it is very difficult to explore the day-to-day dynamics through which mindfulness influences employees' outcomes. So far, mindfulness at work has begun to draw attention from a within-person approach. Research has shown that individuals do tend to vary in their mindfulness levels across days, showing that a significant amount of the variance occurs at the within-person level (Hülsheger et al. 2013; Hülsheger et al. 2014). Furthermore, within-person investigations are necessary because theorizing at the within-person level frequently provides a deeper understanding of the process under study (e.g., Dalal et al. 2014) and because the size of the relationship among variables may differ across the between- and within-person levels.

Mindfulness is associated with a wide variety of employee's positive outcomes. For example, mindfulness-related meditation training programs have been shown to reduce work-related stress (e.g., Bazarko et al. 2013), and enhance emotional well-being (Weinstein et al. 2009). Similarly, individuals with a disposition to be more mindful have been found to report higher levels of positive affect (Giluk 2009). In fact, positive affect has been argued to be one of the core processes in the mindfulness literature, since being able to regulate one's affective experiences effectively comprises the generation and maintenance of positive

[1]The *Mindfulness* journal uses a reference style slightly different to the standard APA. Because this text is the integral text as published in that journal, we have decided to keep this style of citation.

affect (Glomb et al. 2011). According to Desbordes et al. (2015), mindfulness may alter the lifecycle of emotional reactions as well as the overall valence of emotional experience. Meta-analytic evidence indicates a positive association between mindfulness and positive mood states (Giluk 2009). In the field of Industrial and Organizational (IO) Psychology, mindfulness has been found to be related to several work-related variables, such as psychological detachment (Hülsheger et al. 2014), recovery (Marzuq and Drach-Zahavy 2012), and emotional exhaustion (Hülsheger et al. 2013). As we mentioned above, only recent research has included the use of alternative designs such as diary or event sampling methodologies for examining state mindfulness from a within-person approach (Sutcliffe et al. 2016). Following this approach, Hülsheger et al. (2013) found that mindfulness at work was positively related to end-of-day job satisfaction at both the within- and between-person levels, and Hulsheger et al. (2014) showed that mindfulness at work was positively associated with sleep quality.

Although mindfulness is an individual experience, emerging evidence suggests that it may affect social and relational outcomes (Good et al. 2016). For example, healthcare workers' trait mindfulness was found to be related to patients' higher ratings of happiness (Beach et al. 2013; Singh et al. 2004). In a similar vein, leaders' trait mindfulness was positively associated with their employees' performance and well-being (Reb et al. 2014). These interpersonal effects have also been found in couples. Mindful individuals are better able to create and maintain satisfying relationships (McGill et al. 2016). Additional research showed that an 8-week mindfulness training course improved reports of relationship satisfaction (Carson et al. 2004). Mindfulness has also been linked to greater satisfaction at home and better sleep quality (Crain et al. 2017), and greater work–family balance (Allen and Kiburz 2012). Thus, research has begun to suggest that mindfulness effects may spill over to the home domain, affecting the family life. This process is known as *spillover* effect, which is a within-person, across-domain transmission of experiences, from work to home and from home to work for the same individual (Westman 2001). In contrast, *crossover* is defined as a bidirectional transmission of positive and negative emotions, mood, and dispositions between intimately connected individuals (Westman et al. 2009). However, it is not always a bidirectional relation. In fact, there are studies that demonstrate that it can be asymmetrical, going only from one member to another (e.g., Westman et al. 2001). Crossover and spillover are two ways in which stress or well-being are carried over within and across individuals and domains.

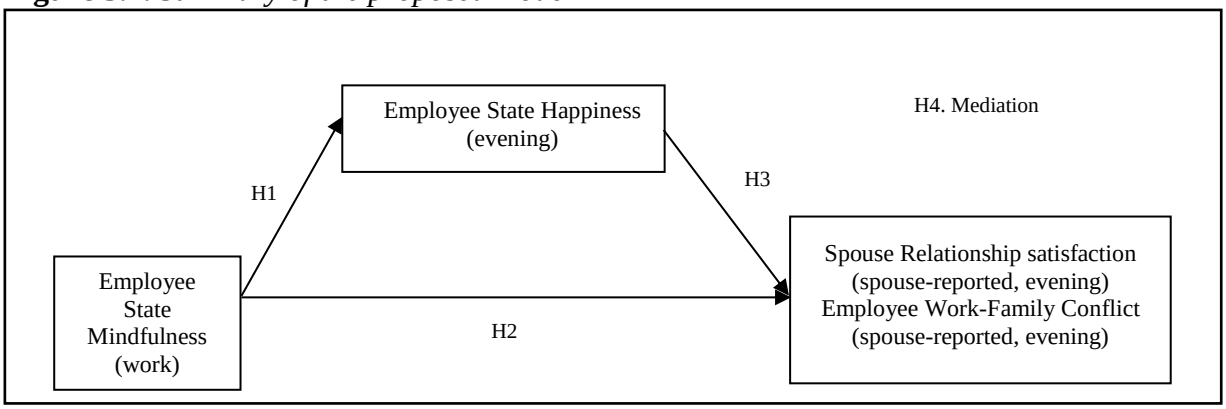
There have been calls during the last few years for increasing the understanding of processes and mechanisms behind the benefits of mindfulness in general (Glomb et al. 2011), and the links between work-family constructs and mindfulness in particular (Allen and Paddock 2015). The relationship between employees' daily levels of mindfulness at work, happiness and family outcomes can be explained through the Conservation of Resources theory (COR; Hobfoll 1989). The basic tenet of COR theory is that individuals strive to protect (conserve) and acquire resources. Resources are defined as objects, conditions, personal characteristics and others that are valuable in themselves or as a means to a valuable end. One the assumptions of COR is that resources can generate new resources. Hobfoll (2001) described this phenomenon as *resource caravans*, meaning that resources come in bundles. Once obtained, resources appear to create a gain spiral, in which resources accumulate.

Mindfulness has been considered as a resource-conserving and obtaining variable (Kroon et al. 2015), which has been applied to the work–family context (Allen and Paddock 2015). The propensity to be more mindful has been associated with other resources, such as greater optimism (Brown and Ryan 2003), vigor (Marzuq and Drach-Zahavy 2012) and positive affect (Malinowski and Lim 2015). These effects have been argued to be a result of superior self-regulation (Glomb et al. 2011), allowing for a more skillful use of resources (e.g. Montani et al. 2016). Therefore, mindfulness can be considered a key psychological resource "that facilitates the selection, alteration, and implementation of other resources" (ten Brummelhuis and Bakker 2012, p. 548). These key resources preserve and facilitate the application of lower order, less stable resources such as time, energy, and affect (Halbesleben et al. 2014).

It may be plausible that after being mindful at work, people have already gained a psychological resource like a state of positive affect at home (i.e., happiness). This work-home enrichment process may occur because of the inter-domain resource transfer (Rothbard 2001). Enrichment may occur when resources (e.g., interpersonal skills) gained at work directly facilitate performance improvement at home (i.e., the instrumental path), or indirectly enhance performance at home by first triggering positive affect (i.e., the affective path; Greenhaus and Powell 2006). The happier employees are during evenings, the more likely they will be to engage in positive behaviors at home. Positive emotional states are associated with enhanced interpersonal relations, including more prosocial behaviors (Fredrickson 2001), better social relations (Lyubomirsky et al. 2005), and increased social connectedness (Reis and Patrick 1996).

Despite the existing research, some important questions remain unclear. How can the daily diary state of mindfulness spill over into employees' family lives? What specific mechanisms explain the daily spillover and crossover of mindfulness? We shed light on these issues by investigating whether mindfulness can transfer into the home domain. Furthermore, we examine within-individual levels of mediating mechanisms which account for how these processes occur. Based on the reasoning above, we expect that on days when employees have higher levels of mindfulness at work their partner reports better family-related outcomes (i.e., WFC and relationship satisfaction) by an increase in happiness. Therefore, we expect that employees´ state mindfulness at work is positively related to their end-of workday happiness within individuals (Hypothesis 1). Additionally, we also expect that employees´ state mindfulness at work is negatively related to their daily WFC (spouse-reported) (Hypothesis 2a), and positively to the daily relationship satisfaction of their spouses (spouse-reported) (Hypothesis 2b) within individuals. Furthermore, we propose that daily employees' happiness during the evenings is negatively related to their daily WFC (spouse-reported) (Hypothesis 3a), and positively to the daily relationship satisfaction of their spouses (spouse-reported) (Hypothesis 3a) within individuals. Finally, we propose that the within-individual relationship between mindfulness at work and home outcomes (i.e., spouse-reported employees' WFC and spouses' relationship satisfaction) is mediated by employees' state happiness during non-work time.

Figure 3.1. *Summary of the proposed model*



3.3. Method

3.3.1. Participants

Out of 176 participants who were requested for participation, 122 surveys with self and spouse information (69% response rate) were completed and returned, which according to Ohly et al. (2010) is a good response rate. Two of these were left out of the analyses due to missing data or missing spouse reports. We had a final sample of 120 participants (60 employees and their daily spouse reports), 50.8% of which were female. Employees' mean age was 42.1 years (SD = 9.9), whereas spouses' mean age was 41.0 years (SD = 9.8). Mean job tenure was 20.2 years (SD = 10.7) and on average, they both worked 35.8 hours per week (SD = 14.4). All participants worked in the services sector, though there was a broad range in the professions, spanning from school teachers to medical doctors. The majority of the sample had at least one child (57.6%), while 51.5% of the sample had a university degree or postgraduate studies. Regarding their prior experience with mindfulness, half of the sample (52.5%) had never been introduced to mindfulness or meditation in any form; 22.4 % of those who had been introduced to it had maintained a daily meditation practice, which consisted of less than 20 minutes daily (71%) or between 20 and 40 minutes daily (21%).

3.3.2. Procedure

Participants were recruited using the researchers' social networks and those of their students, who were granted extra course credits for every couple they could provide. The use of student contacts to obtain access to employee samples is quite common in the field of organizational behavior (e.g., Demerouti and Rispens 2014). Specifically, the requisites participants had to fulfill for the study were that i) they were in a stable romantic relationship, ii) both members were cohabiting in the same residence, and iii) both members had a stable job. Participants were then contacted via email explaining the procedure that the diary-based research would follow during the work week. They also filled out a general questionnaire regarding sociodemographic data and trait variables of interest. Informed consent was obtained from all individual participants included in the study. We collected the data via online surveys hosted by Qualtrics.com. In order to guarantee participants' privacy and anonymity, partners' responses were linked by means of anonymous codes provided by the participants.

As recommended by scholars, we used a multi-source daily diary design in order to implement a dynamic process perspective in Industrial/Organizational Psychology research (Ohly et al. 2010). The diary survey had to be filled in over five consecutive workdays, twice

a day (before leaving the workplace, and before going to bed). Specifically, mindfulness at work was measured at the end of the workday (average response time: 5 pm / 17:12), whereas happiness was reported before going to bed. Spouse-reported information about WFC and relationship satisfaction were also measured during the evenings (average response time: 11 pm / 23:02).

3.3.3. Measures

Mindfulness. State mindfulness at work was measured using the state version (Hülsheger et al. 2013) of the Mindful Awareness Attention Scale (Brown and Ryan 2003). This scale consists of five items evaluating how aware the respondent was of his activities during work time. Items were rated on a 6-point scale, ranging from 1 = not true at all to 6 = totally true. Participants responded to items such as "Today, at work, I've done jobs or tasks automatically, without being aware of what I was doing" and "Today, at work, I found myself preoccupied with the future or the past" (all items are reversed scored). The mean of Cronbach's alpha across the five occasions was .89.

Happiness. State happiness was measured using the Subjective Happiness Scale (Lyubormirsky and Lepper 1999). We used three of the four items, and selected items with the highest factor loading or item total correlation. We also modified them slightly to capture day-level experience. Items were rated on a 6-point scale, ranging from 1 = not true at all to 6 = totally true. Examples of the items are "Today, during the evening (outside my working hours) I consider myself to have been a happy person" and "Today, during the evening (outside my working hours) I consider myself as a happier person than most of my peers". The mean of Cronbach's alpha across the five occasions was .82.

Work-family conflict. Spouse-report of daily WFC was measured with three items from the Survey Work-home Interaction – NijmeGen (SWING) (Geurts et al. 2005), modified to measure the daily experience. Each spouse had to report on the daily WFC of his/her partner. Examples of these items are "During today's evening, at home, my partner's work schedule made it difficult for him/her to fulfil his/her domestic obligations" and "During this evening, at home, my partner didn't have the energy to engage in leisure activities with me because of his/her job". Items were rated on a 6-point scale, ranging from 1 = not true at all to 6 = totally true. The mean of Cronbach's alpha across the five occasions was .75.

Relationship satisfaction. Spouse-report of daily relationship satisfaction was measured with a scale based on Kunin (1955). It was measured using a single item at the end of the day (evening questionnaire): "Today, how satisfied are you with your relationship?" We used faces as response options. The scale consists of five faces, ranging from ''very unsatisfied" to ''very satisfied". A one-item measure of affective states is commonly used in diary designs (e.g., Fisher et al. 2016).

Control variables. To rule out alternative interpretations, we assessed as control variables: gender, number of children, hours worked per week and years of experience in meditation practice at the person level. We also controlled for the levels of trait of mindfulness using the Mindful Awareness Attention Scale (Brown and Ryan 2003). All of these variables were measured in the sociodemographic questionnaire filled before the onset of the studied work week.

3.3.4. Data analyses

Given the hierarchical structure of the data, with days (Level 1; N = 300 observations) nested within individuals (Level 2; N= 60 participants), we used multilevel modelling using the MLwiN software (Rasbash et al. 2002). In all of the models, Level 1 predictors (e.g., state mindfulness at work) were centered around each individual's mean score to remove any possible between-individual effects as recommended by Ohly et al. (2010). Level 2 variables (i.e., gender, number of children, worked hours per week, years of experience in meditation practice and trait mindfulness) were centered around the grand mean. As we were interested in intra-individual processes, hypothesized relationships were investigated at the lower or within-person level, while controlling for variation in the variables at the between-person level (i.e., we also estimated the variances at the between-level).

We followed recommendations by Bauer et al. (2006) for testing mediation in multilevel models. Our model corresponds to a 1–1–1 design where predictor, mediator, and outcome variables are all assessed at Level 1, the day level. For each hypothesized effect we conducted a Monte Carlo simulation with 20,000 replications. The Monte Carlo approach involves constructing a sampling distribution of the indirect effect using point estimates of mediation paths and the asymptotic covariance matrix of those estimates (Preacher and Selig 2012). If the 95% confidence intervals obtained does not include zero then this provides support for a statistically significant mediation effect.

3.4. Results

We calculated means, standard deviations, and correlations among the study variables. These correlations were calculated using the averaged scores over the five days for the day-level variables. As it can be seen in Table 3.1, the pattern of correlations was in the expected direction. Furthermore, spouse daily report of WFC was associated with number of children (r = .12, p < .01), and their experience in meditation (r = -.12, p < .01), whereas state happiness was related to gender (r = -.09, p < .05) and worked hours per week (r = -.09, p < .05). In addition, spouse daily report of relationship satisfaction was associated with the number of children (r = -.11, p < .01), and their experience in meditation (r = .18, p < .01). Finally, gender also showed a relationship with state mindfulness at work (r = -.10, p < .05). Therefore, these variables were used as covariates in the following analyses.

Before hypotheses testing, we calculated the intraclass correlation (i.e., intercept-only models) to examine whether variables in the study varied within individuals. Intercept only model, also known as null model or baseline model, contains only intercept and corresponding error terms. The percentage of total variance that resides between and within persons was significant for all day-level variables: day-level state mindfulness at work (59.7% of the total variance is explained by within-person fluctuations), day-level state happiness (62.4% of the total variance is explained by within-person fluctuations), day-level spouse-report of WFC (67.2% of the total variance is explained by within-person fluctuations), and day-level spouse-report of relationship satisfaction (64.6% of the total variance is explained by within-person fluctuations). According to Byrne (2011), when ICC values are larger than .10 and smaller than .90 there is a substantive amount of variance both at the between-person and within-person level. Furthermore, the -2*log likelihood difference showed that a two-level model fits much better to the data than a one-level model for spouse-report of daily WFC ($\Delta\chi^2$ (1) = 24.1, p < .01), and spouse-report of daily relationship satisfaction ($\Delta\chi^2$ (1) = 88.9, p < .01). Therefore, it was appropriate to use a multilevel approach to test our hypotheses.

To test our study hypotheses, we examined a series of nested models. In Model 1, we included the control variables (gender, number of children, worked hours per week, years of experience in meditation, and trait mindfulness). In Model 2, we entered state mindfulness at work. In Model 3, we included the hypothesized mediator, state happiness. We compared the model fit of these models by calculating the difference between the likelihood ratio of one model and the likelihood ratio of the previous one. This difference follows a chi-square distribution (with degrees of freedom being the number of variables added in each model).

Table 3.1. *Mean, standard deviations, and correlations*

	M (SD)	1	2	3	4	5	6	7	8	9
1. Gender	---	---								
2. Number of children	0.97 (1.04)	.02	---							
3. Worked hours per week	35.8 (14.4)	-.01	-.11**	---						
4. Years of experience in mediation practice	1.34 (0.97)	.17**	.14**	.03	---					
5. Trait Mindfulness	4.29 (0.90)	.07	.04	-.12**	.04	---				
6. State mindfulness at work	4.48 (1.74)	-.10*	.08	-.06	.04	.33**	---	.17**	-.13*	.30**
7. State happiness	4.26 (1.29)	-.09*	-.05	-.09*	.05	.18**	.39**	---	-.26**	.51**
8. State work-family conflict (spouse-report)	2.02 (1.09)	.02	.12**	.03	-.12**	-.11**	-.14**	-.20**	---	-.32**
9. State relationship satisfaction (spouse-report)	5.29 (0.87)	.03	-.11**	-.01	.18**	.22**	.26**	.41**	-.32**	---

Note. Correlations below the diagonal are person-level correlations, and above the diagonal are day-level correlations. State refers to daily level variable.
* $p < .05$. ** $p < .01$.

Model 3 showed a better fit to the data than the rest of the models in the equations. Tables 2 and 3 present unstandardized estimates, standard errors, and *t* values for all predictors.

Hypothesis 1 stated that employees' state mindfulness at work is positively related to their end-of workday state happiness. Results from multilevel analysis supported our hypothesis, for state mindfulness at work had a significant positive relation with state happiness ($\gamma = 0.339$, $SE = 0.037$, $t = 9.16$, $p < .001$).

Hypothesis 2 suggested that employees' state mindfulness at work is positively related to daily relationship satisfaction of their spouses, and negatively to daily work-family conflict (spouse-reported) within individuals. Results showed that state mindfulness was positively related to spouse-report of relationship satisfaction ($\gamma = 0.171$, $SE = 0.029$, $t = 5.89$, $p < .001$), and negatively to spouse-report of employees' WFC ($\gamma = -0.137$, $SE = 0.040$, $t = -3.42$, $p < .01$). Thus, Hypothesis 2a and 2b were supported.

Hypotheses 3a and 3b stated that employees' state happiness is significantly related to daily home domain spouse-reported outcomes. As can be seen in tables 2 and 3, employees' state happiness was negatively related to their daily WFC (spouse-reported) ($\gamma = -0.177$, SE = 0.052, $t = -3.40$, $p < .01$), and positively daily to their spouses'relationship satisfaction (spouse-reported) ($\gamma = 0.266$, $SE = 0.034$, $t = 7.82$, $p < .001$). Thus, Hypothesis 3a and 3b were supported.

Finally, Hypothesis 4 proposed that employees' daily state happiness mediates the relationship between employees' daily state mindfulness at work and day-level family domain outcomes (WFC and relationship satisfaction). The conditions that should be met in order to support the mediation hypothesis are (a) state mindfulness should be positively related to state happiness; (b) state happiness should be positively related to daily WFC and relationship satisfaction; (c) and after the inclusion of the mediator, the previously significant relationship between daily mindfulness and home domain outcomes either turns into non-significant (full mediation) or becomes significantly weaker (partial mediation; Mathieu and Taylor 2006).

Table 3.2. *Multilevel estimates for models predicting daily work-family conflict (spouse-report)*

Variable	Null Model			Model 1			Model 2			Model 3		
	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*
Intercept	2.061	0.068	30.3***	2.049	0.063	32.5***	2.112	0.067	31.5***	2.138	0.066	32.3***
Gender				0.073	0.106	0.68	0.152	0.110	1.38	0.177	0.108	1.63
Number of children				0.150	0.061	2.45*	0.164	0.062	2.64*	0.160	0.062	2.58*
Worked hours per week				0.001	0.005	0.20	0.001	0.005	0.20	0.001	0.005	0.20
Years of experience in mediation practice				-0.158	0.051	-3.09**	-0.169	0.055	-3.07**	-0.164	0.052	-3.15**
Trait mindfulness				-0.149	0.068	-2.19*	-0.146	0.071	-2.05*	-0.144	0.071	-2.02*
State mindfulness at work							-0.137	0.040	-3.42**	-0.109	0.040	-2.72*
State happiness										-0.182	0.052	-3.50**
-2 X Log (lh)	1450.073			1262.559			1190.373			1178.047		
Difference of -2 X Log				187.51***			72.18***			12.32***		
df				5			1			1		
Level 1 intercept variance (SE)	0.695 (0.074)			0.545 (0.077)			0.529 (0.078)			0.512 (0.075)		
Level 2 intercept variance (SE)	0.338 (0.051)			0.205 (0.042)			0.193 (0.043)			0.187 (0.043)		

* $p < .05$. ** $p < .01$. *** $p < .001$. n = 60 dyads, n = 120 individuals × 5 days, n = 600 observations.

Table 3.3. *Multilevel estimates for models predicting daily relationship satisfaction (spouse-report)*

Variable	Null Model			Model 1			Model 2			Model 3		
	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*	Estimate	*SE*	*t*
Intercept	2.314	0.073	31.6***	2.335	0.068	34.3***	2.272	0.067	33.9***	2.220	0.059	37.6***
Gender				0.042	0.080	0.52	0.013	0.081	0.16	0.072	0.072	1.00
Number of children				-0.080	0.061	-1.31	-0.113	0.059	-1.91	-0.120	0.052	-2.30*
Worked hours per week				-0.005	0.004	-1.25	-0.004	0.004	-1.00	-0.006	0.004	-1.50
Years of experience in mediation practice				0.120	0.043	2.79*	0.147	0.044	3.34**	0.145	0.039	3.71**
Trait mindfulness				0.148	0.056	2.64*	0.070	0.059	1.18	0.059	0.050	1.18
State mindfulness at work							0.171	0.029	5.89***	0.111	0.026	4.23***
State happiness										0.265	0.034	7.79***
-2 X Log (lh)		1172.952			1013.909			942.028			842.816	
Difference of -2 X Log					159.04***			71.88***			99.21***	
df					5			1			1	
Level 1 intercept variance (SE)		0.449 (0.038)			0.432 (0.038)			0.389 (0.048)			0.294 (0.030)	
Level 2 intercept variance (SE)		0.245 (0.058)			0.212 (0.056)			0.164 (0.038)			0.135 (0.037)	

* $p < .05$. ** $p < .01$. *** $p < .001$. n = 60 dyads, n = 120 individuals × 5 days, n = 600 observations.

The test of Hypothesis 2 supports the first condition, whereas the test of Hypothesis 3 supports the second condition. Regarding specific mediation effects, the Monte Carlo test showed that employees' daily state mindfulness at work was positively related to spouse-report of employees' daily WFC through employees' state happiness (95% CI = [LB -0.088, UB -0.035]). After the inclusion of the mediator, the initial effect of state mindfulness on daily WFC is reduced from (t = -3.42, p < .01) to (t = -2.72, p < .05). Therefore, partial mediation exists. Similarly, the Monte Carlo test also showed that state happiness partially mediated (95% CI = [LB 0.0527, UB 0.105]) the relationship between employees' daily state mindfulness and their spouses' daily relationship satisfaction (spouse-reported). As the relationship only becomes weaker, partial mediation exists. Thus, Hypothesis 4 was partially supported.

3.5. Discussion

The current multi-source daily diary study predicted that employees' state mindfulness at work spills over to the home domain through an increase in their daily happiness. This increase, in turn, affects family domain outcomes, so that employees are perceived as experiencing lower WFC and partners' are satisfied with their romantic relationship. Mindfulness not only affects employees' outcomes (i.e., happiness and WFC), but also exerts a direct effect on their partners' outcomes (i.e., relationship satisfaction). Results supported our hypotheses, therefore answering the calls for both research on the underlying mechanisms accounting for mindfulness' beneficial effects (Glomb et al. 2011; Good et al. 2016) and on how positive work-related experiences can improve relationships (van Steenbergen et al. 2014).

This study makes several contributions to the ongoing body of research about mindfulness in the workplace. First, our findings add to the emerging line of research on the spillover of mindfulness. Previous research has found that employees' state mindfulness at work was negatively related to lower daily emotional exhaustion during evenings (Hülsheger et al. 2013), but not with daily sleep quality (Hülsheger et al. 2014) at the within-person level. The spillover of mindfulness on happiness adds and complements these findings, showing that daily mindfulness is not limited to decreases in negative outcomes (such as emotional exhaustion) but also to increases in positive ones. In this line, we also found the spillover of state mindfulness at work on employees' WFC (as reported by their partner) during the evenings, so that on days when employees were more mindful, their partners reported that employees had less conflict between work and home. Our results are based on

the tenets of COR theory: by being more mindful at work, employees can conserve their resources and acquire new ones, both personal or from the job context, so that they are in a better position to use them during non-working hours, manifesting as increased happiness and lower WFC.

Second, we also contribute to the literature about the crossover of organizational phenomena to the personal sphere, showing that employees' daily mindfulness levels at work were positively related to their partners' relationship satisfaction. This contribution is especially significant to the emerging body of research on mindfulness as an interpersonal phenomenon. Recently, researchers have found that the more mindful the leaders, employees and even couples, the more benefitted are their subordinates, clients and partners (Barnes et al. 2007; Reb et al. 2014; Singh et al. 2004). However, our study found that daily state mindfulness in one domain (work) is associated with a state variable of another person (partner at home) who does not share the context in which mindfulness occurred. Specifically, on days when employees' showed higher state mindfulness at work their spouses' daily relationship satisfaction was higher. Recent meta-analysis showed a positive relationship between a person's trait mindfulness and relationship satisfaction (McGill et al 2016). Our study complements this finding by showing that daily mindfulness is also related to *the partner's* relationship satisfaction, not only to one's own.

Finally, the partial mediation of daily happiness expands the existing line of research showing that mindfulness is beneficial for couples because of increased positive affect (Malinowski and Lim 2015). Our results show that employees' daily state mindfulness levels at work are associated to their partners via how happy employees are when they are back home. This mediation can be understood through COR theory: the more mindful employees are during working hours, the more resources they will have, preventing them from further losses that are associated with the emotional and cognitive demands of the workplace. Additionally, on days when employees are more mindful they are more prone to acquire new resources they would not notice with a more distracted mind (Kroon et al. 2015). Both of these strategies (conservation and acquisition) can be used for both personal and interpersonal (the couple's) use: the happier employees are at home, the more likely they are to behave in prosocial ways and have a better relation with their partners (Fredrickson 2001; Lyubomirsky et al. 2005).

Our study extends the current literature about mindfulness in organizations and couples in three ways. First, we found the crossover of mindfulness from employees at work to their partners at home. Previous research has suggested that there is a relationship between

individuals mindfulness and significant others' moods (e.g., Barnes et al. 2007), but not that this relationship existed while both partners are in different contexts. In this line, Fowler and Christakis (2008) found that individual's happiness is related to the happiness of others up to the third connection in their social network. Our results suggest that mindfulness could also ripple out from one person into his social network, and thus be related with the well-being of their social network. Second, our results about the spillover of mindfulness on happiness and WFC also add to the growing body of research exploring the complex temporal dynamics of state mindfulness at work. Specifically, our findings provide evidence for the need to conceptualize mindfulness at both the between- and within-person levels of analysis, for each one is associated with different outcomes. Furthermore, a within-person approach to mindfulness can provide fruitful complementary insights into the existing recovery (e.g., Sonnentag et al. 2008) and occupational health (e.g., Bakker et al. 2009) literatures. Finally, our finding that happiness mediates the relation between mindfulness at work and the family outcomes was based on the tenets of COR theory; namely, that mindfulness works as a personal resource that allows for the acquisition of other related resources. This result complements the findings on the mediational mechanisms of mindfulness at work, such as surface acting and psychological detachment (Hülsheger et al. 2013; Hülsheger et al. 2014).

3.5.1. Limitations and suggestions for further research

Despite the strengths of our design (e.g., large number of observations with two different sources), our study has a number of limitations that should be acknowledged. First, our study cannot assess causality between the included variables. Although our multi-level daily diary design provides more reliable information about the within-person relations between variables than other types of designs, conclusions about causality cannot be drawn. Future research about interpersonal effects of mindfulness might overcome this shortcoming by using experimental designs in which couples undergo a mindfulness training program for several weeks and are thoroughly assessed using a daily diary design before, during and after the intervention. This would allow to shed light on the daily within-person variations in state mindfulness when it is practiced on a regular basis, as well as its influence on employees' and their partners' variables

A second limitation of the present study is that although our sample size was large enough according to diary design criteria (Ohly et al. 2010) and heterogeneous, all of them worked in the service sector. Therefore, this limits the generalizability of our findings. Future

research may address this issue by assessing mindfulness in other job sectors such as the production or the manufacturing sectors, both of which remain understudied in comparison with the services sector.

Finally, we collected self-report data, which raises concerns about common method variance. To minimize such bias, we collected work and family constructs at two different points every day and from two sources. Therefore, we would not expect common method bias to pose a serious threat to our results.

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3.5.3. Compliance with ethical standards

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical approval: The procedures involving human participants described in this research were approved by the Universidad Complutense de Madrid's institutional ethical committee and are in accordance with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent: All participants in the study provided their informed consent about the nature and procedure of the current study.

Author Contributions. GMM: executed the study and wrote the article. ARM: designed the study, analyzed the data and wrote part of the results. MA: designed the study, collaborated with the analysis of the data and wrote part of the results. FG: collaborated in the writing and editing of the final manuscript.

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Chapter 4

Mindfulness in Coworker Dyads

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4.1. Abstract

This multi-source daily diary study examines the association between a work colleague's mindfulness at work and the employee's well-being and performance in different contexts. A sample of 63 couples of coworkers filled in quantitative web-based reports during five consecutive working days twice a day (N = 629 occasions). Multilevel analysis showed that colleague's daily mindfulness at work was positively related to employee's daily relaxation at home, an association partially mediated by the employee's daily positive affect at work. We also found that on days when the employee experienced higher positive affect at work, the next day he engaged in more organizational citizenship behaviors (colleague-reported). This relationship that was partially mediated by the previous day's relaxation at home. Our results are the first to show the crossover of mindfulness between work colleagues, providing evidence that such interpersonal associations have positive implications for same hierarchical-level employees. Moreover, our study expands the emerging line of research about the within-person dynamics of mindfulness and the way it can be transferred from work to home, and home to work, on a daily basis. Finally, we discuss the theoretical and practical implications of our findings.

Keywords: Mindfulness, Positive Affect, Relaxation, Organizational-Citizenship Behavior, Crossover, Spillover.

4.2. Introduction

Mindfulness refers to paying attention to and being aware of both internal and external events occurring in the present moment (Brown & Ryan, 2003). A growing body of research about mindfulness is emerging in the field of Industrial and Organizational Psychology (Hyland, Lee, & Mills, 2015). Mindfulness at work has been consistently associated with performance and a variety of personal well-being outcomes (Lomas et al., 2017), but most of these findings have been found using cross-sectional designs, paying little attention to its shorter-term, daily dynamics. In addition, almost all research of mindfulness at work has been focused on its individual benefits, not taking into account the positive association it may have with other people's outcomes. These are major gaps in the field of mindfulness at work.

In this multi-source daily diary study, we examine the association between colleague's mindfulness and the employee's well-being and performance. Specifically, we study affective, physical and behavioral outcomes, namely positive affect and relaxation for well-being and organizational citizenship behaviors (OCB) for performance. Positive affect refers to a person's overall pleasant emotional tone, while relaxation refers to his low physical activation. Finally, OCB comprises the discretionary in-job behaviors that go beyond "*the call of duty*" and are beneficial for coworkers and the organization alike.

The contributions of the current research are threefold. First, our research examines the interpersonal consequences of mindfulness at work. Previous research has started to explore the positive social effects of mindfulness between supervisors and employees (Reb, Narayanan, & Chaturvedi, 2014), clinicians and patients (Beach et al., 2013), and employees and their romantic partners (Montes-Maroto, Rodríguez-Muñoz, Antino, & Gil, 2017). However, no study has yet examined the possible influence of mindfulness between work colleagues. This gap is a major one, since it leaves unexamined how may same-level workers (who spend most of their working time together) influence each other's well-being (Sonnentag, 2015).

Second, this study examines the effects of mindfulness at work on non-work outcomes. Previous research has focused mainly on its effects at work, but few are concerned with other contexts. So far, mindfulness at work has been found to be positively related to job satisfaction (Hülsheger et al., 2013), psychological detachment (Hülsheger et al., 2014) and less work-family conflict (Montes-Maroto et al., 2017) during the evenings. We extend this research by studying relaxation during evenings, thus answering for calls on the ways mindfulness can foster recovery from work (Hülsheger et al., 2013).

Finally, we broaden the temporal scope of our study in order to assess the impact of positive affect on the employee's variables across days. Research on the lagged effect of affect at work is still scarce, and the existing findings are mixed. Although positive affect experienced at work has been related to the next day's creativity (Amabile, Barsade, Mueller, & Staw, 2005) and proactive behavior (Fritz & Sonnentag, 2009), it has also been shown no relation with the next day's positive affect (Sonnentag & Binnewies, 2013). In order to shed light on this issue, we measure the next day's OCB reported by colleague. In doing this, we follow Reb, Narayanan and Ho's (2015) suggestion about taking into account different sources of information when evaluating the employee's outcomes and use the colleague's report of OCB.

The current research draws from Conservation of Resources Theory (COR; Hobfoll, 1989, 2001) to propose that on days when the colleague is more mindful at work he will become a job resource for the employee, who will in turn experience more positive affect at work and will be more relaxed during the evening. The daily effect of the colleague's mindfulness on the employee's relaxation will be mediated by the latter's positive affect at work. Such positive feelings at work will broaden and build the employee's resources (Fredrickson, 2013), so that the he will be more likely to engage in OCB the next day. This effect will be due to an increase in resources during the previous day's relaxation, which will mediate between that day's positive affect at work and the next day's OCB.

4.2.1. Theoretical background and hypotheses

4.2.1.1. Mindfulness and interpersonal positive affect

Mindfulness and positive affect seem to go by the hand. Cross-sectional research has found a positive association between mindfulness and positive affect, which is defined as a psychological state characterized by a combination of pleasantness and high or low activation (Yik, Russell, & Steiger, 2011). Brown and Ryan (2003) found that trait mindfulness was associated with positive affect, as well as with optimism, vitality and life satisfaction. This finding was supported by subsequent meta-analyses, which found that both trait mindfulness and mindfulness training are associated with a positive emotional tone (Eberth & Sedlmeier, 2012; Giluk, 2009).

However, recent research has shown that an individual's mindfulness level is also associated with other people's positive feelings. For example, Reb, Narayanan and Chaturvedi (2014) demonstrated that supervisors' trait mindfulness was positively related to employees' job satisfaction and psychological need satisfaction. In the health care field, the

patients of more mindful clinicians reported higher overall satisfaction (Beach et al., 2013), while the patients of mindful caregivers were significantly happier (Singh et al., 2004). The transmission of dispositions, emotions and moods from one person to another is known as crossover effect (Westman, Brough, & Kalliath, 2009), and it is a phenomenon well studied in Organizational Psychology (Bakker & Demerouti, 2013). Taken together, these between-person findings suggest that mindfulness is an interpersonal phenomenon that is closely related to other people's positive emotions. Therefore, in this within-person study we hypothesize that:

> *Hypothesis 1:* Colleague's mindfulness at work is positively related to employee's positive affect at work.

4.2.1.2. The role of positive affect in relaxation

Positive affect is an influential phenomenon. A body of research assessing its daily within-individual fluctuations has found that on days when positive affect at work was higher, it was also high at home during the evenings (Ilies et al., 2007; Judge & Ilies, 2004; Song, Foo, & Uy, 2008; Sonnentag & Binnewies, 2013). The within-person transmission of experiences across different contexts is known as spillover effect (Westman, 2001). However, not only the positive but also the negative experiences during work hours (e.g., stress; Grzywacz, Almeida, & McDonald, 2002) and their consequences (e.g., fatigue, emotional exhaustion) spill over to other contexts. This makes it especially necessary for the employee to rest and recover after work (Sonnentag & Fritz, 2007). Recovery refers to a process opposite to that of strain, in which the body returns to its baseline physiological state, negative affect decreases and positive affect is experienced (Geurts & Sonnentag, 2006). Recovery, in turn, precedes employees' later well-being and performance (Bennett, Bakker, & Field, 2018).

Positive affect and recovery have been found to be closely related. For example, a diary study by Sonnentag, Binnewies, and Mojza (2009) with public service workers found that mastery and relaxation experiences during the evening were associated with positive affect the next morning. More recently, Sonnentag and Binnewies (2013) found that the positive association between daily positive affect at work and daily positive affect at bedtime was moderated by psychological detachment. In another daily diary study, Feuerhahn, Sonnentag, and Woll (2014) showed that the association between exercise after work and positive affect in the evening was mediated by psychological detachment. Like recovery experiences, positive emotions have been shown to foster psychological resources after

stressful situations (Fredrickson, Tugade, Waugh, & Larkin, 2003) and to counteract the harmful effects of negative emotions (Fredrickson & Levenson, 1998). Therefore, their very presence during working hours should spill over onto more recovery experiences during evenings.

More specifically, we focus on relaxation as the main recovery outcome of this spillover. Relaxation refers to a physical process characterized by low sympathetic activation that manifests as slower heart rate, decreased muscle tension and other indicators of activation (Benson, Greenwood, & Klemchuk, 1975). Positive affect has generally been associated with relaxation (Fredrickson, 2000) and it is in fact one of the components of the relaxation recovery experience (Sonnentag & Fritz, 2007), so we expect it to be also transmitted at the within-person level when it is experienced at work onto relaxation while back home. Therefore, we hypothesize that:

Hypothesis 2: Employee's positive affect at work is positively related to their own level of relaxation at home.

One of the main challenges currently faced by mindfulness researchers is to provide mediating variables accounting for its beneficial effects. So far, within-person studies have found that lower emotional exhaustion (Hülsheger et al., 2013) and higher psychological detachment (Hülsheger et al., 2014) and happiness (Montes-Maroto et al., 2017) mediate the relation between daily mindfulness at work and several well-being outcomes at home. These findings can be understood through the lens of COR Theory (Hobfoll, 1989, 2001). The fundamental tenet of COR theory is that people strive to gain, keep and protect their resources. Resources are defined as states, conditions, objects and any other entities that people value either in their own right (health, energy, leisure time) or as means for obtaining centrally valued resources (e.g., job autonomy, social support). Accordingly, people strive to (a) increase, (b) maintain, or (c) recover resources by investing their existing resources. Succeeding at this increases the likelihood of experiencing "resource gain spirals", in which individuals are in a better position to obtain further resources. Hobfoll (2001) called this phenomenon *resource caravans,* referring to the fact that once a resource has been obtained, they come in bundles and tend to accumulate. Accordingly, resources obtained in the work context can facilitate their investment or application in the home domain (ten Brummelhuis & Bakker, 2012).

Mindfulness has been conceptualized as a resource-obtaining and conserving variable (Kroon et al., 2015) and has been studied as such in the work context (Montani, Dagenais-Desmarais, Giorgi, & Grégoire, 2018). Additionally, trait mindfulness has been found to be positively related to other resources, such as vigor (Marzuq & Drach-Zahavy, 2012), optimism (Brown & Ryan, 2003) and positive affect (Giluk, 2009). These associations have been argued to be a consequence of superior regulation of attention, resulting in higher attentional control, stability and efficiency (Good et al., 2016). Such heightened attentional capacity allows for an improved use of other resources, whether they are readily available (e.g., Montani et al., 2018) or had been previously unnoticed (Kroon et al., 2015). Because of this, mindfulness has been conceptualized as a personal resource (Grover, Teo, Pick, & Roche, 2017). More specifically, and given its role in managing and implementing other lower-order resources (e.g., time, energy, affect), it can be considered a key psychological resource (Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012). Empirical research seems to support these claims, for mindful employees have been reported to have higher empathy, communication quality in their interactions and to be more prosocially-oriented, as well as to perform better in their tasks (Good et al., 2016).

Therefore, we expect that the colleagues of mindful employees benefit both at work and at home from interacting with them. This is in accordance with theory and research, which indicate that some social elements present in the job context (i.e., social job resources, such as supervisor support) can help employees achieve their work goals and foster personal growth (Bakker & Demerouti, 2014). The more mindful an employee is during working hours, the more likely he will be to become a job resource for his colleague. The higher self-regulation, interpersonal skills and improved performance found in cross-sectional research of mindful employees (Good et al., 2016) suggest that they will have more quality interactions and better teamwork with colleagues. As a result, the colleagues will experience more positive affect at work. We expect this association to occur within the framework of gain spirals of resources (Hobfoll, 2001). Because the mindful colleague becomes a resource for the employee, the latter is likely to gain further resources in the form of positive affect. In this sense, positive affect can be considered a resource, for it is "perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 1338). Affect is considered a key resource (Halbesleben et al., 2014), since it facilitates the mobilization of other resources, and makes the use of other resources more effective (ten Brummelhuis & Bakker, 2012). According to the Broaden-and-Build Theory of positive emotions (B&B; Fredrickson, 2004, 2013), positive moods help accomplishing one's aims by broadening the

repertoire of cognitive, social and behavioral options available, while also building or maintaining these options for later use. Empirical research has supported both propositions, finding that positive emotions were associated with more cognitive flexibility, holistic processing, empathy and trust (broaden hypothesis). In the long term (build hypothesis), people who experience and express more positive emotions have been found to be more socially connected, resourceful and resilient. Because of this conservation and increase in personal resources associated with positive affect, we expect that on days when the colleague is more mindful at work, the employee will experience more positive affect at work and will later find it easier to experience relaxation at home. We find this path reasonable, since job resources in general (Bennett et al., 2018) and mindfulness in particular (Amutio, Martínez-Taboada, Hermosilla, & Delgado, 2015; Marzuq & Drach-Zahavy, 2012) have been found to have a positive and significant association with relaxation. Based on this reasoning, we propose that:

> *Hypothesis 3:* Colleague's mindfulness at work is positively related to employee's relaxation at home through enhanced positive affect during working hours.

4.2.1.3. The role of relaxation for engaging in OCB on the next day

The main goal of daily recovery is to restore the employee's energies and resources after work in order to face the next day's challenges (Binnewies & Sonnentag, 2013). Both theoretical and empirical data indicate that spillover effects not only occur from work to home, but also from home to work (Edwards & Rothbard, 2000; Judge & Ilies, 2004; Rothbard, 2001)

Researchers have found increasing evidence of the home-work spillover of recovery. For example, a diary study with public service workers by Sonnentag, Binnewies, and Mojza (2008) showed that good sleep quality had a strong relation with high positive affect and low negative affect the next morning, while different components of recovery were predictors of low fatigue, positive affect and, in the case of relaxation, serenity. In a subsequent diary study with a similar sample, Binnewies, Sonnentag, and Mojza (2009) found that feeling recovered in the morning before work was positively associated to OCB during working hours. Expanding these results, the same authors later found that recovery experiences (detachment, relaxation and mastery) during the weekend predicted feeling recovered at the beginning of the working week, which in turn predicted fluctuations in weekly task performance and OCB (Binnewies, Sonnentag, & Mojza, 2010).

However, none of these studies investigated the daily association between the components of the recovery experience and OCB. OCB refers to an employee's behaviors that are discretionary, not explicitly associated to organizational rewards and which contribute to the good functioning of the organization (LePine, Erez, & Johnson, 2002). The association between recovery and OCB is supported by COR theory, for OCB requires to invest personal resources and go beyond the call of duty (Bolino, Hsiung, Harvey, & LePine, 2015). Therefore, such an extra effort can only be addressed if one's resources are ready at the beginning of the workday. Research has found that engaging in relaxing activities the previous evening contributes to feeling recovered and having such resources the next morning (Binnewies et al., 2010). Therefore, we hypothesize that:

Hypothesis 4: Employee's relaxation is positively related to their own level of OCB on the next day (colleague-reported).

Affect has far-reaching consequences for the employee. Research has shown that affect experienced at work not only does *not* stay at work and spills over to the home domain, but that it also spills over to *the next day* at work. Seminal research by Amabile, Barsade, Mueller, and Staw (2005) on the across-days spillover of positive affect found that positive affect predicted creative thought on the same and the next day, while later research found that positive mood was significantly related to proactive behavior on both the same and the next work day (Fritz & Sonnentag, 2009). More recently, however, Sonnentag and Binnewies (2013) found that negative affect at work was associated to negative affect on the evening and the next morning, but that positive affect at work did not show such spillover effect neither for the evening nor for the next morning's positive affect. On the light of these mixed results, positive affect appears to have a lagged differential impact on other outcomes. According to B&B theory, positive emotions are indeed related to future resource use (build hypothesis) depending on the resources that were developed during the positive affective experience (broad hypothesis) (Fredrickson, 2013). Therefore, whether positive affect experienced at work will be related to the next day's outcomes depends on the resources it built while it was experienced. In the aforementioned studies, both creativity and proactivity are highly valued behaviors by organizations (Crant, 2000; Zhou & Hoever, 2014), so it is reasonable that positive affect at work would increase the likelihood of engaging in such necessary behaviors in the future.

However, little is known about the specific variables that explain the spillover from one day of work to the following one. So far, psychological detachment and sleep quality have been found to moderate the relation between negative affect experienced at work and negative affect in the next morning (Sonnentag & Binnewies, 2013). More recently, the results of Nicholson and Griffin's (2015) diary study on incivility at work and recovery at home suggested that psychological detachment (but not relaxation) may have been mediating this relation. Based on the B&B theory, we expect that colleagues' positive affect at work will make OCB more readily available (broaden hypothesis), because it is both (a) encouraged by the organization (LePine et al., 2002) and (b) in accordance with the other-orientation that characterizes positive emotions (Fredrickson, 2013). However, such cognitive availability of resources may not manifest as actual acts until the next day, for these behaviors have been argued to be contingent on contextual factors (Binnewies et al., 2010), and can stay latent until the opportunity comes (i.e., build hypothesis). Complementarily, and following the proposal of COR theory about resource gain spirals (Halbesleben et al., 2014), positive affect at work will provide colleagues with enough resources as to be able to relax successfully in the evening, which in turn will allow for acquiring more resources. The next day, the colleague will have all the necessary resources to implement the OCB that he built the next day whenever it is necessary. This reasoning is also congruent with the spillover model, which asserts that positive affective states experienced in one context improve performance in another context by increasing cognitive functioning, positive social interactions with others and persistence (Edwards & Rothbard, 2000). Given that we propose OCB to be related to the spillover of the previous day's positive affect, it is possible that such positive mood makes the employee see himself in a more favorable way than it actually is, a common rater effect associated with positive mood (Podsakoff, MacKenzie, Jeong-Yeon Lee, & Podsakoff, 2003) Additionally, the use of self-reports may be adequate for private events such as job satisfaction, but other behavioral outcomes such as performance are recommended to be measured by other methods (Conway & Lance, 2010). Therefore, we use the colleague's report of employee's OCB. In doing so, we follow Reb, Narayanan and Ho's (2015) suggestion in their study about mindfulness in leaders and employees of using a different source for reporting employee OCB. Based on this, we hypothesize that:

> *Hypothesis 5:* Employee's positive affect at work is positively related to OCB on the next day (colleague-reported) through enhanced relaxation during non-working hours.

4.3. Method

4.3.1. Procedure and sample

Participants were recruited using the researchers' social networks and those of their students, who were granted extra course credits for every couple they could provide. The use of student contacts to obtain access to employee samples is quite common in the field of Organizational Behavior (e.g., Demerouti & Rispens, 2014). Specifically, the requisites participants had to fulfill for the study were that i) colleagues had to interact frequently during the working day, and ii) both members had a stable job. Participants were then contacted via email explaining the procedure that the diary-based research would follow during the work week. Informed consent was obtained from all individual participants included in the study. We collected the data via online surveys hosted by Qualtrics.com. In order to guarantee participants' privacy and anonymity, partners' responses were linked by means of anonymous codes provided by the participants. Ethical approval was given by the first author's university local ethical committee for research.

We used a multi-source daily diary research design. The study consisted of two phases. In the first phase, participants filled in a one-time online survey in which we measured their demographic information and trait level of mindfulness. The second phase started one week later, and it consisted of two daily online surveys, over five consecutive workdays. Specifically, mindfulness at work, positive affect and OCB were measured at the end of the workday (average response time: 16:38), whereas relaxation was reported before going to bed (average response time: 23:22).

Of the 196 participants who were solicited for participation, 126 surveys (73.6% response rate) were completed and returned. Fourteen of these were left out of the analyses due to missing reports. This left a final sample of 63 dyads (N=126; 630 occasions). The mean age of the participants was 39.7 years (*SD* = 10.99), and 70.5% of them were women. Almost half of participants (46.8%) had children, and 76.0% of the sample had a university degree or postgraduate studies. The average number of hours worked per week was 35.7 hours (*SD* = 13.1). All participants worked in the services sector, though there was a broad range in the professions. Regarding their prior experience with mindfulness, half of the sample (48.4%) had never been introduced to mindfulness or meditation in any form; and those who had been introduced to it had maintained a daily meditation practice, which consisted of less than 20 minutes daily (70.6%).

4.3.2. Measures

4.3.2.1. Daily survey data

Daily mindfulness at work was measured using the state version (Hülsheger et al., 2013) of the Mindful Awareness Attention Scale (Brown & Ryan, 2003). This scale consists of five items evaluating how aware the respondent was of his activities during work time. Items were rated on a 6-point scale, ranging from 1 = "not true at all" to 6 = "totally true". Participants responded to items such as "Today, at work, I've done jobs or tasks automatically, without being aware of what I was doing" and "Today, at work, I found myself preoccupied with the future or the past" (all items are reversed scored). The mean of Cronbach's alpha across the five occasions was .83.

Daily positive affect at work was measured with a short (six items) version of the of the Positive and Negative Affect Schedule scale (Watson, Clark, & Tellegen, 1988). Items were "At this moment I feel active / interested / alert". Following Sonnentag and Grant (2012), we also assessed low activation positive affect, with three items of the measure of Abele-Brehm and Brehm (1986). Items were "At this moment I feel calm / relaxed / laid-back". Items were rated on a 6-point scale, ranging from 1 = "not true at all" to 6 = "totally true". The mean of Cronbach's alpha across the five occasions was .74.

Daily relaxation was measured with the daily version (Bakker, Sanz-Vergel, Rodríguez-Muñoz, & Oerlemans, 2015) of the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007). Participants had to indicate how often they had experienced each situation (e.g., "Today, I kicked back and relaxed"). Items were rated on a 6-point scale, ranging from 1 = "not true at all" to 6 = "totally true". The mean of Cronbach's alpha across the five occasions was .88.

Daily OCB on the next day was measured with helping and courtesy items (four) developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990), which include items such as "Is always ready to lend a helping hand to those around him/her". To avoid common method variance, we slightly modified the items formulation, to assess OCB reported by employee's colleagues (e.g., "Today at work, my colleague has been ready to lend a helping hand to those around him/her"). Items were rated on a 6-point scale, ranging from 1 = "not true at all" to 6 = "totally true". The mean of Cronbach's alpha across the five occasions was .77.

4.3.2.2. General survey data

Control variables. To rule out alternative interpretations, we assessed a number of control variables, such as gender, age, number of hours worked per week, and experience in meditation. We also controlled for the levels of trait of mindfulness using the Mindful Awareness Attention Scale (Brown & Ryan, 2003).

4.3.3. Statistical analyses

In the present study, we present a multilevel design, with days nested in persons and persons nested in dyads. Thus, we have three levels of analysis: A repeated measurement over 5 days represents the first level (within-person), the individual persons represent the second level (between-person), and the dyads represent the third level (between-dyad). To test the hypotheses, we conducted multilevel modeling using the MLwiN software (Rasbash, Browne, Healy, Cameron, & Charlton, 2000) with three levels: day (Level 1; N = 630 observations), person (Level 2; N = 126 participants), and dyad (Level 3; N = 63 dyads). We followed the standard procedures to center variables, and centered predictor variables at the person level around the grand mean, and predictor variables at the day level around the respective person mean (Ohly et al., 2010). Because members of the dyad cannot be treated as independent from one another, it is important to use a technique, which deals with the issue of non-independence, and the APIM model deals with violation of statistical independence (APIM; Kashy & Kenny, 2000; Kenny, Kashy, & Cook, 2006). Each respondent is considered either as the employee or as the colleague in the hypothesized relationships.

4.4. Results

4.4.1. Preliminary analyses

The means, standard deviations, and correlations are presented in Table 4.1. First, before APIM estimation, we examined the discriminant validity of all the variables included in the study. We conducted multilevel confirmatory factor analyses with Mplus 6.12 (Muthén & Muthén, 2010). Specifically, we compared a four-factor measurement model discriminating between the variables included in the study (daily mindfulness at work, daily positive affect at work, daily relaxation, daily OCB) compared to a single factor model. Results showed that the four-factor model presented an acceptable fit to the data (χ^2 (124) = 335.13, CFI = .93, TLI = .91, RMSEA = .07, SRMR (within) = .06 vs. SRMR (between) = .09), whereas the single factor model presented an unacceptable fit (CFI = .88, TLI = .87,

RMSEA = .14, SRMR (within) = .13 vs. SRMR (between) = .62). This indicates that the variables included in the study can be empirically discriminated from each other.

In addition, gender (r = -.13, p < .01), number of hours worked per week (r = -.14, p < .01) and years of experience in meditation practice (r = .13, p < .01) were associated with relaxation at home. Similarly, age (r = .10, p < .05) was associated with OCB. Therefore, these variables were used as controls in our analyses.

Finally, we calculated whether our dependent variables exhibited sufficient between- and within-person variability. We calculated the intraclass correlations with the intercept-only model. ICC (1) is commonly referred to simply as the ICC in random coefficient models. Results showed that in both dependent variables the three-level models explained a significant amount of variance. Specifically, variance attributable to within-person variations in our variables ranged from 46.7% to 60.9%. Regarding, variance attributable to between-person variations ranged from 12.9% to 13.4%. Finally, variance attributable to between-dyad ranged from 26.2% to 39.8%. These results support the use of multilevel modelling with three levels of analysis, because the variance attributable to the dyad was significant. According to Byrne (2011), when ICC values are larger than .10 and smaller than .90 there is a substantive amount of variance at that level of analysis. In light of these results, the most appropriate strategy of analysis is the multilevel analysis, which takes into account the variation at these three levels (dyads, persons, days).

4.4.2. Hypotheses testing

To test our study hypotheses, we examined a series of nested models. In the first model, predicting employee's relaxation at home, we included the intercept as the only predictor in the null model. In Model 1, we included the person-level control variables (gender, age, worked hours per week, years of experience in meditation practice and trait level of mindfulness). In Model 2, we entered both employee's and colleague's daily mindfulness at work. Finally, in Model 3, we entered employee's daily positive affect at work. We compared the model fit of these models by calculating the difference between the likelihood ratio of one model and the likelihood ratio of the previous one. This difference follows a chi-square distribution (with degrees of freedom being the number of variables added in each model). Model 3 showed a better fit to the data than Model 2 (difference of -2 X log = 9.32, df = 1, p <.01), Model 1 (difference of -2 X log = 129.86, df = 3, p <.001), and the null model (difference of -2 X log = 1116.94, df = 8, p <.001).

Table 4.1. *Mean, standard deviations, and correlations.*

Variable	M (SD)	1	2	3	4	5	6	7	8
1. Mindfulness at work, employee	4.71 (1.03)	---							
2. Mindfulness at work, colleague	4.71 (1.03)	.19**	---						
3. Positive affect at work, employee	3.97 (0.74)	.39**	.18**	---					
4. Positive affect at work, colleague	3.97 (0.74)	.18*	.39**	.25**	---				
5. Relaxation at home, employee	3.86 (1.57)	.07	.06	.24**	.09*	---			
6. Relaxation at home, colleague	3.86 (1.57)	.06	.08	.09*	.24**	.27**	---		
7. OCB next day, employee	4.92 (0.98)	.04	.02	.17**	.01	.07	.10*	---	
8. OCB next day, colleague	4.92 (0.98)	.02	.04	.01	.17**	.10*	.07	.21**	---

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

In the second model, predicting employee's OCB on the next day, we included the intercept as the only predictor in the null model. In Model 1, we included the same person-level control variables. In Model 2, we entered employee's daily positive affect at work. Finally, in Model 3, we entered employee's daily relaxation at home. Model 3 showed a better fit to the data than Model 2 (difference of -2 X log = 21.05, df = 1, p <.001), Model 1 (difference of -2 X log = 69.39, df = 2, p <.001), and the null model (difference of -2 X log = 829.50, df = 7, p <.001). Table 4.2. and 4.3. present unstandardized estimates, standard errors, and t values for both models.

Hypothesis 1 stated that daily colleague's mindfulness at work would be negatively related to daily employee's positive affect at work. Results from multilevel analysis supported our hypothesis, because colleague's mindfulness at work was positively related to employee's positive affect ($\gamma = 0.061$, SE = 0.029, $t = 2.10$, $p < .05$). This effect was obtained after controlling for the effect of employee's mindfulness at work on their positive affect ($\gamma = 0.235$, SE = 0.029, $t = 8.10$, $p < .001$).

Hypothesis 2 suggested that daily employee's positive affect at work would be positively related to their own level of daily relaxation at home. Results show that employee's positive affect was positively related to their daily relaxation at home ($\gamma = 0.398$, SE = 0.152, $t = 2.61$, $p < .05$). Thus, Hypothesis 2 was supported.

Hypothesis 3 suggests a mediating effect employee's positive affect on the relationship between daily colleague's mindfulness at work and daily employee's relaxation at home. The conditions that should be met in order to support the mediation hypothesis are (a) daily colleague's mindfulness at work should be positively related to daily employee's positive affect at work; (b) daily employee's positive affect at work should be positively related to daily employee's relaxation at home; (c) and after the inclusion of the mediator, the previously significant relationship between daily colleague's mindfulness at work and employee's relaxation at home either turns into non-significant (full mediation) or becomes significantly weaker (partial mediation; Mathieu & Taylor, 2006). The test of Hypothesis 1 and 2 supports the first two conditions. However, results showed that the effect of IV on DV was not significant. Colleague's mindfulness at work was not related to employee's relaxation at home ($\gamma = 0.061$, SE = 0.098, $t = 0.62$, $p > .05$). However, the Monte Carlo test showed that an indirect effect was significant since the bias- corrected 95% confidence interval did not include zero (lower bound [LB] = .008, upper bound [UB] = .047).

Table 4.2. *Multilevel estimates for models predicting employee's relaxation at home.*

Variable	Null Model			Model 1			Model 2			Model 3		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Intercept	3.965	0.102	38.8***	3.853	0.159	24.2***	3.820	0.162	23.5***	3.789	0.153	24.7***
Gender				-0.629	0.278	-2.26*	-0.657	0.287	-2.28*	-0.550	0.272	-2.02*
Age				0.007	0.011	0.63	0.005	0.011	0.45	0.003	0.011	0.27
Worked hours per week				-0.008	0.007	-1.14	-0.009	0.011	-0.81	-0.006	0.010	-0.60
Years of experience in mediation practice				0.043	0.118	0.36	0.046	0.121	0.38	0.045	0.113	0.39
Trait mindfulness				0.226	0.134	1.68	0.215	0.115	1.86	0.168	0.112	1.50
Daily mindfulness at work (employee)							0.002	0.098	0.02	0.032	0.097	0.32
Daily mindfulness at work (colleague)							0.061	0.098	0.62	0.096	0.097	0.98
Daily positive affect at work (employee)										0.398	0.152	2.61*
-2 X Log (lh)		2034.984			1047.900			927.361			918.037	
Difference of -2 X Log					987.08***			120.53***			9.32**	
df					5			2			1	
Level 1 intercept variance (SE)		1.506 (0.101)			1.734 (0.162)			1.751 (0.177)			1.770 (0.179)	
Level 2 intercept variance (SE)		0.321 (0.137)			0.187 (0.173)			0.163 (0.179)			0.103 (0.170)	
Level 3 intercept variance (SE)		0.644 (0.166)			0.446 (0.184)			0.433 (0.189)			0.365 (0.168)	

* p < .05. ** p < .01. *** p < .001. *n = 63 dyads, n = 126 individuals × 5 days, n = 630 observations.*

Table 4.3. *Multilevel estimates for models predicting employee's OCB (colleague-report).*

Variable	Null Model			Model 1			Model 2			Model 3		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Intercept	4.915	0.070	70.2***	4.974	0.114	43.6***	4.999	0.117	42.7***	5.000	0.114	42.7***
Gender				0.171	0.198	0.86	0.121	0.206	0.58	0.113	0.200	0.58
Age				0.023	0.008	2.87*	0.024	0.008	3.00*	0.024	0.008	3.00*
Worked hours per week				0.001	0.008	0.12	0.004	0.008	0.50	0.003	0.008	0.50
Years of experience in mediation practice				0.033	0.118	0.27	0.022	0.087	0.25	0.035	0.084	0.25
Trait mindfulness				0.100	0.096	1.04	0.107	0.100	1.07	0.115	0.097	1.07
Daily positive affect at work (employee)							0.053	0.071	0.74	0.053	0.072	0.74
Daily relaxation at home (employee)										0.075	0.031	2.41*
-2 X Log (lh)	1412.471			652.354			604.022			582.965		
Difference of -2 X Log				760.11***			48.33***			21.05***		
df				5			1			1		
Level 1 intercept variance (SE)	0.458 (0.031)			0.367 (0.036)			0.377 (0.037)			0.381 (0.039)		
Level 2 intercept variance (SE)	0.132 (0.056)			0.062 (0.064)			0.047 (0.066)			0.035 (0.065)		
Level 3 intercept variance (SE)	0.388 (0.079)			0.446 (0.092)			0.401 (0.096)			0.371 (0.091)		

* p < .05. ** p < .01. *** p < .00. *n = 63 dyads, n = 126 individuals × 5 days, n = 630 observations.*

Thus, results suggest that there is a significant indirect effect. Indirect effects are a special form of intervening effects whereby the predictor and the dependent variable are not related directly, but they are indirectly related through significant relationships with a linking mechanism (Mathieu & Taylor, 2006). Therefore, daily colleague's mindfulness at work is related to employee's relaxation at home trough employee's daily positive affect. Hypothesis 3 was partially supported.

Hypothesis 4 suggested that daily employee's relaxation would be positively related to their own level of OCB on the next day (colleague-reported). Results show that employee's relaxation was not significantly related to their level of OCB on the next day (γ = 0.0.53, SE = 0.072, t = 0.74, $p > .05$). Thus, Hypothesis 4 was not supported.

Finally, Hypothesis 5 suggests a mediating effect employee's relaxation on the relationship between daily employee's positive affect and OCB on the next day (colleague-reported). The conditions that should be met in order to support the mediation hypothesis are (a) daily employee's positive affect should be positively related to daily employee's relaxation; (b) daily employee's relaxation should be positively related to daily employee's OCB on the next day; (c) and after the inclusion of the mediator, the previously significant relationship between daily employee's positive affect at work and OCB on the next day either turns into non-significant (full mediation) or becomes significantly weaker (partial mediation; Mathieu & Taylor, 2006). The test of Hypothesis 2 supports the first condition. Results also show support for the second condition, since employee's relaxation was related to employee's OCB ($\gamma = 0.075$, SE = 0.031, $t = 2.41$, $p < .05$). However, Hypothesis 4 showed that the effect of IV on DV was not significant, but the Monte Carlo test showed that an indirect effect was significant since the bias- corrected 95% confidence interval did not include zero (lower bound [LB] = .006, upper bound [UB] = .055). Thus, results suggest that there is a significant indirect effect. Therefore, daily employee's positive affect at work is related to OCB on the next day (colleague reported) trough employee's daily relaxation at home. Hypothesis 5 was partially supported.

4.5. Discussion

4.5.1. Theoretical implications and suggestions for future research

To our knowledge, our study is the first to show the crossover of mindfulness on well-being outcomes between coworkers. We found that daily mindfulness at work was positively related to the coworker's daily positive affect at work and relaxation experiences at home. Additionally, the relation between the employee's daily positive affect at work and the next day's OCB (as reported by the colleague) was mediated by daily relaxation at home. Therefore, these results provide further evidence about the notion that the potential effects of mindfulness go beyond the individual and the work context.

Our main theoretical contribution is showing that the employee's mindfulness is associated with the coworker's positive outcomes. The majority of within-person research on mindfulness has focused on the individual, examining the daily dynamics of well-being for an individual employee (Hülsheger et al., 2013; Hülsheger et al., 2014; Sonnentag, 2015). What we learn from this study is that mindfulness at work is also related to the coworker's positive affect at work and relaxation experiences at home. This finding broadens the literature on the relation of mindfulness with positive affect. Previous research has found an association between these variables at the individual level (Giluk, 2009), in the leader-employee relationship (Reb et al., 2014) and the clinician-patient relationship (Beach et al., 2013). Our findings show that this association also exists between coworkers. More research is needed to shed light on what other employee's variables are associated with the colleague's mindfulness at work, and especially at what moment of the day they are to be found.

Second, the mediating role of relaxation in the association between positive affect and next day's OCB is telling us that the daily spillover of positive affect requires an intermediate step in order to be associated with OCB. Indeed, researchers have asked for more studies on the specific states associated with daily OCB (Spitzmuller, Ilies, & Choi, 2018). In this sense, our findings integrate and expand previous findings in the area of work recovery. Fritz and Sonnentag (2009) found an association between positive affect and the next day's proactive behavior, while Binnewies and colleagues (2009, 2010) revealed the association between recovery and OCB. The current research integrates these findings in a mediational model in which daily positive affect at work is positively related to the next day's OCB, partially mediated by previous evening's relaxation. This is in accordance with B&B theory, which explains that positive emotions broaden the individual's range of resources, which in turn can be used in a future occasion (Fredrickson, 2013). Because OCB

requires a) the investment of resources and b) a triggering situation, the employee may need an additional resource-obtaining experience (such as relaxation) in order to fulfill the former requisite, while waiting for the appropriate moment the next day fulfills the second. Therefore, our results suggest that daily positive affect works as a lagged investment in future OCB. This lagged association of positive affect has also been found with creativity (Amabile et al., 2005). It would be interesting for future research to investigate what other social and personal factors during work hours are related to the next day's OCB.

Overall, our findings are in accordance with COR theory and B&B theory. Our results suggest that the more mindful the colleague is during work hours, the more resources he acquires. This, in turn, makes interactions more satisfying and effective for the employee, who experiences increased positive affect and, consequently, increased (broadened) resources. Such increase in resources is then experienced at home, where the employee can find it easier to relax, further increasing resources after work in a resource caravan (Hobfoll, 2001). Then, the employee is more likely to engage in OCB on the next day because of the higher amount of resources accumulated (built) during the previous day and the (broadened) cognitive availability of OCB as a course of action.

Finally, the current research emphasizes the importance of assessing mindfulness at the within-person level in order to explore its daily associations with other work and home variables. Indeed, within-person variability of mindfulness has been shown to range between 38% and 71%, suggesting that there are many variables, both personal and organizational, that may affect (and may be affected by) state mindfulness (Brown & Ryan, 2003). Evidence from daily diary studies have shown that daily mindfulness levels bear unique associations with daily work engagement (Tuckey, Sonnentag, & Bryan, 2018), while high levels of mindfulness at work were associated with well-being variables at home, such as higher job satisfaction and happiness and lower emotional exhaustion and work-family conflict (Hülsheger et al., 2013, Montes-Maroto et al., 2017). Our results expand this growing body of research by showing that daily mindfulness at work goes beyond the individual by affecting not only to employee's outcome, but also to the colleague's well-being.

4.5.2. Methodological strengths and limitations

The current research should be evaluated in the light of its strengths and limitations. From a methodological perspective, one major asset of our study is related to its design (i.e., repeated-measures design from two separate informants). Although mindfulness has been considered mainly a state, most research has focused on it as a trait (Good et al., 2016; Lomas et al., 2017). By using a daily diary design, we were able to shed light on the within-person fluctuation of mindfulness and its association with other variables at the day level. Moreover, a general limitation in the broader organizational field and in mindfulness research (Grossman, 2011), is the use of self-reports, which might be associated with method bias (Podsakoff et al., 2003). We dealt with this issue by including both colleague and employee reports. Additionally, the use of a daily diary design reduces the likelihood of retrospective bias while at the same time takes into account the incidental influences of the environment and the surrounding individuals on the outcomes of interest (Ohly et al., 2010).

Despite its strengths, the current study also presents some limitations. First, the Actor-Partner Interaction Model applied for the analyses cannot indicate causality between our variables, even though we also included a lagged effect between positive affect and the next day's OCB. Although we have avoided the use of causal language, our theorizing and results suggest that the directions of effects are such that the colleague's mindfulness increases the employee's positive affect, which in turn, promotes relaxation in the evening. Such direction is also implied in the employee's positive affect-relaxation-OCB relations. These suggestions are grounded both on theory and research, for mindfulness trainings have been associated with higher positive emotions (Jain et al., 2007) and psychological detachment (Hülsheger et al., 2014), while recovery has been associated to OCB (Binnewies et al., 2009; 2010). However, it is also possible that the associations we found are due to other causes, are reciprocal or even reversed.

Second, we used a convenience sample, thus limiting the generalizability of our results. The participants were heterogeneous in terms of the professions they held, which follows the recommendation by Lomas et al. (2017) about using non-health-related professions. However, all of them worked in the services sector. In this sense, future studies could include employees from different occupations (e.g., factory workers) in order to expand these findings.

Third, we assessed our study's variables over the course of a workweek, focusing on the daily fluctuations occurring from Monday to Friday. Given that a significant part of recovery occurs during the weekend (Binnewies et al., 2010), future research could include

also the weekend and investigate to what temporal extent does the spillover of well-being associated with the colleague's mindfulness extends.

4.5.3. Practical implications

Finally, our study has practical implications for organizations. The current results suggest that mindfulness is associated with affective and physiological outcomes that have positive implications for the organizational context. Therefore, we follow Gilbert, Foul, & Bono (2015) and encourage organizations to implement mindfulness-training programs in order to foster employees' mindfulness at work and therefore increase their personal resources. Given that Hülsheger et al. (2014) found that even a 2-week self-administered intervention was effective in increasing mindfulness levels, organizations can implement shorter-than-usual versions of mindfulness interventions that fit their time requirements. Moreover, the indirect link between positive affect and next day's OCB is an important one for managers, for OCB is largely dependent on situational cues (Binnewies et al., 2010) and positive affect (Ilies et al., 2006). Therefore, increasing positive affect should prove an easier and more effective way to increase the likelihood of OCB. In this line, some studies have pointed to the link between mindfulness practice and altruistic behaviors (Condon, Desbordes, Miller, & DeSteno, 2013; Lim, Condon, & DeSteno, 2015) so it is reasonable to expect that the more mindfulness employees are, the more prosocial and pro-organizational behaviors they will be likely to engage in. Lastly, research by Fowler and Christakis (2008) found that an individual's happiness rippled out throughout his social network up to the third connection. Our results suggest that a similar pattern may also occur for mindfulness. Therefore, the positive crossover and spillover effects we present in the current study could be much wider than expected, which implies that organizations may have at their disposal a far-reaching strategy for improving the quality of the work and life of their employees.

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Chapter 5

Mindfulness in Teams

5.1. Abstract

This experimental study examined the impact of team mindfulness on the performance of diverse teams. We hypothesized that team mindfulness would increase it through two complementary paths. The affective path included lower negative affect and higher intersubgroup trust, while the cognitive path comprised cognitive integration and the team's transactive memory system. Finally, both paths would improve the elaboration of task-relevant information, resulting in performance. 58 four-person teams with a strong activated faultline underwent a team mindfulness or mind wandering induction and then engaged in a decision-making task. Results supported the affective path to elaboration of information, but not the cognitive one. Elaboration, in turn, predicted higher team performance. Implications for the study and management of team faultlines are discussed.

Keywords: faultlines, team mindfulness, negative affect, trust, transactive memory system, team performance

5.2. Introduction

Rapidly changing global dynamics have made organizations increasingly diverse (Carter & Philips, 2017). In this context, the complexity of today's work has led to the adoption of teams as an indispensable organizational element (Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017). A team is a set of two or more individuals embedded within an organizational system who interact to attain a common goal, are interdependent in their means and have different roles and responsibilities (Kozklowski & Ilgen, 2006).[1] The disparity of characteristics in team members has made research on team diversity an issue of great relevance (Plaut, 2010). A team with diverse members (i.e., educational background, job experience, gender) should be associated with a larger pool of informational resources to face complex tasks. However, research has long indicated that such positive relation is all but consistent (e.g., van Knippenberg & Schippers, 2007).

Team diversity is an elusive construct. The literature of the last 20 years has shown that the diversity-processes-outcomes relationship depends on a multitude of personal and social factors (Joshi & Neely, 2018). To better understand such complexity, several approaches have been taken over the years to understand team diversity's positive and negative effects (Meyer, 2017). One of them outlines how diversity characteristics can get combined under certain circumstances to form subgroups within the larger team (Carton & Cummings, 2012; Lau & Murnighan, 2005). Such phenomenon is known as *team faultlines*, which are "hypothetical dividing lines that may split a group into subgroups based on one or more attributes" (Lau & Murnighan, 1998; p. 328).

Team faultlines and poor team functioning tend to go together. For example, faultlines have been associated to team conflict (e.g., Jehn & Bezrukova, 2010), low group learning (Jehn & Rupert, 2008) and low elaboration of task-relevant information (Rico, Sánchez-Manzanares, Antino, & Lau, 2012). In turn, meta-analytic evidence has linked faultlines to overall low performance (Thatcher & Patel, 2011). Given that team diversity is an unavoidable organizational reality, leaders have been called to find strategies to deal with the occurrence of team faultlines (Chrobot-Mason, Ruderman, Weber, & Ernst, 2009). In this sense, intervening in faultlines would be more effective if more data was available about other underlying team variables associated with them (Chen, Wang, Zhou, Chen, & Wu, 2017). On the one hand, scholars have repeatedly associated intergroup relations with affect

[1] In this chapter, we use "group" and "team" as synonyms for the sake of reading flow. However, both concepts are slightly different. A group is defined as "an aggregate of two or more individuals who interact with and influence one another" (Bordens & Horowitz, 2008 p. 282). Therefore, a team is a particular kind of group that specializes in accomplishing a task within an organizational context.

(Barsade, 2002; Niedenthal & Brauer, 2012, Thatcher & Patel, 2012) yet the diversity and faultlines literatures have seldom included this variable (Hentschel, Shemla, Wegge, & Kearney, 2013). On the other, a team with well-functioning cognitive states is a major factor for their performance (DeChurch & Mesmer-Magnus, 2010). However, the faultlines literature has tested this fact with studies limited by their design (i.e., cross-sectional) and lack of measurement accuracy, providing a suggestive yet narrow view about causality. These are major gaps in the literature of team faultlines.

The aim of the present study is to shed light on these issues by examining the role of team mindfulness in reducing the negative impact of activated team faultlines on the team's cognitive and affective states. We conducted a laboratory experiment using teams in a decision-making task to examine the effect of a team mindfulness induction. We analyzed its effects on performance by testing two mediation paths. Firstly, the affective path proposes that team mindfulness improves the team's affective states (team negative affect and intersubgroup trust), which in turn fosters the elaboration of task-relevant information (ETRI), finally improving performance. On the other hand, the cognitive path links team mindfulness to the team's cognitive states (namely, cognitive integration of information and transactive memory system), ETRI and team performance.

Our study extends the current literature in three ways. First, we test the effectiveness of inducing team mindfulness as an intervention to reduce the intergroup bias characteristic of subgroups. Several studies have addressed this issue by explicitly manipulating the diversity categories (e.g., creating a superordinate reward; Rico et al., 2012) or the perception of diversity (e.g., encouraging prodiversity beliefs; Homan, van Knippenberg, van Kleef, & De Dreu, 2007). However, no study has investigated the way interacting with attention to the present and a non-judgmental attitude may affect the perception of diverse others. By using team mindfulness, we answer Hülsheger's (2015) call to examine mindfulness as a team-level phenomenon and its impact on other team's states and processes. Second, we explore the affective consequences of faultlines. The diversity and faultlines literatures deal with topics whose negative consequences are inherently affective (e.g., team conflict; Thatcher & Patel, 2012). However, team affect has received scarce scholarly or empirical attention (Hentschel et al., 2013). By including it, we provide evidence about the affective mechanisms that underlie many well-known processes and outcomes in both literatures. Finally, we investigate the team's cognitive underpinnings, complementing the affective states and providing a more detailed description about the mechanisms accounting for mindful teams' superior performance. By doing so, we combine the literatures about

cognitive states and faultlines (Cronin et al., 2011; Rupert, Blomme, Dragt, & Jehn, 2016) with team mindfulness (Yu & Zellmer-Bruhn, 2017). Based on our findings, we propose practical implications for leaders and team managers.

5.2.1. Theoretical Background

Diversity is a team-level construct that reflects disparity on a number of attributes between the members of a work group (Joshi & Neely, 2018). The impact of diversity in the team's processes, states and outcomes has long been studied by examining single diversity attributes, such as gender or educational background (van Knippenberg & Schippers, 2007). However, results using this approach have been mixed (Bowers, Phanner, & Salas, 2000; Williams & O'Reilly, 1998). The faultline concept stresses that *several* diversity attributes can be *simultaneously* present in team members (Lau & Murnighan, 1998) and that the alignment of such attributes can *split the team* into several subgroups (Carton & Cummings, 2012). Therefore, the faultlines construct offers a more refined perspective to examine the effects of team diversity.

Team faultlines occur when the distribution of diversity attributes create hypothetical dividing lines that split members into relatively homogeneous subgroups (Lau & Murnighan, 2005). As a consequence, team members feel attracted to similar ones, making the perception of subgroups more salient and leading to social categorization and identification processes (Lau & Murnighan, 1998). The strength of the faultline depends on the number of attributes aligned, while faultline distance reflects the extent to which subgroups perceive themselves as different (Bezrukova, Jehn, Zanutto, & Thatcher, 2009). For example, a 6-person team made of 3 young Asian female nurses and 3 mature Latin psychologists will have a stronger and more distanced faultline than a 6-person team made of 2 young female nurses, 2 young male psychologists and 2 mature male social workers, all of them Latins.

The actual split into subgroups depends on the activation of the faultline. A faultline trigger is defined as any event that promotes an identity threat between two or more people from different social identity subgroups and makes the perception of subgroups readily available (Chrobot-Mason et al., 2009). Faultline triggers are caused by the team (e.g., different values) or by external factors (e.g., differential treatment). Triggers evoke a social identity threat as long as they are perceived as meaningful (Jehn & Bezrukova, 2010). Therefore, everything can be considered a potential trigger of identity-based faultline, so leaders need to find strategies to deal with the consequences of a precipitating event that is as disruptive as unpredictable (McNeil, Mitchell, & Parker, 2013).

Social categorization lies at the heart of faultlines. Perceiving subjectively similar others as in-groups and subjectively dissimilar others as out-groups provides the cognitive basis for subgroup formation (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). However, whether the diversity attributes of the members become so salient they result in social categorization depends on the simultaneous occurrence of three factors. First, *normative fit* is the extent to which the social categorization is meaningful to group members (e.g., a multidisciplinary team with a faultline based on educational background). Second, *comparative fit* reflects the extent to which team members perceive ingroups as highly similar and outgroups as highly different. For instance, an age-based faultline in a directive board made of male executives may have the younger members perceiving the older ones as too conservative, while the latter will think the youngsters are too risky. Third, *cognitive accessibility* refers to how easily the categorization schema comes to mind (e.g., a gender-based faultline triggered by uneven salary) (van Knippenberg, De Dreu, & Homan, 2004). When these three processes occur together with a meaningful trigger, faultlines emerge and coalitions split the team into smaller subgroups.

The similarities between the members of subgroups are associated with more liking, identification and favoritism towards the ingroup over the outgroup (Hewstone, Rubin, & Willis, 2002). Intergroup bias has been consistently associated with conflict (Fiske, 2002), negative affect (Hornsey & Hogg, 2000), communication hindrances (Halevy, 2008) and less information use when offered by others (De Wit, Jehn, & Scheepers, 2013; Turner et al., 2007). Consequently, subgroups cannot elaborate on the different information, skills and knowledge held by individuals members, a process key to the higher performance of diverse teams (van Knippenberg et al., 2004; Jehn & Bezrukova, 2010; Rico et al., 2012)

Reducing intergroup bias is key for improving intergroup relations (Hewstone et al., 2000). Accordingly, reducing biased perceptions of out-groups will result in better interactions. We base this assertion on Brewer's (1979) three key principles of intergroup relations: (1) favoritism, which refers to the trust and liking associated with ingroups; (2) intergroup accentuation, which refers to the enhanced perception of individuals as belonging to a specific category, making ingroups more similar to oneself and (3) social competition, which reflects the negative relation towards others based on a misperception about limited resources. To counteract these processes, the "us vs. them" dichotomy created by social categorization needs to be addressed. A number of strategies are available for reducing social bias. Among them, decategorization focuses on erasing categorization by two complementary processes: differentiating (making individuals out of the uniform outgroups)

and personalizing (seeing outgtoups in their uniqueness) (Hewstone & Brown, 1986). Previous applications of this approach have yielded mixed results (Bettencourt, Brewer, Croak, & Miller, 1992; Cameron, Rutland, Brown & Douch, 2006; González & Brown, 2003; Maras & Brown, 2000). However, all these studies used a "depersonalized contact" approach, by which (physical) exposure to outgroups was assumed to reduce (psychological) social bias. Working the other way around, emphasizing a reduction of bias and then behavioral exposure, remains unexplored.

5.2.2. Managing team faultlines by inducing team mindfulness

Team mindfulness refers to the shared belief among team members that their interactions are based on attention to present events and a non-judgemental attitude towards within-team experiences (Yu & Zellmer-Bruhn, 2017). Team mindfulness is an emergent state, for it results from the members' sustained and interdependent interactions (Klein & Kozlowski, 2000). After some time, such pattern becomes stable and promotes mutual adjustment in all members (Weick & Roberts, 1993). Finally, a shared perception about the team being characterized by present-moment attention and non-judgement further reinforces these attitudes at the individual level, creating a feedback loop (van Knippenberg, van Ginkel, & Homan, 2013). Initial empirical evidence has shown that team mindfulness weakens the association between task conflict and relationship conflict, as well as between relationship conflict and individual social undermining behaviors (Yu & Zellmer-Bruhn, 2017). These results are promising, for they indicate that team members' attentional focus and non-judgmental attitudes can, over time, buffer detrimental team dynamics. However, this approach is limited insofar team mindfulness is reduced to an emergent state that takes both time and members' continuity to develop. Team composition is not always stable (e.g., operating room teams, police squads), so team managers need efficient strategies to deal on the spot with any kind of team, regardless its prior experience together (Mathieu, Tannenbaum, Donsbach, & Alliger, 2014).

Research on individual-level mindfulness has found that this state can be effectively elicited with short guided inductions (Hafenbrack, 2017). Individual mindfulness refers to being fully aware and attentive to present-moment experiences occurring both internally and externally (Brown & Ryan, 2003; Dane, 2011). In the workplace, a recent meta-analysis has shown the overall benefits of mindfulness, both for employees and the organization (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). Brief mindfulness inductions have been found to be an efficient way to reduce perceptual and social biases. For

instance, Kiken and Shook (2011) found that participants in the mindfulness induction condition classified more accurately both positive and negative stimuli, showing a significantly lower negativity bias as compared with the control group. In the social context, Lueke and Gibson (2015) showed that induced mindfulness was associated with lowered implicit bias towards race and age. In another study, they found that the reduction in social bias was associated with decreased discriminatory behaviors towards a race-different partner during the Trust Game (Lueke & Gibson, 2016). More recently, a short mindfulness induction was associated with significantly lowered correspondence bias when attributing attitudes to a stranger (Hopthrow, Hooper, Mahmood, Meier, & Weger, 2017). Taken together, these results suggest that inducing mindfulness can be a powerful tool to promote the kind of attentive and non-judgmental interactions that characterize team mindfulness. Indeed, individual and team mindfulness have been found to have a positive significant relation (Yu & Zellmer-Bruhn, 2017).

Inducing individual mindfulness that later turns into team mindfulness is likely to have an impact on the team's affective and cognitive processes. By being fully attentive to events occurring in the present within the team, members have a powerful tool for regulating emotions and processing information. Additionally, having a non-judgmental attitude during interactions can create a climate that promotes better information sharing and elaboration by the members, leading to improved performance. Based on this reasoning, we propose two paths through which we expect team mindfulness positively influences team performance.

5.2.3. The affective path

Once the faultline is activated, identification with the subgroup makes similar members feel attracted (Hornsey & Hogg, 2000). Both theory and research have shown that identification with a group makes the individual experience emotions on behalf of the group (Niedenthal & Brauer, 2012). Affective convergence in the team occurs when all the members follow such identification-to-emotion process (Tanghe, Wisse, & van der Flier, 2010). This, in turn, leads to the appearance of group level affect, a global, diffuse and long-lasting team experience that regulates both intra- and inter-group attitudes and behaviors (Gamero, González-Romá, & Peiró, 2008; Niedenthal & Brauer, 2012; Smith, Seger, & Mackie, 2007). Faultlines have been theoretically linked to team negative affect (Thatcher & Patel, 2012). From an evolutionary perspective, group negative affect emerged to make group boundaries explicit and spread information about potential threats from outgroups (Fischer & Manstead, 2008; Kelly, Iannone, & McCarty, 2014). Empirically, team negative

affect has been related to stressors (Ng & Sorensen, 2009). A pioneer study has supported these claims for faultlines: a longitudinal study with banking teams showed that faultlines were significantly related to team negative affect (Valls, 2015).

Team mindfulness may reduce this association. Relating to other members with full awareness is a psychological stance found to decrease social categorization (Lueke & Gibson, 2015, 2016). By perceiving outgroup members in an experiential, non-elaborative way, the distinction between "us" and "them" that supports social identification is diminished. As a consequence, individual members do not identify with a particular subgroup and thus do not experience negative affect associated with a polarization. Team mindfulness' second component (interactions based on non-judgement) can promote a more relaxed and secure affective climate. Behavior that is informed by social categorization is likely to be negative and to reinforce the categorization (i.e., confirmation bias; Crocker & Major, 1989). However, behavior based on non-judgement can remove the negative affective component attached to the perception of outgroups. The resultant behavior will be more benign, and serve as a cue for others not to experience stress and, ultimately, negative affect. In this sense, team mindfulness was associated to psychological safety (Yu & Zullmer-Bruhn, 2017). Complementarily, individual mindfulness has been consistently associated with low negative affect, as evidenced by several meta-analyses (Eberth & Sedlmeier, 2012; Giluk, 2009; Mesmer-Magnus et al., 2017). Based on this reasoning, we propose:

H1a: Team mindfulness is related to lower negative affect during activated faultlines

Team affect plays a key role in the development of team dynamics over time (Barsade & Knight, 2015). However, the diversity literature has barely researched it (Hentschel et al., 2013). The scarce evidence shows that group negative affect can be both detrimental (Bashshur, Hernández, & González-Romá, 2011; Cole, Walter, & Bruch, 2008) and beneficial for teams (Kooij-de Bode, van Knippenberg, & Van Ginkel, 2010; van Knippenberg, Kooij-de Bode, & van Ginkel, 2010). Looking for more predictable relations, Knight and Eisenkraft's recent meta-analysis (2015) found that negative affect was associated with lower social integration, the relational ties linking group members between themselves and to the group (O'Reilly, Caldwell, & Barnett, 1989). Specifically, group negative affect was consistently related with weaker social integration only when the cause of the affect was endogenous to the group. In that situation, members are likely to perceive the group itself badly (Fischer & Manstead, 2008), for negative affect is associated with stressors, withdrawal cognitions and behaviors (Ng & Sorensen, 2009).

Activated faultlines are an endogenous team experience, for their structure is based on the configuration of the characteristics of the members (Lau & Murnighan, 2005), even though they may have been triggered by an exogenous factor (Chrobot-Mason et al., 2009). Faultlines are associated with inter-subgroup conflict (Thatcher & Patel, 2012), which can lead to hostility, discomfort and frustration (Gaertner et al., 1999). Theory and research have found that negative affect stemming from social categorization is associated with lower group trust (Insko, Schopler, Hoyle, Dardis, & Graetz, 1990; Williams, 2001). Team trust refers to a common belief that other members are sincere, will behave benevolent and will not make unfair use of one another (Simons & Peterson, 2000). Although subgroups may experience more cohesion and trust within themselves (Thatcher & Patel, 2012), empirical evidence has related strong faultlines to reduced team trust (Cronin et al., 2011; Mach & Baruch, 2015; Polzer, Crisp, Jarvenpaa, & Kim, 2006). In this line, team trust has also been proposed as a moderator of the negative influence of activated faultlines on team conflict (van der Kamp, Tjemkes, & Jehn, 2012). Based on this theorizing and evidence, we expect team negative affect to foster an opposing attitude towards the other subgroup, reducing inter-subgroup trust.

H1b: Team negative affect will be negatively related to intersubgroup trust

Team trust allows team members to interact as if the uncertainty and vulnerability inherent to human interaction had been favorably resolved (De Jong & Elfring, 2010). In this way, trust helps teams to invest their resources in ways that contribute to work attitudes, behaviors and outcomes (Dirks & Ferrin, 2001). On the other hand, lack of trust makes team members focus on their self-interest and preservation, leaving little energy and resources for the tasks (Joshi, Lazarova, & Liao, 2009; Mayer & Gavin, 2005). The last meta-analysis has supported this reasoning, showing a positive relation between team trust and performance (De Jong, Dirks, & Gillespie, 2016). However, the trust-outcomes relation has long been proposed to emerge from the influence of trust on other team's processes (Dirks, 1999). For example, trust has been associated with increases in the team's cooperation and members' efforts towards achieving the team's aims (Mach & Baruch, 2015), increased team satisfaction (DeOrtentiis, Summers, Ammeter, Douglas & Ferris, 2013) and team monitoring (De Jong & Elfring, 2010). A number of factors also influence the impact of team trust on performance, such as higher task interdependence and skill differentiation (De Jong et al., 2016). These findings are of special interest to the diversity literature, where team members heavily rely on each other's abilities and knowledge for completing their tasks.

The advantage of diverse teams is that they have a larger pool of knowledge, skills and resources to effectively deal with work tasks (van Knippenberg et al., 2004). However, an activated demographic faultline is associated with increased distrust, impairing the team's ability to develop a climate of psychological safety that enables information sharing and discussion with members from other subgroups (Carton & Cummings, 2012). In this line, van Knippenberg et al. (2004) have proposed that subgroup identification promotes inter-subgroup bias that disrupts sharing with others different task-relevant skills, information and abilities. Sharing information between subgroups can even be misinterpreted as criticism, limiting communication even further (Lau & Murnighan, 2005). In this sense, ETRI refers to the team's exchange, discussion and integration of task-related information (van Knippenberg et al., 2004). ETRI is a fragile process that can be easily overridden by social category salience and subsequent intergroup bias. Research on faultlines has found that the members' high need for cognition, superordinate goals and prodiversity beliefs predict the team's ETRI (Homan et al., 2007; Kearney, Gebert, & Voelpel, 2009; Meyer & Schermuly, 2012; Rico et al., 2012). These findings suggest that placing a higher-order interest generates an underlying sense of trust in other members' willingness to cooperate that overrides intergroup bias. As a consequence, team trust investment of resources on the task (instead of in conflict), facilitating sharing information and discussing it with all the members. Thus, we propose that:

H1c. Team intersubgroup trust will be positively related to the elaboration of task-relevant information

The asset of team diversity is that it gives members a larger pool of information, perspectives and knowledge (van Knippenberg & Schippers, 2007). This distribution can be especially useful during tasks that require information processing and decision making (van Knippenberg et al., 2004). In order to make the best out of diversity, van Knippenberg et al. (2004) have proposed ETRI as a fundamental mechanism linking it to performance. Sharing, processing and collectively discussing all the available information will make the team more aware about its current resources to fulfill the task. Initial evidence supported these claims, for Jehn et al. (1999) found that informational diversity was more strongly associated to performance on less-routine tasks, while Bowers et al.'s (2000) meta-analysis found that diversity was positively related to team performance during complex tasks, but negatively related to performance during simpler tasks. In the context of faultlines, ETRI has been consistently associated with team performance. For example, Homan et al., (2008) found

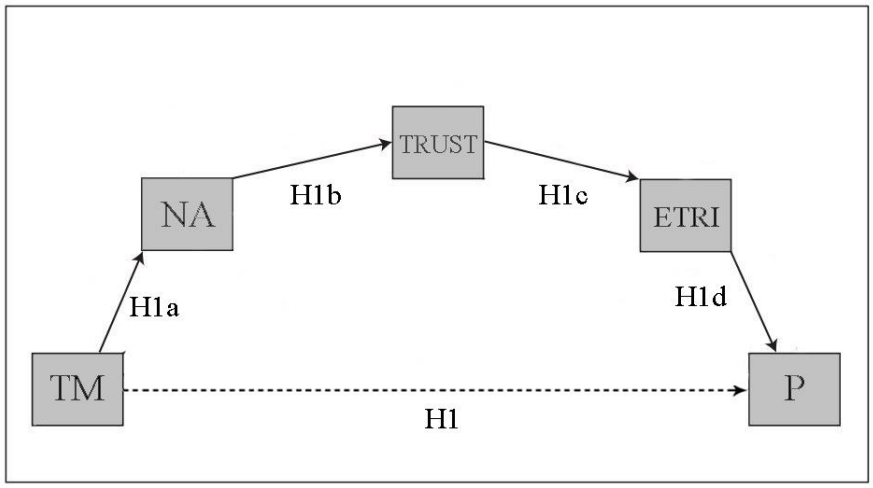
that teams with a faultline elaborated more when the task structure made the reward achievable only by the group as a whole than when the reward reinforced subgroup work. In this line, Rico et al. (2012) found that teams with a faultline and whose members had crosscut roles elaborated more on information when reward structure pointed to a superordinate goal. Other studies on this area support the association of ETRI and performance (Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; Kearney et al., 2009; Meyer & Schermuly, 2012; Meyer, Shemla & Schermuly, 2011; van Ginkel & van Knippenberg, 2008). Thus, we propose that:

H1d. The elaboration of task-relevant information will be positively related to team performance.

Based on this reasonings and available empirical evidence, we expect team mindfulness to exert is positive influence on team performance through several steps. Thus, we propose a triple mediation model on the affective states of the team, the affective path:

H1: Team mindfulness exerts its positive impact on team performance during activated faultlines through a triple mediation: a reduction in negative affect, an increase in intersubgroup trust and an increase in the team's elaboration of task-relevant information (the affective path hypothesis).

Figure 5.1. *The affective path to performance.*



Note. TM = Team mindfulness; NA = Negative Affect; TRUST = Intersubgroup trust; ETRI = Elaboration of task-relevant information; P = Performance.

5.2.4. The cognitive path

Teams are information-processing units (Schippers, Den Hartog, Koopman, & van Knippenberg, 2008). Therefore, understanding the way they manage information has become a critical topic of research (Hinsz, Tindale, & Vollrath, 1997). Team cognition is one of the team's emergent states linking inputs (i.e. diversity, training, leadership) to valued outputs (DeChurch & Mesmer-Magnus, 2010). Team cognition refers to the way in which information important to team functioning is mentally represented, organized and distributed in the team, allowing members to anticipate or execute actions (Kozlowski & Ilgen, 2006). Team cognition has been consistently associated to several team's motivational and behavioral processes, as well as with higher performance (DeChurch & Mesmer-Magnus, 2010). However, information is not a single-facet phenomenon, but depends on the framework used to interpret it (e.g. frames; Kahneman & Tversky, 1984; schemata, Fiske & Linville, 1980). Within a team, using different frames of reference to understand the same piece of information can provoke misunderstandings (Carlile, 2002, 2004). In the context of faultlines, members identify with their subgroup, develop a particular coding scheme and use it as frame of reference for understanding information (Hornsey & Hogg, 2000; Bechky, 2003). Therefore, a lack of common ground is likely to make members misperceive, misclassify and ill-use information provided by members of the other subgroup (Cronin et al., 2011). Subgrouping has been argued to prevent knowledge exchange (Halevy, 2008) and to perceiving comments as threats instead of as constructive critiques (Lau & Murnighan, 2005). Indeed, empirical evidence has shown that conflict within a group is associated with more biased information use and processing (De Wit et al., 2013), so faultline researchers have been asked to investigate about the specific states associated with knowledge exchange affected by the subgrouping process (Thatcher & Patel, 2012).

Team mindfulness could reduce this negative pattern. Team mindfulness refers to the team's shared perception that the members' interactions are based on awareness and non-judgement. While awareness can enhance the perception of information coming from other members, it does not preclude its misinterpretation. However, the non-judgmental attitude can fulfill this task. Non-judgement is based on the premise that the team is aware of its thoughts and emotions without over-identification nor labeling them as inappropriate (Yu & Zullmer-Bruhn, 2017). This attitude is known as cognitive defusion, and it refers to experiencing psychological phenomena as mere events occurring in the present moment (Bishop et al., 2004). Cognitive defusion allows to see that subjective phenomena need not be accurate nor reliable descriptions of reality (Feldman, Greeson, & Senville, 2010). As a

consequence, their occurrence no longer threats one's identity (Kernis, Paradise, Whitaker, Wheatman, & Goldman, 2000) and consequently does not produce secondary cognitive processes, such as labeling as "good" or "bad" (Bishop et al., 2004). At the individual level, mindfulness has been associated with seeking new perspectives (Ding et al., 2014), less social cognitive biases (Lueke & Gibson, 2015, 2016; Hopthrow et al., 2017) and more perspective taking (Krasner et al., 2009; Birnie, Speca, & Carlson, 2010). Therefore, we expect team mindfulness not only to reduce bias associated with subgrouping, but also to prevent the development of different interpretative schemas within subgroups. We argue this effect comes through awareness and especially non-judgment. By being aware about their different schemas but not acting as if they were truly informative, members can keep in touch with others' perspectives without dismissing them as irrelevant or pointless. This will allow members to better understand others' proposals, information and schemes — regardless their source.

The members' ability to understand, incorporate and anticipate the perspective of other members as their own is known as cognitive integration (Cronin et al., 2011; Todorova & Weingart, 2009). In other words, a team is cognitively integrated when the members have a basic agreement about their different perspectives about the task and the way to accomplish it. For example, a sociologist may be baffled by a clinical psychologist's definition of "psychological problem" (and the other way around). However, sustained interactions will enhance their cognitive integration, so that when the clinical psychologist uses the term, the sociologist understands what the clinician is implying, therefore reducing misunderstanding. At the same time, understanding information does not imply agreeing with it, but simply acknowledging its existence (Cronin et al., 2011). Empirical studies have shown that cognitive integration is associated with less representational gaps in members, more team coordination (Weingart, Todorova, & Cronin, 2008) and, in the faultlines literature, a weaker relation between subgrouping and team effectiveness (Cronin et al., 2011). Therefore, we expect that the kind of attentive and non-judgmental interactions associated with team mindfulness will enhance the members' understanding and acceptance of others' views. Based on this, we propose:

H2a. Team mindfulness will be positively related to the team's cognitive integration during activated faultlines

Awareness of the expertise and abilities of other members is associated with a motivation to learn from and share information with them (DeChurch & Mesmer-Magnus,

2010). In this sense, knowing "who knows what" is a fundamental element of the team's cognitive life. The team's transactive memory system (TMS) is a team-level cognitive state that "consists of members' domains of expertise combined with what members know about member-expertise associations" (Lewis, 2003, p. 589). The development of a team's TMS needs that members learn about others' expertise through communication and/or observation (Huang & Chen, 2017). Then, they have to encode, store and retrieve the information about other members' disclosed area of expertise (Wegner, 1986). Empirical evidence has found that communication (Hollingshead & Brandon, 2003), shared experience (Zheng, 2012) and team familiarity (Akgun et al., 2005) are antecedents of TMS.

Faultlines, on the other hand, have a negative relation with communication (Vora & Markoczy, 2012) and information sharing (Jiang, Jackson, Shaw, & Chung, 2012). Research has found evidence for the negative association between faultlines and TMS. For example, Shen, Gallivan and Tang (2008) showed that a decrease in the coordination factor of TMS ("orchestrated knowledge processing"; Lewis, 2003, p. 589) mediated the negative relation between faultlines and team performance. Rupert et al. (2016) found that the subgroups' perception of dissimilarity moderated the faultline-TMS relation. In other words, when faultline distance was *small*, faultline strength had a *positive* indirect effect on team performance through enhanced TMS and team learning. These results suggest that faultlines affect TMS as long as members perceive themselves as part of a subgroup, limiting their understanding of others' perspectives by a narrower set of interpretative schemas (Hornsey & Hogg, 2000; Bechky, 2003). As a consequence, potential misunderstandings can arise from differences in syntactic (vocabulary), semantic (interpretation) and pragmatic (key assumptions) knowledge between the members (Carlile, 2002, 2004). Specifically, Kotlarsky, van den Hooff, and Houtman (2015) found that when syntactic and pragmatic knowledge differences occurred, TMS development was impaired. Therefore, the understanding of other members' frames and knowledge that characterize cognitive integration should facilitate having both a pool of knowledge about the members' expertise and a shared frame and language to use it. Therefore, we propose:

> *H2b. Cognitive integration will be positively related to the team's transactive memory system during activated faultlines*

A well-developed TMS has been linked to improved team outcomes, such as innovation (Peltokorpi & Hasu, 2016), creativity (Cao & Ali, 2018) and performance (DeChurch & Mesmer-Magnus, 2010; Peltokorpi, 2008). Having a shared knowledge about the members' expertise provides the team with a quick and effective way to access a great amount of task-relevant knowledge, allowing members to coordinate and perform better (Lewis, Lange, & Gillis, 2005). However, Engelmann and Hesse (2011) have argued that merely knowing the distribution of expertise within a team does not guarantee efficacy. While the team's TMS provides a larger number of information to address the task (Mell, van Knippenberg, & van Ginkel, 2014), members still need to work on how to use and integrate such information (Okhuysen & Eisenhardt, 2002). Otherwise, teams may not select and use the necessary task-relevant knowledge and perform worse (Huang & Chen, 2017). Therefore, teams need to act for TMS to be effective.

Several mechanisms have linked TMS use and performance. For example, while higher task complexity increased the use of TMS (Akgun, Byrne, Keskin, & Lynn, 2006; Akgun, Byrne, Keskin, Lynn, & Imamoglu, 2005), later knowledge integration mediated its association with performance (Huang & Chen, 2017). Both mechanisms are closely related to ETRI, for task complexity promotes the team's sharing and discussing of the necessary information, and knowledge integration is an inherent part of ETRI (van Knippenberg et al., 2004).

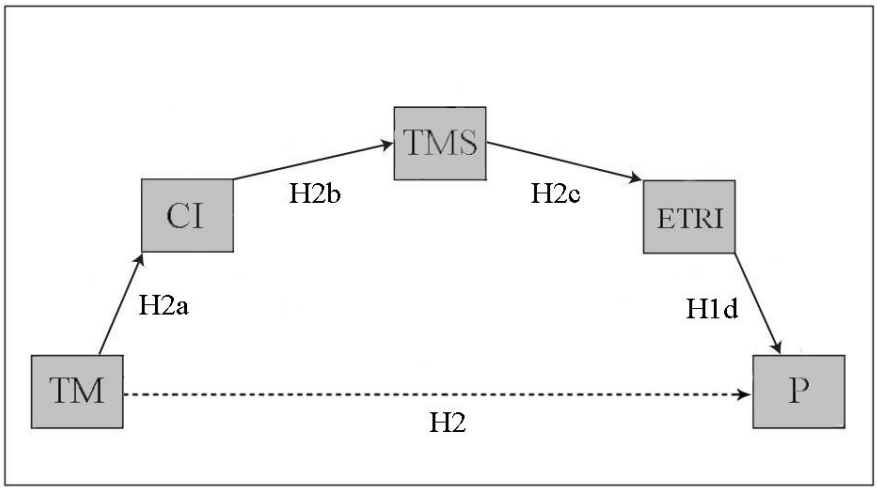
Therefore, we expect TMS and ETRI to be related. Mell et al. (2014) have provided initial evidence for this link. In their experimental study, they found that transactive retrieval -communication aimed at obtaining specific task-relevant information from other team members- mediated the relation between TMS and ETRI (Mell et al., 2014). Consequently, we propose that:

H2c. The team's transactive memory system will be positively related to the elaboration of task-relevant information during activated faultlines

Based on these reasonings and empirical evidence, we advance that the effect of team mindfulness with team performance will be mediated by a triple mediation based on the team's cognitions. Thus, we propose the cognitive path:

H2: Team mindfulness exerts its positive impact on team performance during activated faultlines through a triple mediation: improved cognitive integration, transactive memory system and elaboration of task-relevant information (the cognitive path Hypothesis).

Figure 5.2. *The cognitive path to performance.*



Note. TM = Team mindfulness; CI = Cognitive integration; TMS = Transactive memory system; ETRI = Elaboration of task-relevant information; P = Performance.

We conducted a laboratory-based experimental study to test these hypotheses. We arranged student teams with a strong activated demographic faultline to undergo a mindfulness (vs. control) induction and then perform a decision-making task. We adopted an experimental design in order to test the causal effect of the induction on the study variables, as well as to observe the temporal dynamics of this process.

5.3. Method

5.3.1. Participants

In this experiment, 248 undergraduate students were recruited and organized into 62 four-person teams. All participants studied in the same University. The degrees they were pursuing were Psychology (42.7%), Sociology (26.6%), Social Work (13.7%), Anthropology (7.3%), Economics (5.6%), Public Administration and Management (2.4%), IT engineering (.8%) and Audiovisual Communication (.8%). When informing about the experiment to the potential participants, we framed it as a research about team decision-making in extreme situations. Voluntary participation was rewarded with course credit (as previously agreed upon with the professors) and by an invitation to attend a seminar on mindfulness-based stress reduction and team-management strategies. 94.8% of participants indicated having a Spanish nationality, the average age was 20 years (*SD* = 2.49) and 50% were women.

We controlled for prior acquaintance between the members by asking them to rate their familiarity with other members using Gruenfeld, Mannix, Williams, and Neale's (1996) familiarity scale. Teams were only eligible if the two subgroups did not know each other, so four teams were excluded. The final sample consisted of 58 four-person teams (N = 232).

5.3.2. Experimental design

We created four-person teams with a strong demographic faultline based on gender (two men, two women) and educational major (two students from a degree, two from another). Each team was randomly assigned to one of the two conditions (team mindfulness induction or mind wandering induction). Ethical approval for the study was granted by the authors' Faculty ethics committee.

5.3.3. Decision task

Teams worked on the winter survival task (for details, see Johnson & Johnson, 2003). Participants were asked to imagine they had just survived an airplane crash and had landed in a deserted, snow-covered area. They had to rate a 12-item list of items they had rescued from the debris. The ranks should be given according to their importance for survival.

5.3.4. Procedure

Participants entered a laboratory room, where they were asked to take a seat around a table based on their educational major. This information was explicitly mentioned by the experimenter in order to make the faultline salient from the beginning. Participants were seated in opposite sides of the table on same-color chairs, had same-color pens and their spot was marked with same-color, different-symbol labels (red A and B, green 1 and 2). Therefore, both sitting and equipment were aligned with the demographic faultline (i.e., red implements for one subgroup, green for the other). In this way, we fostered subgroup categorization, for the alignment of diversity dimensions produces higher levels of between-subgroups differentiation and within-subgroup similarity (Gaertner et al., 1999).

Once seated, the experimenter briefly explained the overall procedure of the experimental session and informed them that the sessions would be videotaped for later analysis. After reading the background information and contact data, all participants signed the informed consent. They were then asked to fill an initial set of sociodemographic questions, trait scales and current affective state on the experimental booklet. When they finished, the faultline was activated by performing a short warm-up exercise. The

experimenter asked the team members to imagine they were representatives of their educational major before a principalship commission. Due to the economic crisis, the commission had been forced to withdraw funding for research to one of the areas participants belonged to. No equal distribution of the funds was possible. Participants were asked to provide their best arguments to persuade the commission to give the funds to their area of knowledge. The instructions were explicit about the competitive nature of the task, so collaboration between subgroups was not allowed. Participants were then given 8 minutes to discuss. This method has proved to be useful in activating demographic faultlines in student teams (Rico et al., 2012). Afterwards, the experimenter entered back into the room and asked participants to fill a short questionnaire about their current affective state and the extent to which the faultline had been activated.[2]

Upon completion, participants were asked to open an envelope placed besides the booklets, which contained a sleep mask. The experimenter explained that they were to cover their eyes with it, sit comfortably and listen to an 8-minute audio recording. Their only task was to mentally follow the instructions as best as they could while being still and silent. We included the sleep mask in order to prevent the subjects from opening their eyes and interacting with each other. Then, the experimenter reproduced either (1) the mindfulness induction or (2) the mind wandering instruction and left the room. When the recording was over, the experimenter briefly re-entered and asked participants to fill two short scales assessing the effectiveness of the induction and their current affective state. Additionally, they were to read the following two pages (containing the experimental task) and start discussing its content when all the members were ready.

The task information consisted of two pages that contained (a) a story about the airplane accident, their location and the list with the 12 items; (b) instructions suggesting the criterion to follow when ranking the items and (c) specific information regarding 6 of the 12 items. An example of the latter is "A sectional air map made of plastic is dangerous because it will encourage individuals to attempt to walk to the nearest town - condemning them to almost certain death" (Johnson & Johnson, 2003, p. 315). While the cover story, the list of the 12 items and the criterion instructions were shared by all members, some information about the items was distributed. Each participant had information about four items (common to all members), while each one held information about two items that nobody else in the

[2] The activation questionnaire consisted of three items adapted from Rico et al. (2012): "My team (4 people) has been split into (2 people) subgroups", "Our team got divided into two subgroups" and "Internally, my subteam (two people) had the feeling of being "them" versus "us". Response format was a Likert-type scale ranging from 1 (*at all*) to 5 (*a lot*) (α = .59, M = 3.89, SD = .89)

group did. Consequently, the team as a whole had all the necessary information for optimally performing the task, while individual members did not. Neither the experimenter nor the instructions mentioned this covert distribution of information, and the two pages containing this information had been crafted to look identical. Therefore, team members were unaware of the distribution of information, a common method used in decision-making tasks (for more details on hidden-profile paradigms, see Sohrab, Waller, & Kaplan, 2015).

Once all the members had read the instructions, the team discussed for 10 minutes. Then, the experimenter entered and handled them a sheet of paper to write down the list with the ranked objects during the last 5 minutes. When the time was up, the experimenter entered the room and asked them to fill the remaining pages of the booklet, which contained scales about the team's states and process during the task. When all the members had finished, the experimenter thanked them for their participation, asked them not to share the content of the experiment with their classmates and informed them that they would receive the overall results and date for the seminar during the next weeks.

5.3.5. Manipulation

Participants were randomly assigned to one of two 8-minute audio recordings described in Table 5.5. and adapted from Long and Christian (2015). The mindfulness induction asked participants to listen carefully to the instructions, which would help them to remain focused in the present moment and to be aware of whatever was happening at every moment. They were then instructed to take their attention to the sensations associated with the breath in their bodies, and to calmly return to these sensations whenever they realized their minds had wandered off. These initial instructions lasted for 2 minutes and 20 seconds. The main part of the recording consisted of 10-seconds reminders (separated between by 30 to 45 seconds intervals of silence) to pay attention to the breath and let go of any distractions. In the last 15 seconds, they were asked to take several deep breaths and slowly open their eyes. This kind of induction has been shown to effectively elicit mindfulness states in novices (e.g., Hafenbrack, Kinias, & Barsade, 2014; Kiken & Shook, 2011). Teams in the control condition received an 8-minute mind-wandering induction, which elicits baseline wakeful states (Hafenbrack et al., 2014; Long & Christian, 2015). The structure paralleled the mindfulness recording. However, participants were informed at the beginning that the induction's objective was to allow their minds to function automatically and to wander freely. Then they were asked to allow any thought or image to appear in their minds and,

after a pause, to let any associations to occur without interfering. The 10-second reminders asked them to think about the tasks they had to do in the future or events from the past.

Trying to mimic a standard mind wandering, we were careful not to give any instructions that would lead them to think about especially emotional events. For a detailed description of the inductions, see the Appendix section.

5.3.6. Pilot studies

We conducted six experimental sessions (three experimental conditions and three controls) to test the effectiveness of the manipulations, the design and the scales. The feedback from the participants and the dynamics we observed encouraged us to insert the following modifications in the final version of the experiment.

Faultline activation. Originally, the warm-up exercise asked participants to first debate the reasons for a hypothetical unequal distribution of funds between the faculties they belonged to. Then, they were asked to distribute themselves the funds for the current year in an unequal way, so that one of the faculties received at least 60% of the funds. Contrary to our expectations, the first two pilot studies showed that participants chose not to follow the instructions, and either refused to argue with the other subgroup, or agreed to give most of the money to one faculty and give it to the other on the next year. Therefore, the faultline was not activated. To remedy this, we simplified the task and made the instructions clearer: the task consisted of defending the right of each party's faculty to the funds before a hypothetical decision-taking committee. They were to support the interest of their faculty by providing the best, most creative and persuasive arguments they could come up with in order to convince the committee to invest in their area of research (regardless their personal opinion about the matter). After this inclusion, participants reported that they had perceived a split in the team.

Length of the recorded induction. The first recordings we used for the inductions followed Long and Christian (2015) both in content and length. However, the subjects of our study repeatedly reported that they felt them to be too long, which made them feel anxious and distressed, especially in the final minutes. Therefore, we reduced the length from 12 to 8 minutes.

5.3.7. Measures

5.3.7.1. Mediators

We assessed the team's mediators using the individuals' reports, but because they interacted and worked together, their answers were probably not independent. Therefore, we aggregated their individual scores at the team level. To check whether teams could be differentiated based on these scores, we calculated the ICC(1) and ICC(2) indexes (Bliese, 2000). Criteria for establishing what constitutes a good ICC(1) (and therefore the associated ICC(2)) depends on the content of the scale. In the case of psychological states (such as the ones we measured), ICC(1) values are often less than .05 and consequently, ICC(2) are not higher than .17 (Bliese, 2000; Bliese, Maltarich, & Hendricks, 2018).

Negative team affect. We asked team members to rate their individual experience of affect during a particular period of time (after completing the initial set of scales, after the warmup exercise, after the induction). Participants had to rate items describing both activated ("Annoyed", "Nervous", "Distressed") and deactivated ("Drowsy", "Bored", "Tired") negative affect (Bartel & Saavedra, 2000). Responses were given on a Likert scale ranging from 1 ("Barely") to 5 ("A lot"). The latest meta-analysis (Knight & Eisenkraft, 2015) has shown that a referent-shift approach to team negative affect yields more negative relations to social integration variables. Therefore, we choose the more conservative approach of direct consensus and averaged the individual members' affective score into a single team score (Parkinson, Fischer, & Manstead, 2005). The aggregation was supported by the intraclass correlation indexes, for ICC(2) = .39 and ICC(1) = .14.

Intersubgroup trust. We developed a single-item measure of trust. Single-item scales assessing have been recommended for use in organizational research, especially when aiming to reduce respondents' burden (e.g. McAllister, 1995; Johnson, Cullen, Sakano, & Takenouchi, 1996) and to focus on content validity (Fisher, Matthews, & Gibbons, 2015). The item was "Please rate individually how much you trust each of the members of your team" and was followed by a Likert-type response scale ranging from 1 ("Little") to 5 ("A lot"). Participants had to answer this question for each of the other three members of the team. We averaged scores from the members of both subgroups towards the other subgroup. Then, we calculated a single score for all four members, which we aggregated at the team level. The intraclass correlation indexes were above average and supported the aggregation, for ICC(2) = .25 and ICC(1) = .08.

Cognitive integration. Cronin et al.'s (2011) four-item scale was used. It measures cognitive integration as a single-factor with a Likert-type response format ranging from 1

("strongly disagree") to 5 ("strongly agree"). Sample items are "We tend to think the same way on this team" and "Sometimes it is like my team shares a brain" (α = .769). The aggregation indexes supported the aggregation, for ICC(2) = .46, ICC(1) = .18

Transactive memory system. We assessed the team's TMS by adapting Gockel and Brauner's (2013) objective measure. After completing the experimental task, participants had to answer a set of 12 multiple-choice questions. Each item referred to one of the objects comprising the list. The three available responses described different uses of the item, but only one of them was correct (according to the expert's criterion). Participants were asked mark the one they believed to be true based on the information they had read and the information other members had shared during the discussion. Right besides every item was a table in which participants had to mark their perception about the other members' accuracy in answering to each item. Participants had to indicate this for each member separately. For each item, they had to mark whether they believed the other members (a) knew the correct answer, (b) did not know the right answer or (c) they themselves did not know whether another member knew the correct answer. Based on these answers, we computed two indices of TMS. *TMS accuracy* refers to the accuracy of one's metaknowledge (knowledge about knowledge), while *TMS agreement* reflected the team's agreement about metaknowledge.

TMS accuracy was computed by comparing the responses of each member to the answers of the other members. For example, if Member 1's answer was correct and Member 2 indicated that 1 knew the correct answer, the team obtained 1 point for accuracy. If 1's answer was incorrect or had not marked any option and 2 also said that 1 did not know the answer, the team obtained again 1 point. We gave no points in all other cases. Then, we summed up all points for all questions and members. Therefore, with 12 questions and 12 judgements per question, a team could achieve a maximum of 144 points for TMS accuracy. The team's TMS accuracy was computed from individuals' responses, so every member received the same score and was then aggregated at the team level. Therefore, ICC(2) = 1 and ICC(1) = 1, indicating that 100% of the variance for this variable was explained by group membership.

TMS agreement was computed by comparing the responses of three team members to the answer of the fourth member. We gave 1 point if all three members correctly agreed on their knowledge about the third member's option (both if was correct or incorrect). We summed all points across items and subjects, and so with 12 items and 4 judgements per question, the maximum score obtainable for TMS agreement was 48 points. Because TMS agreement scores were based on TMS accuracy scores, both had a significant positive

correlation (r = .778, p < .01). As in TMS accuracy, ICC(2) = 1 and ICC(1) = 1, indicating that 100% of the variance for this variable was explained by group membership.

Elaboration of task-relevant information. We used Kearney & Gebert's (2009) four-item scale. Responses were given in a Likert-type response format ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Examples of items are: "The members of this team complement each other by openly sharing their knowledge" and "The members of this team carefully consider all perspectives in an effort to generate optimal solutions" (α = .752). The aggregation indexes supported the aggregation, for ICC(2)=.31 and ICC(1) = .10.

5.3.7.2. Dependent variables

Performance was evaluated comparing the ranked list of objects produced by the team with that of a survival expert (Johnson & Johnson, 2003). We first computed the absolute difference between the team's score for each item and the expert's, and then added them to obtain a total difference score. Finally, we reversed this score so that a high score would actually reflect a high performance. Thus, the maximum score to be attained was 132, while the lowest was 0.

5.4. Results

5.4.1. Manipulation check

We assessed the effectiveness of the inductions by developing three items: "Did your mind wander about future plans and projects?", "Was your mind focused in the present on a single object of attention?*"* and "Did you remain in the "here" and "now"*"*? (α = .708). The response scale ranged from 0 ("Not at all") to 6 ("A lot").

Although the induction and the manipulation check measurement were at the individual level, their answers were probably interdependent (Bliese, 2000), so we aggregated their scores at the team level. We checked whether the teams could be differentiated on their scores on the manipulation by calculating the ICC(2) and ICC(1) indexes. The value of both ICC(2) (.53) and ICC(1) (.22) were above average, justifying aggregation for the manipulation (Bliese, 2000)

An independent samples t-test was conducted to compare present-moment awareness in mindfulness and mind wandering inductions. There was a significant difference in the scores for the mindfulness (M = 3.40, SD = .73) and the mind wandering (M = 2.24, SD = .59) inductions; $t(60)$ = 6.93 (p < .05). These results support that the inductions were effective in inducing a state of mindfulness in participants.

Table 5.1. *Means, standard deviations, and correlations*

Variable	*M (SD)*	1	2	3	4	5	6	7	8
1. TM	-	-							
2. NA	1.95 (.34)	-.27*	-						
3. Trust	3.58 (.42)	.07	-.37**	-					
4. CI	3.06 (.43)	.21	-.34**	.26	-				
5. TMS (1)	75.24 (18.31)	.20	-.04	-.15	.35**	-			
6. TMS (2)	15.66 (7.33)	-.03	-.15	-.12	.42**	.78**	-		
7. ETRI	4.06 (.34)	.06	-.24	.29*	.37**	.10	.09	-	
8. Performance	42.48 (9.35)	.16	-.26	-.02	.10	.18	.13	.39**	-

Note. TM = Team mindfulness; NA = Negative Affect after Induction; CI = Cognitive integration; TMS (1) = Transactive memory system - Accuracy; TMS (2) = Transactive memory system - Agreement ETRI = elaboration of task-relevant information; * $p < .05$. ** $p < .01$

5.4.2. Test of hypotheses

Table 5.1. shows means, standard deviations and correlations among the study's variables. The experimental condition was coded as a dummy variable.

A Pearson product-moment correlation coefficient was computed to test hypotheses 1a to 2c. A significant negative correlation was found between team mindfulness and team negative affect (r = -.27, p < .05). Therefore, Hypothesis 1a was supported. Team negative affect and intersubgroup trust had a significant negative correlation (r = -.37, p < .01). These results support Hypothesis 1b. A significant positive association was found between intersubgroup trust and ETRI (r = .29, p < .05) supporting Hypothesis 1c.

On the cognitive path, we found that team mindfulness was not associated with cognitive integration (r = .21, p > .05). Hypothesis 2a was not supported. A significant positive correlation was found between cognitive integration and both components of TMS (TMS accuracy, r = .35, p < .01; TMS agreement, r = .42, p < .01). This supports Hypothesis 2b. The relation between both types of TMS and ETRI was not significant (TMS accuracy, r = .10, p > .05; TMS agreement, r = .09, p > .05), so Hypothesis 2c received no support.

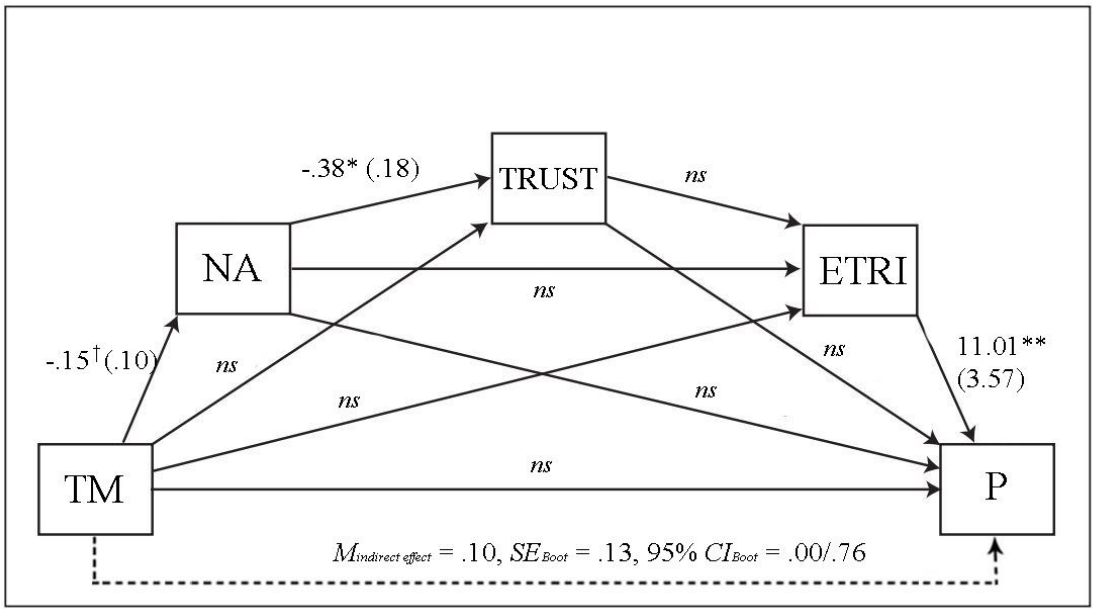
Finally, we found ETRI and team performance had a significant positive correlation (r = .39, p < .01), thus confirming Hypothesis 3.

A triple mediation analysis was used to test the indirect effect of team mindfulness on team performance through the affective and cognitive paths. We implemented Hayes' (2012) Process macro and generated a bootstrap-based bias corrected and accelerated confidence interval (95%) for the indirect effect by taking 5,000 samples from the original data set. These samples were used to calculate estimates of the conditional indirect effect of the experimental manipulation on performance through the affective (negative affect, intersubgroup trust and ETRI) and cognitive (cognitive integration, TMS accuracy/TMS agreement and ETRI) paths to performance. We tested each step of the mediation analysis.

For the affective path, we first predicted post-induction negative affect on team mindfulness while controlling for pre-induction negative affect. We found a tendency to significance for this relation (B = -.15, SE = .10 t = -1.82, p < .10). Second, we tested the relation between negative affect and intersubgroup trust, and found it significant (B = -.38, SE = .18, t = -2.13, p < .05). Third, we predicted ETRI on the basis of intersubgroup trust, and found a positive but not significant association (B = .17, SE = .11, t = 1.50, p > .05). Finally, ETRI was a significant predictor of team performance (B = 11.01, SE = 3.57, t = 3.08, p < .01). The direct effect of team mindfulness on team performance was not significant (B = 1.68. SE = 2.35, t = .72, p > .05). On the other hand, the indirect effect was significant

($M_{indirect\ effect}$ = .10, SE_{Boot} = .13, 95% *CI* = .00/.76), for the cutoff value in the lower-tail of the bootstrap distribution of conditional indirect effects was marginally above zero (.001/.757), indicating significance. This suggests that the team mindfulness-team performance relationship is fully mediated by negative affect, intersubgroup trust and ETRI. Thus, Hypothesis 1 was supported.

Figure 5.3. *Statistical model for the results of the triple mediation of the affective path.*



Note. TM = Team mindfulness; NA = Negative affect after induction; ETRI = elaboration of task-relevant information; P = Performance; † < .10, * *p* < .05. ** p < .01, ns = not significant; *B (SE).*

For the cognitive path, we first predicted cognitive integration on team mindfulness and did not find a significant association (*B* = .18, *SE* = .11, *t* = 1.63, *p* > .05). For TMS, we tested two alternative paths, each one including one of the components of TMS (accuracy or agreement). Cognitive integration significantly predicted TMS accuracy (*B* = 13.72, *SE* = 5.47, *t* = 2.51, *p* < .05) and TMS agreement (*B* = 7.66, *SE* = 2.12, *t* = 3.61; *p* < .01). However, neither TMS accuracy (*B* = -.00, SE .00, *t* = -.17, *p* > .05) nor TMS agreement (*B* = -.00, *SE* = .01, *t* = -.57, *p* > .05) predicted ETRI. Finally, ETRI significantly predicted performance scores under both types of TMS (*B* = 11.31/11.55, *SE* = 3.52/3.62, *t* = 3.13/3.19, *p* < .01). Regardless TMS, Team mindfulness had no significant direct effect on team performance (*B* = 2.42/3.17, *SE* = 2.36/2.35, *t* = 1.021.34, *p* > .05). Moreover, team mindfulness did not have an indirect effect ($M_{indirect\ effect}$ = -.01/-.03, SE_{Boot} = .10/.21, 95% *CI* = -.23/.16 and -.47/.38) on performance under both TMS components. The interval of the bootstrap distribution of conditional indirect effects for the cognitive path included zero when TMS was measured as

accuracy (-.227/.161) and agreement (-.479/.384), indicating no relation. Thus, Hypothesis 2 was not supported.

In sum, team mindfulness was related to performance by lower team negative affect, higher intersubgroup trust and enhanced elaboration of task-relevant information.

Figure 5.4. *Statistical model for the results of the triple mediation of the cognitive path (1).*

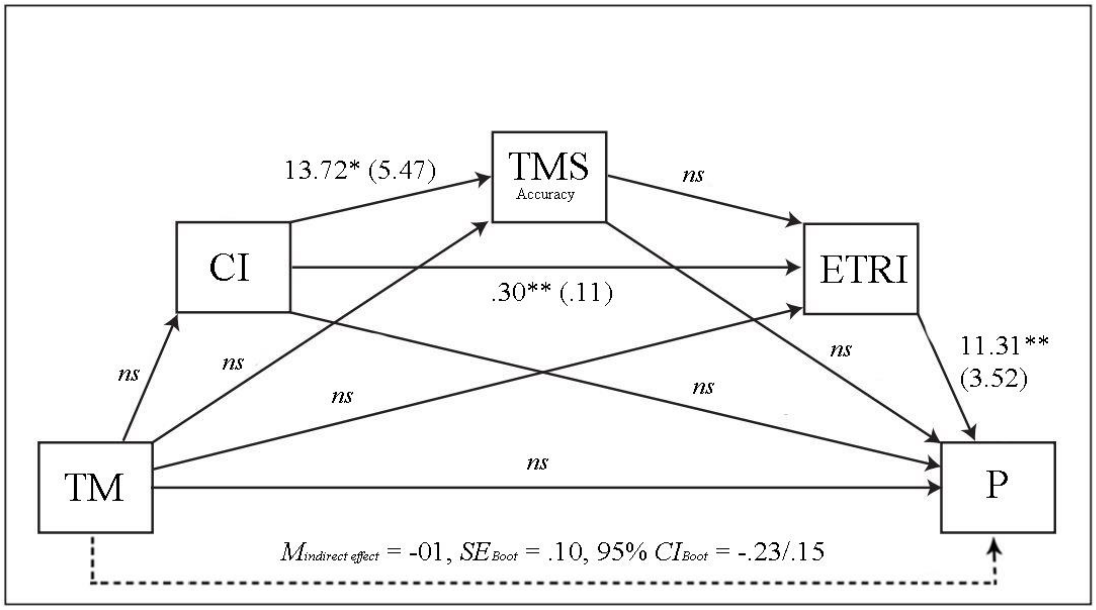
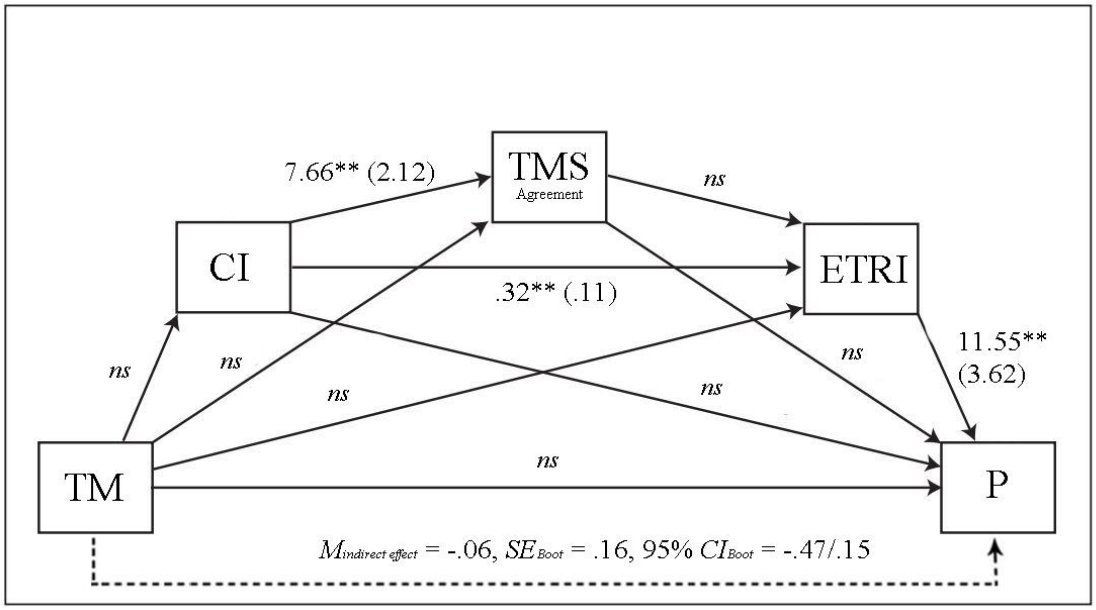


Figure 5.5. *Statistical model for the results of the triple mediation of the cognitive path (2).*



Note. TM = Team mindfulness; CI = Cognitive integration; TMS agreement / accuracy = Transactive memory system – accuracy/ agreement; ETRI = Elaboration of task-relevant information; * $p < .05$. ** $p < .01$, *ns* = not significant; *B* (*SE*).

Table 5.2. *Hypothesis 1: Team mindfulness, the affective path and team performance*

Paths and Variables	*B*	*SE*	*t*	*p*	$R^2_{adjusted}$
Model on negative affect					.24**
Team mindfulness	-.15	.10	-1.82	.07	
Negative affect (control)	.60	.17	3.49	.00	
Model on intersubgroup trust					.15*
Team mindfulness	-.03	.11	-.25	.80	
Negative affect	-.38	.18	-2.13	.04	
Negative affect (control)	-.25	.25	-1.02	.31	
Model on ETRI					.13
Team mindfulness	-.00	.15	-.99	.63	
Negative affect	-.08	.15	-.49	.63	
Intersubgroup trust	.17	.11	1.50	.14	
Negative affect (control)	-.28	.21	-1.34	.19	
Model on performance					.23*
Team mindfulness	1.68	2.35	.72	.48	
Negative affect	-6.46	4.01	-1.61	.12	
Intersubgroup trust	-4.67	3.01	-1.55	.13	
ETRI	11.01	3.57	3.08	.00	
Negative affect (control)	-.28	.21	-1.34	.19	
Direct effect on performance					
Team mindfulness	1.68	2.35	.72	.48	
Indirect effect on performance	*Effect*	*Boot SE*	*Boot LLCI*	*Boot ULCI*	
Team mindfulness – Negative affect (control) – Negative affect – Intersubgroup trust – ETRI – Performance	.10	.13	.00	.76	

Note. ETRI = Elaboration of task-relevant information; N = 58; * = $p < .05$; ** = $p < .01$

Table 5.3. *Hypothesis 2: Team mindfulness, the cognitive path (1) and team performance.*

Paths and Variables	*B*	*SE*	*t*	*p*	$R^2_{adjusted}$
Model on cognitive integration					.05
Team mindfulness	.18	.11	1.63	.11	
Model on TMS accuracy					.14*
Team mindfulness	4.76	4.66	1.02	.31	
Cognitive integration	13.72	5.47	2.51	.02	
Model on ETRI					.13†
Team mindfulness	-.01	.09	-.14	.89	
Cognitive integration	.30	.11	2.74	.01	
TMS accuracy	-.00	.00	-.17	.87	
Model on performance					.20*
Team mindfulness	2.42	2.36	-.02	.31	
Cognitive integration	-2.90	3.10	-.94	.35	
TMS accuracy	.08	.07	1.16	.25	
ETRI	11.31	3.52	3.13	.01	
Direct effect on performance					
Team mindfulness	2.42	2.36	1.02	.31	
Indirect effect on performance	*Effect*	*Boot SE*	*Boot LLCI*	*Boot ULCI*	
Team mindfulness – Cognitive integration – TMS accuracy – ETRI - Performance	-.01	.10	-.23	.15	

Note. ETRI = Elaboration of task-relevant information; N = 58; † $p < .10$; * = $p < .05$; ** = $p < .01$

Table 5.4. *Hypothesis 2: Team mindfulness, the cognitive path (2) and team performance.*

Paths and Variables	*B*	*SE*	*t*	*p*	$R^2_{adjusted}$
Model on cognitive integration					.05
Team mindfulness	.18	.11	1.63	.11	
Model on TMS agreement					.19**
Team mindfulness	-1.80	1.80	-1.00	.32	
Cognitive integration	7.66	2.12	3.61	.00	
Model on ETRI					.14*
Team mindfulness	-.02	.09	-.24	.81	
Cognitive integration	.32	.11	2.81	.01	
TMS agreement	-.00	.01	-.57	.57	
Model on performance					.20*
Team mindfulness	3.17	2.36	1.34	.18	
Cognitive integration	-3.50	3.27	-1.07	.29	
TMS agreement	.21	.18	1.19	.24	
ETRI	11.55	3.62	3.19	.00	
Direct effect on performance					
Team mindfulness	3.17	2.35	1.34	.18	
Indirect effect on performance	Effect	Boot SE	Boot LLCI	Boot ULCI	
Team mindfulness – Cognitive integration – TMS agreement – ETRI - Performance	-.06	.16	-.47	.15	

Note. ETRI = Elaboration of task-relevant information; N = 58; † $p < .10$; * = $p < .05$; ** = $p < .01$

5.5. Discussion

Strong activated faultlines have been consistently associated with worse team processes, states, and outcomes (Meyer, 2017; Thatcher & Patel, 2012). However, several strategies have been developed to deal with them (Homan et al., 2007; Rico et al., 2012). However, no research has examined the impact of team mindfulness in attenuating faultlines. Moreover, almost no attention has been paid to the affective consequences of faultlines on the team, nor their impact on key cognitive states. The aim of this study was to shed light on the role of team mindfulness in helping faultline-based teams to perform better. We examined the impact of a team mindfulness induction on the affective and cognitive states of the team, as well as in its elaboration of task-relevant information. These issues by inducing team mindfulness to counteract the impact of a strong activated faultline on the team's elaboration of information and performance, as well as on the affective and cognitive mechanisms accounting for its resultant beneficial effect.

We found that team mindfulness was associated with improved team affective states that led to better performance. Specifically, our results showed that team mindfulness was associated with lower negative affect, which in turn was related with higher intersubgroup trust. As a consequence, the elaboration of information was higher, resulting in higher performance. We found no indirect effect of team mindfulness on performance through the cognitive path (cognitive integration and TMS) preceding ETRI. However, we did find that cognitive integration was significantly associated to TMS. Faultlines were treated as a constant variable in the experiment (all teams had strong activated faultlines), so these findings can be attributed to the differential effects of the mindfulness (vs. distraction) inductions, rather than to faultlines.

5.5.1. Theoretical Implications

Our study makes several theoretical contributions to the faultlines literature. First, we found that team mindfulness helped teams to improve their affective states. Specifically, we found that negative affect was significantly lower for groups in the team mindfulness condition than for groups in the control condition. This provides evidence for theory about how group negative affect emphasizes group boundaries and makes outgroup threats more conspicuous (Fischer & Manstead, 2008; Kelly et al., 2014). Such mechanism is rooted in social categorization, which labels similar ones as ingroups and dissimilar ones as outgroups (Hornsey & Hogg, 2000). Our results confirm Knight and Eisenkraft's (2015) finding: negative affect is not detrimental to performance if it is perceived as caused by an exogenous

factor. For example, van Knippenberg et al. (2010) found that members' trait negative affect moderated the detrimental effects of an induced happy mood on ETRI and decision making, such that teams with lower negative affect in the sad or neutral inductions (the exogenous factor) *outperformed* those in the positive one. On the other hand, faultlines are based in the team's structure (Lau & Murnighan, 2005), making them an endogenous factor. As a consequence, intergroup bias processes occurred and their negative impact on performance.

Second, we connect team mindfulness with faultlines literature and intergroup bias reduction research. Team mindfulness has been shown to be an effective emergent state in attenuating team conflict and harmful individual behaviors (Yu & Zellmer-Bruhn, 2017). The faultlines literature, on the other hand, has employed a number of strategies for reducing intersubgroup bias, such as fostering prodiversity beliefs and creating a superordinate identity (Homan et al., 2007; Rico et al., 2012). Our findings suggest that faultlines can also be intervened by targeting members' interactions, promoting that they are based on awareness and non-judgement. Under such mindful interactions, task goals are more easily kept in mind while off-task distractions (such as the activated faultline) are lowered (Yu & Zellmer-Bruhn, 2017). As a consequence, this may reduce the likelihood of misinterpretations and attribution errors that lead to an increase in conflict (Hopthrow et al., 2017) and a deterioration of inter-subgroup relations. Remarkably, we achieved this effect by inducing team mindfulness with a short mindfulness meditation. Brief mindfulness exercises have been shown to be effective in eliciting this state in individual employees (Hafenbrack, 2017). Our study supports the notion that team mindfulness not only develops with time and sustained member interactions, but also through a brief induction. In this line, we answer Hülsheger's (2015) call for more studies linking organizational variables with team mindfulness. Additionally, the team mindfulness induction proved effective in attenuating this negative affective state. This finding is coherent with findings about the role of mindfulness for emotion regulation (Good et al., 2016) and is association to lower negative affect, both at the individual (Mesmer-Magnus et al., 2017) and the team level.

Third, we found that team negative affect was related to lower intersubgroup trust. This is logical, for group negative affect has been related to stressors (Ng & Sorensen, 2009). In the case of faultlines, the other subgroup is the cause of unrest, a factor associated with poor social relations within the group (Knight & Eisenkraft, 2015). Therefore, beliefs about the benevolence of others are impaired, resulting in lower trust. This finding complements existing field research about the role of trust in faultlines (e.g. Cronin et al., 2011; Mach & Baruch, 2015; Polzer et al., 2006) by providing experimental evidence about its emergence

in teams. The findings on the association between trust and ETRI also provide evidence about trust supportive role in other team processes (Hwang & Burgers, 1997). Previous research has found that trust was associated with higher cooperation (Mach & Baruch, 2015) and that its beneficial effect on performance was related with higher task interdependence (de Jong et al., 2016). By linking trust to ETRI, we provide evidence about how reducing the uncertainty of human interactions is associated with a higher investment of the team's resources in elaborating on the important information (Dirks & Ferrin, 2001). Additionally, we answer to Sohrab et al.'s (2015) call for more research about how trust is associated to information sharing.

Contrary to our expectation, the cognitive path to performance was not supported. Specifically, we did not find evidence for the association between team mindfulness and cognitive integration. This is surprising, for the definition of both concepts includes elements of (1) awareness, (2) non-judgment, (3) interaction with other members and (4) different cognitions and perspectives. Provided that team mindfulness was effective in reducing the team's negative affect, we suggest that the differential effect on cognitive integration may be due to a lack of intentionality. Individual mindfulness has been associated with paying attention *intentionally* (Bishop et al., 2004; Shapiro, Carlson, Astin, & Freedman, 2006). The definition and item formulation of team mindfulness implies such intentional awareness (Yu & Zellmer-Bruhn, 2017), but team members experiencing an activated faultline may not be willing to intentionally take such a demanding step and understand others' frames of reference (Bechky, 2003). Therefore, awareness of within-team experiences may not necessarily include awareness of others' perspectives, especially under activated faultlines. On the other hand, we did found that cognitive integration and TMS were significantly associated. Both emergent states refer to meta-knowledge, whether about general perspectives (cognitive integration) or distribution of specialized information (TMS). Consequently, knowing the general perspective of other members was associated with a more precise knowledge about the distribution of task-related knowledge, skills and distribution. This is in line with Ren and Argote's (2011) proposal that the kind of improved interactions supporting cognitive integration are important for developing a TMS. In this sense, we extend the TMS literature by providing an antecedent that may foster it, just like communication (Kanawattanachai & Yoo, 2007), shared experience (Zheng, 2012) and group training (Liang, Moreland, & Argote,1995).

Finally, our findings also extend knowledge about ETRI. Van Knippenberg et al. (2004) proposed that ETRI is a key element for diverse teams to take advantage of their differences in knowledge and skills and so foster performance. Several cognitive factors have been associated with ETRI, such as openness to experience and need for cognition (Homan et al., 2008; Kearney et al., 2009). We expected that TMS would also be related to it, because a team aware of the distribution of information should engage in more information elaboration (Mell et al., 2014). Our results did not support this prediction. We believe another mediating variable must be accounting for this relation, for TMS by itself does not guarantee performance (Engelmann & Hesse, 2011). However, we did found that intersubgroup trust was an antecedent of ETRI. This supports that trust allows the investment of the team's resources in the task in a way that, under suspicion and uncertainty, would not be possible (Dirks & Ferrin, 2001). Finally, we replicated previous findings about the importance of ETRI for performance in diverse teams (e.g., Homan et al., 2008; Rico et al., 2012; van Knippenberg et al., 2010), supporting the view that it is a key element for the good performance of diverse teams (van Knippenberg et al., 2004).

5.5.2. Practical implications

Our study offers remarkable implications for practitioners. Team faultlines can be detrimental to the team, but their skillful management can turn them from a troublesome issue into a game-changing opportunity. In this sense, our findings follow the line of studies providing tools for dealing with faultlines (e.g., Rico et al., 2012). Team mindfulness was an effective buffer between activated faultlines and the team's affective states. The literature about individual mindfulness at work has found that mindfulness can be developed, either with short inductions (Hafenbrack, 2017) or more elaborate interventions (Jamieson & Tuckey, 2017). Our research provides a tool for inducing mindfulness at the team level in a short lapse of time. Therefore, we encourage team managers and organizations alike to implement training programs about both individual and team mindfulness in order to foster employees' well-being and teams' functional dynamics.

The mediating role of team negative affect opens the door to implementing intervention programs that directly target this aspect, for being able to manage the emotions ohas been found to be a crucial factor for organizational performance (Lawrence, Troth, Jordan, & Collins, 2011). In this sense, Yang and Kelly (2016) have proposed that socially sharing negative emotions could be a key process for the team to reappraise negative affective events, leading to a better team climate and social integration. Empirical evidence

has supported this view: teams able to express negative emotions in a constructive way were found to exchange and integrate critical task-related information in a productive way (Stephens & Carmeli, 2016).

Another interesting way for managers to deal with team negative affect is to use it as a strategy for creating a superordinate identity that compensates for the subgrouping process. While creating a superordinate identity based on a unifying characteristic is a common strategy to reduce intergroup bias (Dovidio & Gaertner, 2010), research has found that negative affect can also be used for the same end (Bramesfeld, 2006). Individuals can join together both because positive *and* negative emotions (Niedenthal & Brauer, 2012). Therefore, managers can use this strategy in faultlines, emphasizing that the discomfort experienced during a faultline is common to all members, and that they can all work together to reduce it only if they see beyond their differences.

5.5.3. Limitations and future research

Our findings also present several limitations that should be used as leads for future research. First, we expected that individually inducing mindfulness would provide the psychological ground that would later manifest as the kind of attentive and non-judgmental interactions that characterize team mindfulness. Individually, the induction proved effective, for individual mindfulness significantly differed across the experimental and control conditions. We assumed that team mindfulness emerged after this, taking individual awareness and non-judgment as its basis, but we actually did not assess it. Teams were to read the instructions of the task as soon as the induction was finished. Evaluating team mindfulness before the task would not have made sense, for team mindfulness requires some time and interactions to be developed. On the other hand, evaluating it at the end would have yielded a score on team mindfulness not only after the induction, but also after a cooperative task. The members had to collectively discuss how to survive *as a team* in an extreme situation, which could also have contributed to increasing team mindfulness. Therefore, we encourage researchers to develop other team mindfulness inductions and designs that allow for a more precise way to assess it. For example, Homan et al. (2007) lectured teams about the benefits of diversity for performance and immediately checked its effectiveness using a short attitudinal scale. Team mindfulness could be induced and evaluated in a similar way, by making the members reflect on the benefits of interactions based on awareness and non-judgment, and then evaluate it as an attitude.

Second, we measured the team's negative affect after the induction. By doing this, we assumed that we would capture the resultant negative affect after the faultline had been activated and it had been attenuated with the mindfulness induction. Although our approach builds on previous research connecting faultlines and negative affect (Valls, 2015), not evaluating it at different points of the experiment (i.e., before and after the faultline activation) blurs conclusions about causality. In other words, different experimental events may have had a significantly different impact on the team's affect. Thatcher and Patel (2012) have asked for more research on the temporal dynamics of faultlines, so we believe that future research should also emphasize this aspect when studying negative affect.

Third, our results supported the affective path linking team mindfulness to performance. Specifically, when intersubgroup trust was higher, the team's ETRI and performance were improved. On the other hand, we found no relation between team mindfulness and performance through the cognitive path composed of cognitive integration and TMS. Our two-path model is informative, but may have oversimplified reality. Affective and cognitive processes mutually influence each other (Bramesfeld & Gasper, 2010; Barsade & Knight, 2015). In this sense, trust is an antecedent of TMS (Akgun et al., 2005; Prichard & Asleigh, 2007). Given that affective and cognitive processes affect the relation between team diversity and ETRI (van Knippenberg et al., 2004), future research may integrate cognitive and affective variables (as well as their interactions) into a single mediational path.

Finally, we kept the gender- and education-based constant across all teams. This kind of faultline is generally considered strong (Lau & Murnighan, 1998, 2005) and has been successfully implemented in studies with a similar design (Homan et al., 2007; Rico et al, 2012). However, not manipulating faultlines strength prevents us from drawing conclusions about its effects on the team's processes and outcomes. In this line, we did not take into account faultline distance which has been found to be a moderator between faultlines and TMS (Rupert et al., 2016). Future research could explore how interventions reduce faultline distance as a mean to increase performance. In this sense, Meyer, Glenz, Antino, Rico and González-Romá's (2014) guide for faultline measurement will be especially useful.

5.5.4. Conclusion

Our study deepens the knowledge about the underlying affective mechanisms of faultlines. It also provides an effective strategy for addressing team diversity. With this findings, organizations can skillfully face the challenges of a diverse workforce by turning a major risk into an indispensable resource.

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Appendix

Table 5.5. *Detailed instructions for the mindfulness and mind wandering inductions.*

Mindfulness induction	*Mind wandering induction*
"During the next minutes you will be listening to some easy instructions that will help you being more focused in the present moment. They will also allow you to be more aware about what is happening at every moment. Follow these instructions as best as you can, sticking as much as possible to them."	"During the next minutes you will be listening to some easy instructions that will help you let your mind wander freely. They will also allow your mind to function automatically."
"Adopt a sitting posture in which you feel comfortable. Allow your eyelids to completely cover your eyes."	"Adopt a sitting posture in which you feel comfortable. Allow your eyelids to completely cover your eyes."
"Begin by getting aware that your body is breathing. Let your body to breath by itself, without interfering at any moment with the breath. If your breath is deep, realise how it is deep. If it's shallow, feel how it's shallow. Allow your breath to be natural at every moment."	"Begin by letting that any memory, thought or imagen to appear in your mind. From now onwards, let any association of ideas to automatically occur."
"Realise how you can feel different sensations throughout your body whenever your body inhales and exhales. From now onwards, try to remain aware at every moment about the physical sensations associated with every breath, without getting caught up in any thought."	"Allow your mind to freely wander between the thoughts that arise, without trying to focus on any of them in particular. Simply allow thoughts about the past, present or future to occur. Allow follow one after another."
"Feel the way your abdomen is ascending and descending with every breath."	"Think about the tasks you have to do tomorrow."
"Whenever your mind gets distracted, try not to judge the distraction as good or bad. Just realise there was a distraction, and gently take your attention back to the breath."	"Let your mind wander about what happened to you last week, both good and bad."
"Continue being focused on the sensation of the inbreath and the outbreath in your abdomen, feeling there the complete cycle of every breath."	"Try to remember how many people you've talked to today, their names, and the topics you discussed."

“If your mind gets distracted, don’t see it as something important and gently take your attention back to the sensations of your body breathing.”	“Let your mind to go to the future. Think about next week, about the important things you have to do.”
“Now focus on the sensations of your breath right outside the nose. Feel the subtle brush of the breath coming in and out the nostrils.”	“Think now about the next two weeks: the tasks you have to do, the plans you want to undertake, the people you want to meet.”
“Over and over again, regardless the number or content of the distractions, recognize them whenever they arise and gently go back to your breath.”	“Don’t think too much about one single thing. Think freely about everything that appears in your mind.”
“Try to be aware about how the air that is coming outside your nose is warmer than the one entering it.”	“Think now about the last month, the pleasurable and unpleasurable things that happened to you.”
“Continue being present on your breath, being fully aware of every inhalation and every exhalation.”	“Remember the unifinished tasks you have to complete, both personal and academic.”
“To conclude, take several deep breaths and slowly open your eyes.”	“To conclude, take several deep breaths and slowly open your eyes.”

Chapter 6

General Discussion

6.1. Summary of the findings and theoretical implications

The general objective of this thesis was to increase the knowledge about the interpersonal effects of mindfulness at work. This research fulfilled the need to investigate the mediating processes between mindfulness and its benefits (Glomb, Duffy, Bono, & Yang 2011), as well as the interpersonal variables involved (Good et al., 2016). Our results indicated that mindfulness goes beyond the individual, both at work and at home.

The findings of this research are summarized within three categories: (1) mindfulness is an interpersonal phenomenon; (2) improved affective states mediate the relation between mindfulness and its interpersonal benefits; and (3) mindfulness benefits the employee and the organization alike. Table 6.1 summarizes these findings, as well as several open questions raised by our results.

6.1.1. Mindfulness has interpersonal implications

The first main finding is that mindfulness goes beyond the employee. Employees' high mindfulness at work was related to partners' relationship satisfaction at home (Chapter 3) and to coworkers' positive affect at work and relaxation at home (Chapter 4). Moreover, team mindfulness reduced the negative effect of a demographic faultline on teams' affective states and performance (Chapter 5). Good et al.'s (2016) review outlined the need to study more interpersonal variables associated with mindfulness at work, but few studies followed. Previous findings showed a positive relation between leader mindfulness and employees' outcomes (Reb, Narayanan, & Chaturvedi, 2014) and the influence of team mindfulness on team dynamics (Yu & Zellmer-Bruhn, 2017). The few studies relating mindfulness to the couple's outcomes were found in the romantic relationships literature (e.g., Barnes, Brown, Krusemark, Campbell, & Rogge, 2007).

Chapter 3 revealed that employees' mindfulness was associated with the couple's higher relationship satisfaction and lower report of the employee's work-family conflict. These findings are in line with the literature about the transmission of psychological states from the work to the personal context, and from one member to another (Bakker & Demerouti, 2013). Research has showed the spillover and crossover of variables like detachment (Rodríguez-Muñoz, Sanz-Vergel, Antino, Demerouti, & Bakker, 2017), life satisfaction (Park & Fritz, 2014) and engagement (Bakker & Demerouti, 2009). Our results extend this line of research by integrating mindfulness. Until now, mindfulness crossover had only been studied within a single context, either work or family.

In couples, one member's mindfulness was related tothe other's perceived support (Williams & Cano, 2014), lower anger (Barnes et al., 2007) and reduced emotional stress (Birnie, Garland, & Carlson, 2010) higher. At work, leaders' mindfulness was related to employees' performance (Reb et al., 2014) and lower emotional exhaustion (Schuh, Zheng, Xin, & Fernández, 2017). Our findings show that employees' mindfulness at work is related to the couple's satisfaction at home, bridging the split between domains in mindfulness literature.

Chapter 4 links employee's mindfulness to the coworker's positive affect and relaxation. Considerable empirical evidence has supported the crossover between employees of positive states like job crafting (Peeters, Arts, & Demerouti, 2016), self-esteem (Neff, Sonnentag, Niessen, & Unger, 2012) and positive affect (Westman, Shadach, & Keinan, 2013). However, this crossover has barely received any attention for mindfulness, even though it is associated with interpersonal variables such as empathy (Krasner et al., 2009), attentive listening (Moll, Frolic, & Key, 2015) and social connectedness (Brown, Ryan, & Creswell, 2007). To our knowledge our study is the first to show the crossover of mindfulness between same-level employees. The closest research in showing this was Nai, Narayanan, Tan, Sim and Reb's (2016) experimental study, which used a short mindfulness induction before a negotiation task and made participants reach a more integrative result. However, mindfulness did not cross over from one participant to the other, but was simultaneously induced by the experimenters. Our results build on these findings and expand them, showing that employee mindfulness at work crosses over to the coworker's positive affect at work and, indirectly, to his relaxation in the evening.

Team mindfulness (Chapter 5) was related with better teamwork. Diversity is an asset as long as members use it as a resource for accomplishing the team's task (van Knippenberg, De Dreu, & Homan, 2004). However, subgrouping based on diversity is associated with poor communication and lower elaboration of relevant information (Thatcher & Patel, 2012; Homan et al., 2008). The processes of social categorization, identification and bias have been proposed to underlie these relations (Lau & Murnighan, 2005; Thatcher & Patel, 2012). Several strategies have been used to address them, such as creating a superordinate identity and fostering prodiversity beliefs (Homan, van Knippenberg, van Kleef, & De Dreu, 2007; Rico, Sánchez-Manzanares, Antino, & Lau, 2012). On the other hand, individual mindfulness has been related to lower social bias (Lueke & Gibson, 2015, 2016), while team mindfulness was related with a positive team climate and lower team conflict (Yu & Zullmer-Bruhn). Our team mindfulness induction showed to be an effective way to reduce

Table 6.1. *Summary of findings.*

Main findings	*Results*	*Open questions*
Mindfulness has interpersonal implications	- Mindfulness crossed over to coworker and partner variables (Chapters 3 and 4). - Team mindfulness improved teams' affective states and information-processing (Chapter 5).	- What degree of intimacy or interaction is needed for the crossover of mindfulness? - Can the collective practice of mindfulness have an impact on larger segments of the organization or society?
Improved affective variables mediate the relation between mindfulness and outcomes	- Happiness mediated between employees' mindfulness and partners' relationship satisfaction and employees' WFC (Chapter 3). - Positive affect mediated between coworkers' mindfulness and employees' relaxation at home (Chapter 4). - Reduced team negative affect mediated between team mindfulness and team performance (Chapter 5). - Affect-related variables also mediated some of the relationships: employees' relaxation and team trust (Chapters 4 and 5).	- What specific affective states mediate these associations? - Does mindfulness have a differential association with activated and deactivated affective states? - What other personal resources may have been promoted by positive affect, and what is their interaction with relaxation?
Mindfulness benefits the employee and the organization	- Mindful employees experienced less work-family conflict (Chapter 3). - Employees with a highly mindful coworker relaxed more at home and engaged in organizational citizenship behaviors at work (Chapter 4). - Team mindfulness was linked with higher elaboration of task-relevant information and team performance (Chapter 5).	- What social and contextual variables may have interacted with mindfulness? - Can team mindfulness be indirectly promoted with organizational policies and healthy psychological climates?

the impact of faultlines on the affective variables of the team. These results integrate team mindfulness with the faultlines literature, which have been consistently associated with higher conflict (Thatcher & Patel, 2012) and recently to negative affect (Valls, 2017). Team mindfulness is a tool to reduce the negative affective states associated with activated faultlines, and promotes the kind of attentive and non-judgmental interactions that foster team performance.

Mindfulness as a personal resource can explain these findings. The Conservation of Resources Theory (COR; Hobfoll, 1989, 2001) asserts that people's main motivation is to increase, conserve or recover their resources. A resource is anything valued or that leads to other resources (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 2001). Investment of resources is an indispensable condition for obtaining, protecting or recovering other resources (Hobfoll, Halbesleben, Neveu, & Westman, 2018). Based on this, Kroon, Menting, and van Woerkom (2015) and Eatough (2015) have argued that mindfulness is a resource, for attentional self-regulation produces better emotional management, dealing with work challenges and discovering (and using) other resources. Therefore, mindfulness is a personal resource that manages and implements other lower-order resources (ten Brummelhuis & Bakker, 2012). Empirical evidence has supported this conceptualization. In this sense, mindfulness was associated with resource acquisition (higher vitality; Brown & Ryan, 2003), conservation (lower emotional exhaustion; Hülsheger, Alberts, Feinholdt, & Lang, 2013) and recovery (relaxation; Marzuq & Drach-Zahavy, 2012). The relation between mindfulness at work and other people's outcomes in the same or a different context suggests that mindfulness makes it possible to conserve personal resources and to prevent losing them during emotionally or cognitively stressful situations. As a consequence, more resources are available for investment during work and leisure hours, improving work performance and family outcomes. This reasoning is coherent with theoretical (e.g., Kroon et al., 2015; ten Brummelhuis & Bakker, 2012) and empirical research, where data has supported the role of mindfulness as a context segmentation strategy (Michel, Bosch, & Rexroth, 2014). Such framework supports the findings from the diary studies. Mindful employees were able to invest more resources on their partners at home, who reported higher relationship satisfaction. Similarly, the colleagues of mindful employees had more resources at work in the form of positive affect. Such resources were associated with later resource recovery at home through relaxation. Team mindfulness also follows this reasoning. Teams that experienced lower negative affect were able to conserve resources (Barsade & Knight, 2015). Additionally, they felt more intersubgroup trust, which

enabled them to invest resources in the elaboration on the task-relevant information instead of in dealing with relational uncertainties (De Jong & Elfring, 2010). Thus, our results are in line with the notion advanced by Kroon et al. (2015) and recently supported by Hobfoll et al. (2018) that mindfulness, regardless its level of analysis, contributes to a more efficient management of resources.

These interpersonal findings provide valuable insights, but also pose new questions. A major one concerns the scope of the crossover. We studied romantic couples and coworkers, both of which share a significant amount of time and interactions. This fact can account for the crossover, which usually occurs between closely related people (Westman, Brough, & Kalliath, 2009). However, can this crossover also occur on more distant people? For example, Fowler and Christakis (2008) found that an individual's happiness was associated with the happiness of third-connection individuals in the social network. The far-reaching implications of meditation have also been suggested over the years in the literature. The influence exerted by a small proportion of the population simultaneously practicing meditation on societal variables is called the Maharishi effect (Borland & Landrith III, 1976). Orme-Johnson's (2003) review of 15 studies spanning 40 years of research found that when a significant number of meditators practiced together Transcendental Meditation (TM), the region's crime and accidents rates significantly decreased, as well as other crime-fostering factors such as alcohol consumption, pollution and infectious diseases.[1,2] This pattern of results still occurred after controlling for changes in police activity, weather and demographic shifts. More recently, the Maharishi effect has been found to reduce motor vehicle fatalities (Cavanaugh & Dillbeck, 2017), infant mortality and drug-related death (Dillbeck & Cavanaugh, 2017). Researchers have proposed that these effects are based on the relation between individual and collective consciousness. When habitual mental patterns are quieted through TM, individuals can access a transcendental state that affects their city, state or nation's collective consciousness, which in turn impacts on its members' individual consciousness (Maharishi, 1978). The principle of coherence with reality makes this

[1] Both Transcendental Meditation and mindfulness meditation develop an alert, relaxed quality of mind. However, TM makes "pure consciousness" (i.e., the experience of being aware) the main object of attention (Roth, 1994), while mindfulness focuses on present-moment internal or external phenomena. Several reviews and meta-analyses show TM's benefits on a number of conditions, such as substance abuse (Alexander, Robinson, & Rainforth, 1994), anxiety (Orme-Johnson & Barnes, 2014), and blood pressure (Bai, Chang, Chen, Li, Yang, & Chi, 2015).

[2] More specifically, the number of meditators should be 1% of the city/region/country/planet's population if they are practicing Transcendental Meditation, or the square root of 1% when practicing the allegedly more advanced and powerful TM-Sidhi program. Such small numbers exclude the possibility of changes occurring because of social interactions, and suggest that the reported benefits stem from the non-physical characteristics of individual and collective consciousness (Maharishi, 1986).

possible: a small number of coherently functioning elements exert a more powerful influence than dysfunctional elements (Orme-Johnson, 2003). These reasonings and data challenge many of our notions about the nature and potential of the mind, and are a topic beyond this research. However, the Maharishi effect is thought-provoking enough to make us consider that our results may be reflecting the same situation at a smaller scale. This is only speculation, and the broader interpersonal and potentially societal reach of mindfulness should be addressed by further research.

6.1.2. An improvement in affective variables mediates the mindfulness-outcomes link

Emotional self-regulation is a key aspect for good social functioning (Gross, 2002). Mindfulness has been linked to improved self-regulation in situations of social stress (Brown, Weinstein, & Creswell, 2012) and experimental emotional tasks (Quaglia, Braun, Freeman, McDaniel, & Brown, 2015). In fact, mindfulness has been proposed as an emotional regulation strategy (Slutsky, Rahl, Lindsay, & Creswell, 2017). In the work context, emotional regulation was proposed as one of mindfulness' underlying mechanisms (Glomb et al., 2011). This was supported by a recent meta-analysis, which found that mindfulness was related to emotion regulation variables and had a negative association with negative emotions and burnout (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen's, 2017). However, most of these results were obtained using trait mindfulness. Trait and state mindfulness are related but predict different amount of variance of overall mindfulness (Brown & Ryan, 2003), as well as different outcomes (e.g., Hülsheger et al., 2014). The extant research on state mindfulness has confirmed its relation with lower emotional exhaustion (Hülsheger et al., 2013), but has not investigated its role as a mediating variable and its impact on other outcomes. Our findings provide evidence about the affective mechanisms underlying mindfulness' benefits.

Daily happiness during evenings mediated the relation between employee mindfulness at work and spouse-reported relationship satisfaction and employee work-family conflict. Happiness is "a variety of subjective evaluations about the quality of one's life, broadly defined" (Kashdan, Biswas-Diener, & King, 2008, p. 221), which makes it a general indicator of personal well-being. A review of the literature showed that happy individuals were more successful in all domains of life, including personal relationships, health and job performance (Lyubomirsky, King, & Diener, 2005). In general, extroverts have been reported to experience more momentary happiness (Oerlemans & Bakker, 2014). However, environmental factors such as the work context are a major influence on happiness

(Fisher, 2010), which has led to a growing body of research about the interaction between work and employee well-being (Sanz-Vergel & Rodríguez-Muñoz, 2013). For example, daily work engagement spilled over to daily happiness, which in turn crossed over to the couple's happiness (Rodríguez-Muñoz, Sanz-Vergel, Demerouti, & Bakker, 2014). The same was found for work enjoyment, which spilled over to employee well-being and then to the couple's (Sanz-Vergel & Rodríguez-Muñoz, 2013). Our results continue this line of research by showing the spillover of daily mindfulness at work on evening happiness, which was related to the employee and the couple's well-being. Our results also support that positive experiences stemming from the job context cross over to the partner (e.g., Westman, Etzion, & Chen, 2009).

Positive affect refers to pleasant feelings with high or low activation (Yik, Russell, & Steiger, 2011). State positive affect emphasizes the transient (vs. dispositional) nature of affect (Watson & Clark, 1992) and has been shown to account for 39.5% of the total variance of work-related positive affect (Shockley, Ispas, Rossi, & Levine, 2012). In general, research has demonstrated that state positive affect is related to beneficial organizational outcomes (Fisher, 2010), such as job satisfaction and organizational citizenship behaviors (Judge, Scott, & Ilies, 2006; Ilies, Scott, & Judge, 2006). Positive state affect has also been linked to reduced interpersonal conflict and more collaboration (Baron, Fortin, Frei, Hauver, & Shack, 1990). Additionally, positive affect is a pervasive phenomenon at the day level, for experiencing state affect at work was related to higher positive affect during the evening (Ilies et al., 2006; Judge & Ilies, 2004; Song, Foo, & Uy, 2008; Sonnentag & Binnewies, 2013). This spillover goes beyond the day: state positive affect at home was associated with the next day's positive affect (Song et al. 2008, proactivity (Fritz & Sonnentag, 2009) and creativity (Amabile, Barsade, Mueller, & Staw, 2005) at work. In turn, a number of organizational variables predict state positive affect, such as task accomplishment (Sonnentag, Reinecke, Mata, & Vorderer, 2017), autonomy (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2012) and a team climate characterized by positive social interactions (Dimotakis, Scott, & Koopman, 2011, Kühnel, Sonnentag, & Bledow, 2012, Xanthopoulou et al. 2012). Our findings suggest that the coworker's mindfulness is also an antecedent for the employee's positive affect. This expands the notion that resources at work are either personal or job-related (Bakker & Demerouti, 2017), and includes the coworker as a potential cause for well-being. Additionally, the mediation between coworker mindfulness and employee's relaxation provides an explanation about how mindfulness exerts its benefits (Glomb et al., 2011), especially at the interpersonal level (Creswell, 2017).

The literature on team negative affect is as scarce as mixed (Barsade & Knight, 2015). Early evidence showed that the team's negative affect was related to higher absenteeism, lower prosocial behavior toward customers and performance (Barsade, 2002; George, 1990). Further research supported this view, for negative affect mediated the relation between dysfunctional team behaviors and lower performance (Cole, Walter, & Bruch, 2008) and between perceived diversity and relationship conflict (Hentschel, Shemla, Wegge & Kearney, 2013). Additionally, the leader's negative mood was associated with the team's higher effort expenditure and lower coordination (Sy, Côté, & Saavedra, 2005). Bramesfeld and her colleagues found that negative mood in teams focused more on uncritical information, relied on initial majority preferences and spent more time in relational issues during a decision making-task (Bramesfeld, 2006; Bramesfeld & Gasper, 2008; Bramesfeld & Gasper, 2010). On the other hand, Kooij-de Bode, van Knippenberg & Van Ginkel (2010) showed that groups whose members had *higher trait negative affect* reached *higher-quality* decisions when the task-relevant information was distributed among the members (but not when fully shared). Similarly, Van Knippenberg, Kooij-de Bode, & van Ginkel (2010) induced either a happy, neutral or sad mood in groups and made them perform a decision-making task. Teams whose members had lower trait negative affect performed better on sad or neutral affective states. When members' trait negative affect was higher, there were no differences on decision quality between the mood inductions. Both studies fit Philips and Lount's theory (2007) about how negative affect may promote more in-depth, controlled information processing and compensate for a too heuristic elaboration of information during positive affective states. These apparent contradictions have been clarified by Knight and Eisenkraft's meta-analysis (2015). The influence of group negative affect depends on contextual factors, namely origin and team's lifespan. Negative affect in one-shot groups or perceived as originating from a group-extraneous source fosters social integration and performance. On the other hand, when it occurs in long-term groups or it stems from the group itself, negative affect undermines social integration and performance. Our finding about the association of faultlines with team negative affect and its impact on trust, elaboration of information and performance is in line with these findings. Team faultlines are an endogenous team phenomenon based on the members' social categorization and identification with diversity attributes, so the impact of negative affect should be detrimental. However, we conducted our experiment with newly-created teams that would not work together again, a factor that predicts that negative affect would be beneficial. Our results show that this is not the case when the one-shot group has an activated faultlines. Knight and

Eisenkraft's (2015) conclusions were drawn using groups and teams that were not experiencing subgrouping, social identification and social bias processes. Therefore, the one-shot criterion may be an exception for teams with an activated faultline.

Relaxation was also a relevant mediator. Relaxation is closely associated with positive affect (Fredrickson, 2000) and is characterized by low sympathetic activation (Sonnentag & Fritz, 2007). Relaxation is one of the components of recovery, a physical and psychological process that counteracts the negative effects of strain (Geurts & Sonnentag, 2006). Cross-sectional research has shown that relaxation experiences are associated with lower physical complaints (Shimazu et al., 2016) and work-family conflict (Molino, Cortese, Bakker, & Ghislieri, 2015), as well as to higher subjective health (de Bloom, Kinnunen, & Korpela, 2015) and life satisfaction (Lee, Choo, & Hyun, 2016). At the day level, daily relaxation had a positive relation with later work engagement (Bosch, Sonnentag, & Pinck, 2018), and the next day's serenity (Sonnentag, Binnewies, & Mojza, 2008), positive affect (Binnewies, Sonnentag, & Mojza, 2009) and recovery feelings (Binnewies, Sonnentag, & Mojza, 2010). This pattern of results was also found in a broader time lag. Relaxation during the weekend was associated with recovery at the beginning of the work week (Binnewies, Sonnentag, & Mojza, 2010) and predicted the positive and negative affect of the next and the following week (Fritz, Sonnentag, Spector, & McInroe, 2010). Regarding its antecedents, a recent meta-analysis found that job resources were uniformly associated to relaxation. However, job demands were differentially associated to relaxation: hindrance demands (i.e., stressful and resource-depleting work events) had a negative relation, while challenge demands (i.e., stressful but resource-promoting) had a positive one (Bennett, Bakker, Field, 2017). Interventions can also promote relaxation by teaching techniques (i.e., progressive muscle relaxation) and strategies to implement them in their daily life (Hahn, Binnewies, Sonnentag, & Mojza, 2011). More akin to our research is Park and Fritz's diary study (2015). They found that the spouse's support for recovery experiences was related to the partner's relaxation, and that this relaxation, in turn predicted the partner's life satisfaction. Finally, life satisfaction crossed over to the spouse. Our findings extend findings on both antecedents and outcomes of relaxation. Daily positive affect at work as an antecedent of relaxation complements results on positive affect as an outcome (e.g., Sonnentag et al., 2009). Additionally, we found that daily relaxation was *not* related to the next day's OCB, but mediated the relation between PA and the next day's OCB. This suggests that relaxation allows other states to exert their day-to-day beneficial impact on personal and work-related variables.

Intersubgroup trust was also an affect-related mediator in the team mindfulness-performance path. Group trust refers to a shared willingness to be vulnerable to the team's actions because of expectations that others are benevolent and reliable (Mayer, Davis, & Schoorman, 1995). Finding trust in the affective path to team performance supports the notion that it is a phenomenon with an emotional component (Jones & George, 1998; Williams, 2001). Fiske (2000) argued that trust is an evolutionary mechanism that fosters group life. However, a clear distinction between "us" and "them" can lead to lower trust towards outgroups (Voci, 2006). In the context of faultlines, our results on the relation between negative affect and intersubgroup trust are supported by theoretical accounts about the impact of mood on making affect-congruent judgments (Schwarz, 1990). Indeed, our results are in line with Williams (2001) proposal that negative affect stemming from social categorization would be related to lower trust. Our results are also congruent with those of the faultlines literature, where faultlines resulted on lower trust (Cronin et al., 2011; Mach & Baruch, 2015; Polzer, Crisp, Jarvenpaa, & Kim, 2006). The benefits of team trust are well-documented, including team performance, OCB, affective commitment and team satisfaction (Fulmer & Gelfand, 2012). However, its beneficial affect has been argued to result from indirect effects on outcomes (Dirks, 1999). Indeed, trust was related to team's outcomes by increased cohesion and satisfaction (DeOrtentiis, Summers, Ammeter, & Ferris, 2013), joint efforts (Dirks, 1999), collaborative culture (Barczak, Lassk, & Mulki, 2010) and team monitoring (De Jong & Elfring, 2010). Our results broaden trust's role in faultlines and support its mediating role for improved processes and outcomes. In this sense, it association with elaboration of task relevant information is congruent with previous findings, where trust increased knowledge and resource exchange (Tsai & Ghoshal, 1998). Finally, including trust as a variable related to performance in the Winter Survival Task answered to Sohrab, Waller and Kaplan's (2015) call for research on trust during hidden-profile paradigms (like our distributed information in the Winter Survival Task).

The mediating role of affective variables can be explained through the lens of COR theory (Hobfoll et al., 2018). Mindfulness is a key personal resource: deploying attention to the present manages and implements other resources, resulting in a more skillful investment and conservation (Eatough, 2015; Kroon et al., 2015). This provides the necessary resources to invest in one's well-being (positive affect and happiness) and to reduce negative emotional reactions (team negative affect). Positive affect and happiness can also be considered as personal resources, for they are valued as an end or are perceived as a means to attain a goal (Hobfoll, 2002; Halbesleben et al., 2014). Positive emotions instrumental role is elaborated

by the Broaden and Build theory (Fredrickson, 2013). Positive emotions broaden the repertoire of available cognitive and behavioral options and promote their later use. In general, resources come in bundles ("resource caravans" in COR theory) and are associated with gaining further resources ("resource gain spirals"). The same pattern occurs for positive emotions: their presence is associated with having access to more resources, now and in the future ("upward spirals of positive emotions") (Fredrickson, 2013). Both theories account for our results: once the resources provided by mindfulness are invested in affective states, they improve the emotional life of the employee and the team. As a consequence, other benefits are experienced, such as higher happiness, trust and relationship satisfaction. These, in turn, foster later well-being and organizational outcomes Therefore, our results support the notion that upward spirals of positive emotions occur at the individual, interpersonal and team levels.

Conceptualizing affect as an activated *and* deactivated state widens the scope of mindfulness research, usually limited to an activated affective trait (Giluk, 2009; Mesmer-Magnus et al., 2017) or state (Haun, Nübold, & Bauer, 2018). However, it raises the question about what specific emotions are better regulated by mindful attention. The diversity literature has made emphasis on the lack of specificity when conceptualizing affective states (Hentschel et al., 2013; Lei & Lehmann-Willenbrock, 2015). This issue is also relevant to mindfulness research, where affect is measured as an aggregation of specific activated states (for exceptions, see Barnes et al., 2007; Heppner et al., 2008). Our findings show that mindfulness is associated with both positive and negative affective states with high or low activation levels, but not the specific emotions underlying these constructs. In this line, does mindfulness also have a negative relation with specific deactivated negative states, such as boredom, sadness or drowsiness? What about deactivated positive affect? Meditation has been shown to increase the value people place on calmness, but not experiencing the actual state (Koopmann-Holm, Sze, Ochs & Tsai, 2013). Does this hold for other deactivated positive emotions, such as calmness, serenity and content? Finally, Sonnentag, Venz and Casper (2017) have suggested that there might be different combinations of recovery experiences that account for its beneficial effects, such as problem-solving pondering after work (Bennett, Gabriel, Calderwod, Dahling, & Trougakos, 2016). Our results suggest that relaxation during evenings may have co-occurred with positive affect. Positive emotions broaden and build the person's resources (Fredrickson, 2013), so it is reasonable to expect that the employee experienced other beneficial states other than relaxation. What other

personal resources may have been fostered by work positive affect? And especially, how may they have interacted with relaxation to impact the next day's OCB?

6.1.3. Mindfulness benefits the employee and the organization

The third main finding of this thesis is that the benefits of mindfulness are also an asset for the organization. Mindfulness has been related to a number of work-related outcomes, such as task performance, engagement and safety behaviors (Good et al., 2016). However, most of these findings were obtained by studying employees' mindfulness in the work context, disregarding the potential influence of interpersonal factors and intercontextual effects over organizational outcomes. Only a few exceptions investigated the spillover and crossover effects of mindfulness on work outcomes (Reb et al., 2014; Schuh et al., 2017), or on outcomes-promoting variables (i.e., work-family balance; Allen & Kiburz, 2012; Kiburz, Allen, & French, 2017; Michel et al., 2014). Our findings about the reduced work-family conflict (Chapter 3), increased OCB (Chapter 4) and team performance (Chapter 5) demonstrate that individual and team mindfulness are not only related with better interpersonal dynamics, but also with a more productive organization.

Work-family conflict (WFC) refers to the incompatibility of pressures associated with roles from the work and family contexts (Greenhaus & Beutell, 1985). WFC is a problem for organizations (Society for Human Resource Management Workplace Forecast, 2008) and societies (Poelmans, Greenhaus, & Las Heras Maestro, 2013). In Spain, WFC is an especially dramatic issue, where employees are in situation of being "Chained to the job" (Fernández, 2018). Accordingly, researchers have produced a large body of literature about it over the last 30 years (Allen, 2012). WFC is associated with impaired physical health, including obesity, high cholesterol, hypertension and somatic complaints (Mihelič & Tekavčič, 2014). Psychological health is also impaired, for WFC was associated to higher likelihood to experience a mood, or substance abuse disorder (Frone, 2000). For the organization, employees' WFC is related to lower organizational commitment and especially higher turnover intentions (Allen, Herst, Bruck, & Sutton, 2000; Kossek & Ozeki, 1998; Mihelič & Tekavčič; 2014). Because WFC stems from the inability to reconcile the demands of the job context with the ones from the family, meta-analytic evidence has found that work stress is the major predictor of WFC (Byron, 2005). At the personal level, neuroticism and trait negative affect were also predictors of WFC (Andreassi, 2011; Michel & Clark, 2009). The two main approaches for dealing with WFC have been increasing work social support (French, Dumani, Allen, & Shockley, 2017; Pluut, Ilies, Curşeu, & Liu, 2017) and schedule

flexibility (Byron, 2005). These interventions rely on redesigning some aspects of work in order to improve social conditions. However, they have received mixed evidence about their effectiveness (Allen, Johnson, Kiburz, & Shockley, 2013; Perlow & Kelly, 2014). On the other hand, mindfulness focuses on the employee's attention to manage demands and counteract maladaptive personality traits associated with WFC. Emerging evidence supports its effectiveness, for trait mindfulness was related to work-family balance (Allen & Kiburz, 2012), and mindfulness-based interventions increased work-family balance and reduced WFC (Michel et al., 2014; Kiburz et al. (2017). Our findings expand this line of research by showing that daily mindfulness at work was related to lower WFC. Moreover, WFC was reported by the couple, so it provided a more accurate description about its impact, as recommended by WFC scholars (Allen et al., 2000).

The diary study on coworkers (Chapter 4) found that their daily positive affect was related to the next day's OCB by the mediation of relaxation. We also found that daily coworker mindfulness crossed over to daily employee positive affect. This association suggests that coworker mindfulness may have triggered the PA-relaxation-OCB path. OCB are discretionary actions that are not associated to organizational rewards but support the environment in which task performance occurs and thus contribute to the optimal functioning of the organization (Organ, 1988, 1997). Therefore, OCB is a critical component of job performance and is a valuable organizational outcome (Rotundo & Sackett, 2002). A meta-analysis has supported this notion, for OCB was related to beneficial outcomes both for employees (i.e., performance, turnover, absenteeism) and the organization (i.e., efficiency, customer satisfaction, productivity) (Podsakoff, Whiting, Podsakoff, & Blume, 2009). A large number of studies have been carried at the between-person level (Spence, Brown, Keeping, & Lian, 2014), but researchers have been asked to include the within-person level to have a more thorough understanding of OCB (Bolino, Harvey, & Bachrach, 2012). In this sense, positive affective experiences such as state gratitude (Spence et al., 2014), state positive affect (Dalal, Lam, Weiss, Welch, & Hulin, 2009; Ilies et al., 2006), and recovery feelings (Binnewies et al., 2009) were found to predict OCB. These findings are coherent with the initial theoretical proposal about the affective antecedents of OCB. According to Smith, Organ, & Near (1983), affective experiences inform about the necessity or suitability of engaging in OCB. For example, while anxiety about a deadline may prevent helping coworkers, satisfaction caused by task completion may motivate the employee to help others (Spector & Fox, 2002). Mindfulness researchers have found that employees' OCB was related to their leader and their own levels of trait mindfulness (Reb et al., 2014;

Reb et al., 2015), but no research was carried at the day level. Our results can be interpreted so that coworkers' daily mindfulness crossed over to employees' positive affect, which allowed for later relaxation and next day's OCB. However, our study did not test this path nor could the diary design prove causality. Although Reb et al. (2014) finding on the crossover of leaders' mindfulness to employee OCB supports the idea of a causal path, for the moment remains as an interesting possibility. In any case, the daily PA-relaxation-OCB path was indeed significant, and answered for Spitzmuller, Ilies, & Choi's (2018) call for more research on the specific states predicting daily OCB.

In Chapter 5, team mindfulness was associated with performance for teams with a faultline. By and large, faultlines are associated with lower team performance (Thatcher & Patel, 2011, 2012), so Chrobot-Mason et al (2009) asked for strategies to counteract the negative impact of faultlines on the team's states and processes. To this end, researchers have relied on the Categorization-Elaboration Model (CEM; van Knippenberg et al., 2004). The CEM proposes that the diversity-performance relation depends on the way members make sense of diversity. Categorization salience refers to the cognitive activation of the categorization, while normative fit refers to the meaningfulness of the categorization. Finally, comparative fit describes the extent to which the categorization produces high between-group difference and within-group similarity, and has been proposed to lie at the root of faultlines (van Knippenberg & Mell, 2016). These three processes must be simultaneously present to impair the team's elaboration of task-relevant information (ETRI; van Knippenberg et al., 2004). ETRI has been shown to be a well-established antecedent of performance (Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; Kearney, Gebert, & Voelpel, 2009; Meyer & Schermuly, 2012; Meyer, Shemla & Schermuly, 2011; van Ginkel & van Knippenberg, 2008). Therefore, faultline researchers have aimed at reducing normative fit in order to foster the team's ETRI – and consequently, performance. Several cognitive factors have been linked to ETRI, such as openness to experience (Homan et al., 2008) and need for cognition (Kearney et al., 2009). Factors altering the categorization process have also been useful. For example, having shared team objectives (van Knippenberg, Dawson, West, & Homan, 2010), a shared reward (Homan et al., 2008) and a superordinate identity (Rico et al., 2012) were effective in increasing the team's ETRI and performance. The team mindfulness induction can be added to these strategies as a way to promote intersubgroup trust and ETRI, resulting in higher performance.

These results are coherent with COR theory's proposals (Hobfoll et al., 2018) and the conceptualization of mindfulness as a key personal resource (Eatough, 2015; Kroon et al., 2015). Resource investment is necessary to conserve or acquire the necessary resources for performance (Hobfoll et al., 2018). Mindful regulation of attention allows selecting and implementing job and personal resources, as well as facilitating work performance. For example, mindfulness moderated the relation between negative affect and innovative behaviors (Montani, Dagenais-Desmarais, Giorgi, & Grégoire, 2018). This buffering effect was argued to result from the conservation of resources otherwise lost by negative affect and their investment on innovation. Similarly, our results are coherent with this pattern of optimized conservation and investment of resources. First, WFC occurs because demands from the work role consume time and energy (two personal resources) that cannot be later invested in the family domain (ten Brummelhuis & Bakker, 2012; Valcour, 2007). Mindfulness makes the employee aware of both the current level of demands and available resources, facilitating better decision taking regarding what should be done and with what priority (Kroon et al., 2015). Additionally, reduced distractions and emotional regulation in the work context conserves resources that can be later used in the family context (Allen & Paddock, 2015). Second, OCB requires the investment of personal resources, for they are actions that go beyond the call of duty and additional effort (Bolino, Hsiung, Harvey, & LePine, 2015). Coworker mindfulness crossed over to the employee's positive affect, which may have triggered a resource gain spiral (Fredrickson, 2013; Hobfoll et al., 2018) that spanned from one day at work and culminated on the next day's OCB. Finally, effective teams need their members' attention and resources allocated on the task instead of on issues that are conflicting (De Dreu & Weingart, 2003), uncertain (Dirks & Ferrin, 2001) or task-irrelevant (e.g., Bramesfeld & Gasper, 2010). Team mindfulness is based on members' attentive and non-judgmental interactions, which prevents conflict and creates a psychological climate that fosters constructive communication (Yu & Zellmer-Bruhn, 2017). Thus, team mindfulness creates the ideal conditions for the investment of resources that lead to performance.

Despite this evidence, questions remain about how mindfulness predicts work performance. Contextual variables may have interacted with mindfulness, as suggested by Hülsheger (2015) and Good et al. (2016). Their remarks gain special relevance at the light of our findings. We assessed mindfulness as a naturally occurring state in non-meditating samples (Chapters 3 and 4) or as an emergent state in short-lived teams of undergraduates (Chapter 5), so it is reasonable to expect that other job and personal resources (different to

meditation experience) influenced outcomes. Emerging evidence has found that psychological job demands, smartphone engagement, workload and organizational constraints were negative predictors of mindfulness (Hülsheger, Walkowiak, & Thommes, 2018; Lawrie et al., 2018; Reb et al., 2015; Woodlief, 2017). What other contextual and social variables may do too? For example, social support is an important predictor of WFC (French et al., 2017) and is theoretically linked to OCB (Allen et al., 2001). Given that participants had to ask a favor to either their couple or coworker to participate in the study, employees must have had some degree of social support, and thus suggests it may have had an influence on employees' well-being and performance. Regarding team mindfulness, psychological safety and constructive controversy are associated constructs that may also foster its emergence (Yu & Zellmer-Bruhn, 2017). Can an organizational culture that promotes them, as well as emotional intelligence, trust and psychological safety may also promote mindfulness? In sum, organizational and interpersonal resources may be fruitful boundary conditions of mindfulness to explore in the future.

6.2. Strengths and limitations

When considering our findings, the weaknesses of the studies should also be taken into account. These limitations are mainly methodological, and provide useful directions for future research. The shortcomings of this work can be summarized in five categories. We discuss how we dealt with them, consider their potential impact on our results and contrast them with the strong points of our studies.

6.2.1. Causality

The diary studies analyzed the relationship between daily mindfulness, affective mediators and interpersonal outcomes within days and between one day and the next. The repeated-measures and lagged associations are more revealing than a simple cross-sectional approach. Additionally, we used the Actor-Partner Interaction Model (APIM) for analysis in Chapter 4. APIM models are useful to test the relation between an individual's predictor variable with his or her own criterion variable (actor effect), to another person's criterion variable (partner effect) and the reciprocal influence of both members of the dyad (Kenny, Kashy, & Cook, 2006). Therefore, each member could be considered an actor or a partner in the results. This strategy allowed us to examine the influence of one employee's mindfulness on the coworker or partner's well-being, as well as the mutual effects between both members. Therefore, our results indicate interdependence between mindfulness and interpersonal

outcomes, and suggest that the former may impact on the other (Kenny & Cook, 1999). In any case, the APIM only provides a significant relation between variables, and not necessarily a causal one (Cook & Kenny, 2005). A temporal lag did exist between mindfulness (in the morning) and close others' outcomes (in the evening), a requisite to affirm causality (Davis, 1985). However, we did not have evidence about reverse causality (i.e., close others' outcomes increased employees' mindfulness) nor did we take into account other unmeasured variables that could have accounted for the effect (Moore & Notz, 2006). The central idea of these studies was that highly mindful employees had more resources at work. This made them a resource themselves, allowing their partners or work colleagues to increase their own personal resources, whether as relationship satisfaction or positive affect. Scholars have linked mindfulness to resource acquisition, conservation and recovery (Eatough, 2015; Kroon et al., 2015), while empirical research on mindfulness interventions has shown that higher mindfulness is associated with increased personal benefits (Jamieson & Tuckey, 2017), a pattern also found at the state level (Hülsheger et al., 2013). Therefore, our results provide evidence about this potentially causal link between mindfulness and interpersonal outcomes. Future research may use diary designs to test the effectiveness of intervention programs that foster the crossover of mindfulness.

The mindfulness induction is both a limitation and a strength. It is a limitation because we did not check whether team mindfulness had actually been elicited. Measuring team mindfulness at the end of the induction made no sense, for members had not had time to interact. On the other hand, measuring it at the end of the task meant that extraneous variables (such as the cooperative nature of the Winter Survival task) may have influenced its emergence — maybe above and beyond the individual induction. Therefore, we expected that inducing individual mindfulness would provide the basis for interactions based on attention and non-judgement (team mindfulness). This proposition was based on evidence about the effectiveness of short mindfulness inductions in reducing social bias (Lueke & Gibson, 2015, 2016), team mindfulness' need of time and interactions to emerge (Yu & Zellmer-Bruhn, 2017) and the positive relational outcomes of mindfulness (Good et al., 2016). At the same time, the mindfulness induction is a strength, because neither the original authors nor other researchers have provided tools for eliciting team mindfulness. The mindfulness induction was effective in improving the team's affective states and performance, as well as a bold move in trying to provide a tool to bridge faultlines and elicit team mindfulness. An additional strength is that we used an active control that underwent a baseline state induction. Recent meta-analytic evidence has found that using a passive

control group (i.e., waitlist) moderates the relation between mindfulness interventions and prosocial outcomes (Kreplin, Farias, & Brazil, 2017). Therefore, our use of an active control group increases the strength of the findings.

6.2.2. Samples

The samples of the diary studies were composed by working adults from different professions, from sales to doctors, and from school teachers to office clerks. Such job heterogeneity is a strength, for it increases generalizability and answers to calls for more mindfulness research outside health professionals (Lomas, Medina, Ivtzan, Rupprecht, & Eiroa-Orosa, 2017). This point is also a limitation: all participants worked in the services sector and almost half of them had at least a university degree, so we cannot draw conclusions about different and maybe less favored populations. In the experimental study, the sample was balanced in terms of gender and age. However, almost all participants studied a Social Science degree. This may have had an influence on the strength of the faultline. Studying a Social Science degree may have implicitly worked as a superordinate identity that attenuated the faultline (e.g., Rico et al., 2012). In other words, Psychologists, Sociologists, Social Workers and Anthropologists (respectively, the main degrees of the sample) all deal with human subjects, and differ on the level, method and time used for study and intervention. Indeed, some participants remarked that there was not much difference between their areas. However, because this factor was constant among almost all sessions, its potential effect was reduced. Future research could create faultlines based on educational background using the level of studies completed (i.e. secondary, graduate, etc), or by using students from significantly different areas of knowledge (i.e., Physics and Law).

6.2.3. Mindfulness operationalization

Establishing a construct definition for mindfulness is a key element for quality research (Van Dam et al., 2018). Mindfulness was defined as a unifactorial construct that refers to being fully aware and attentive about present-moment experiences, occurring internally and externally (Brown & Ryan, 2003). The unifactorial approach is the most used in non-clinical samples (Tomlinson, Yousaf, Vittersø, & Jones, 2018), has been recommended for samples with no meditation experience (Sutcliffe, Vogus, & Dane, 2016) and is the most used for measuring state mindfulness in the work context (e.g., Hülsheger et al., 2018).This conceptualization was consistently used in this work, and thus constitutes a strong point (Jamieson & Tuckey, 2017).

On the other hand, using a unifactorial approach also constitutes a limitation. For example, the multifactorial conceptualization developed by Bishop et al. (2004) includes components such as observing, acting with awareness, describing, nonjudging inner experiences and and nonreactivity to inner experiences (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). This offers a more nuanced approach to examining what specific aspects of mindfulness predict personal and organizational outcomes (Bermúdez-Moreno, 2017). For example, Lenger, Gordon, and Nguyen (2017) found that non-judgement of inner experience predicted own's relationship satisfaction over and above the other factors. At work, Malinowski and Lim (2015) found that non-reactivity was the best predictor of engagement and well-being. Basing our findings on the unifactorial approach lays the foundation about the interpersonal and inter-contextual benefits of mindfulness. Future research may build on it by providing a more detailed description about the specific components involved. In this sense, mindfulness as a multifactorial state can be studied with the State Mindfulness Scale (Tanay & Bernstein, 2013), which provides information about present-moment awareness of thoughts, emotions and body sensations, and is recommended for non-meditating samples (Sutcliffe et al., 2016).

6.2.4. Temporal lag

The daily diary studies covered a 5-day work week, a timespan frequently used in past diary research (Haun et al., 2018; Hülsheger, Feinholdt, & Nubold, 2015; Sonnentag, 2003). However, weekend experiences have an impact on employees' outcomes during the following weeks (Fritz et al., 2010), so the omission of the weekend is a weakness. Future mindfulness research may include the weekend in order to examine the extent of the work-home spillover. Recent research by Hülsheger et al. (2018) found that sleep quality predicted daily mindfulness at work, so studying recovery experiences enhanced during weekends could provide insights about their impact on mindfulness at work. Similarly, including two work weeks (e.g., Tuckey, Sonnentag, & Bryan, 2018) or three measurement moments a day (e.g., Hülsheger et al., 2018) will provide stronger support for the findings.

In the experimental study, the duration of the mindfulness induction was a strength, for it effectively elicited a mindfulness state in only 8 minutes. This figure improves previous induction times, such as 15 minutes (Kiken & Shook, 2011; Hafenbrack, Kinias, & Barsade, 2014) and 12 minutes (Long & Christian, 2015). It also supports the notion that mindfulness meditation is an effective and immediate intervention for the work context (Hafenbrack, 2017). However, a limitation of the study is that the duration of the experiment may have

hindered the emergence of team mindfulness. After listening to the instructions, participants had 15 minutes to discuss and complete the experimental task, after which they individually filled the remaining questionnaires. Team mindfulness is an emergent state that takes time and sustained interactions (Yu & Zellmer-Bruhn, 2017). In this sense, 15 minutes may have been too short a time. Even though the psychological basis for team mindfulness had been induced, the necessary interactions for its emergence may take more time. The original task instructions indicated that participants should discuss for 45 minutes, but we reduced it to a third for the participants' limited availability (the data was obtained during the academic year, and most students could not spend more than the 75 minutes the experiment took). Therefore, future experimental research on team mindfulness may provide more time for interactions to occur.

6.2.5. Trait and state interaction

Mindfulness has been conceptualized both as a state and a trait (Brown & Ryan, 2003). This has been the approach used in studying mindfulness at work, as recommended by scholars (e.g., Fleeson, 2004; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Indeed, researchers studying mindfulness as a state have focused on daily variations and associated outcomes while at the same time controlling for trait mindfulness (e.g., Tuckey et al., 2018). Hülsheger et al. (2014) studied the relation between mindfulness and sleep quality at the between (trait) and within (state) levels of analysis, and found that it was significantly stronger at the between-person level. Because of this, they asked for more research that takes into account both levels of analysis as well as their interaction. This could be considered as a limitation, because we only examined mindfulness as a state. However, we controlled for trait mindfulness levels and our hypotheses only concerned within-person variations, so not using the between-person level beyond the control variable does not constitute a significant limitation of our study. However, more research is indeed needed to understand the complex relations between trait, state and meditation-induced mindfulness.

6.3. Practical implications

The findings of this dissertation are not only relevant for scholars and researchers. The economic, cultural and social issues of our time encourage us to make several practical suggestions. Organizations, couples and employees can take advantage of them to simultaneously face work challenges and develop personal well-being.

6.3.1. Organizational implications

Research has shown that mindfulness interventions improve personal and organizational outcomes (Jamieson & Tuckey, 2017; Mesmer-Magnus et al., 2017). Our results indicate that mindfulness at work also benefits other employees, teams, and the romantic couple. Therefore, we recommend organizations to implement mindfulness programs that teach employees how to develop, sustain and integrate mindfulness states in their work and family roles. Such implementation should not be a problem, for studies have found that mindfulness interventions can be tailored to the temporal needs and economic resources of the organization and still be effective (e.g., Hülsheger et al., 2013). For this, we encourage Jamieson and Tuckey's (2017) guidelines for adapting and integrating mindfulness interventions in the workplace: (1) maintain key elements of established mindfulness programs (e.g., MBSR, MBCT); (2) make sure experienced teachers deliver the intervention; and (3) check compliance with the intervention when it is self-administered or Internet-based.

Mindfulness interventions can be an asset above previous interventions. Nowadays, many intervention programs are available to deal with workplace stress and promote health (Tetrick & Winslow, 2015). Although their overall aim is to foster the use of job and personal resources, their shortcoming is that they focus on developing a limited number of resources. One approach is to increase *job* resources, such as work organization (Bourbonais, Brisson, & Vézina, 2011), ergonomics (Westgaard & Winkel, 1997) and quality training (Cifre, Salanova, & Rodríguez-Sánchez, 2011). Another line is to increase personal resources such as health (Makrides et al., 2011), gratitude (Kaplan et al., 2013) and positive reflections (Bono et al., 2013). The advantage of mindfulness interventions is that they foster a *key* personal resource. Mindful attention allows being aware of lower-order job *and* personal resources, as well as selecting and implementing them (Eatough, 2015; Kroon et al., 2015). In this sense, mindfulness regulates and affects basic human domains (e.g., attention, cognition, emotion), so promoting it also promotes many associated resources whose development would normally take several interventions. In other words, mindfulness

interventions are integral organizational programs, for their benefits are not limited to a single resource (Good et al., 2016).

Mindfulness could also be combined with other workplace interventions. Mindfulness interventions that include temporal segmentation strategies (Michel et al., 2014) and positive reflection (Clauss et al., 2018) were effective in enhancing employees' outcomes. Given our finding about the relation of mindfulness with relaxation (Chapter 4) and also with psychological detachment (Hülsheger et al., 2014), mindfulness could be integrated with recovery programs to enhance their strengths (e.g., Hahn et al. 2011). In a similar way, mindfulness' relation with sleep quality (Hülsheger et al., 2018) make it a good option to improve interventions targeting sleep quality (e.g., Hätinen, Mäkikangas, Kinnunen, & Pekkonen, 2013).

We also encourage organizations to create mindfulness-inducing conditions that are not intervention programs. Scholars have cautioned against the instrumentalization of mindfulness as a tool to exploit employees and silence dissent (Purser & Milillo, 2015). Although this strategy may work for a time, research has found that high job demands and fatigue are negative predictors of mindfulness (Hülsheger et al., 2018; Lawrie et al., 2018). Therefore, it is in everyone's best interest that mindfulness is simultaneously promoted inside and outside the employee. When interventions are finished, the creation of a supporting organizational culture could enhance employees' adherence to mindfulness practice. Examples of this are saving a fixed time slot for meditation during work hours, designating a specific room properly equipped for practice (comfortable seats, quiet) and hanging mindfulness-inspiring quotes in the facilities. Moreover, higher job control (Lawrie et al., 2018), adequate supplies and training (Reb et al., 2015), sleep quality-friendly schedules (Hülsheger et al., 2018) and a reasonable use of smartphones (Perlow, 2012) can complement and enhance naturally occurring mindfulness states. Similarly, overwhelmed employees could be allowed to take 5 minutes off to do a short meditation to replenish their resources (Trougakos & Hideg, 2009). Employees' spatial arrangement and work teams creation could also be done keeping in mind the crossover of mindfulness among employees. For example, workers with a high need for recovery or vulnerable to negative affective states could profit from working near a mindful colleague.

Finally, our findings also offer a valuable tool for leaders. At the individual level, leaders' mindfulness was related to employees' performance and well-being (e.g., Reb et al., 2014). In teams, leaders have a strong impact on the team's states and outcomes (Schaubroek, Lam, & Peng, 2011; Sy et al., 2005). Therefore, leaders have two strategies

for influencing their subordinates with mindfulness. First, leaders' mindfulness is likely to cross over and affect employees' positive emotions and relaxation, as suggested in Chapter 4. This crossover could also be applied to teams, where leaders' mindfulness could influence single members' affective experience and so alter the "building bricks" of the higher-level team affective state. Second, leaders could guide mindfulness inductions like the one used in Chapter 5. This approach would take advantage of leaders' impact on the team and enhance the buffering effects of the induction on the negative affective consequences of an activated faultline.

6.3.2. Implications for romantic couples

Couples can also benefit from our results. In the broader literature, educational and preventive interventions aimed at improving relationship satisfaction have received mixed results (Bradbury & Lavner, 2012). However, mindfulness is related to relationship satisfaction (McGill, Adler-Baeder, & Rodriguez, 2016) and its interventions enhance relationship satisfaction when attended by both members of the couple (e.g., Carson et al., 2004). Our results about the crossover of mindfulness from employee to the partner empower members with a tool to work on their relationship. By being more mindful at work, employees can conserve and acquire personal resources that can later be invested in the partner. Consequently, we encourage romantic couples to enhance their mindfulness levels at work as a mean to benefit their partner and the relationship at home.

Our results are also relevant to couples with a diseased member. Williams and Cano (2014) found that one member's trait mindfulness was related to the sick one's perceived social support. Our results offer an encouraging complement to this. The healthy member could have a positive impact on the sick one when they are not together. By being mindful at work, the healthy member can acquire resources that are later perceived and used by the other member. Moreover, given that our results were found at the day level, members' need not be concerned about their previous trait mindfulness levels. By increasing their mindfulness at work (either through meditation or intentionally paying attention to daily activities) they can start benefitting their couple right away. Thus, couples have a strategy to deal with the emotional challenges of sickness even when they are not together.

6.3.3. Implications for individuals

Employees should also be encouraged by our findings.The spillover and crossover of mindfulness ensure that individuals have a direct and indirect resource to be happier. First, the spillover of mindfulness at work on happiness at home provides a direct strategy for employees to make the best out of their work day and still be able to enjoy their free time. By being more mindful at work, resource acquisition and conservation occur, fostering evening happiness. Second, the crossover of mindfulness between employees offers an indirect way to benefit from it. Being around a mindful coworker was related to one's own higher positive affect at work and relaxation at home, so employees can enhance their well-being by surrounding themselves with other highly mindful coworkers. Nevertheless, we encourage employees to apply both strategies simultaneously to maximize their profits. Keeping a daily mindfulness practice will yield positive results, while being surrounded of mindful individuals will enhance these effects.

Traditionally, mindfulness has been studied as an individual phenomenon, but we found that it has interpersonal implications. Mindful employees seem to improve the quality of life of close others by their paying attention. According to Fowler and Christakis' (2005) findings, happiness ripples out through the social network up to the third connection. So far, individual mindfulness has been found to cross over to closely related people, but it could also affect distant ones. Therefore, our results empower employees with a tool to influence, at least indirectly, those who surround them, whether known or unknown.

Our results also offer good news about an especially pervasive problem in Spanish work culture: work-family conciliation (Fernández, 2018). Our studies show that being mindful at work was related to better functioning at home during the evening, assessed as lower work-family conflict (Chapter 3) or more relaxation experiences (Chapter 4). Research has also shown that daily mindfulness at work is related to psychological detachment at home (Hülsheger et al., 2014) and that mindfulness works as a context segmentation strategy (Michel et al., 2014). Therefore, mindfulness offers a cost-effective and easily implementable strategy to reconcile the demands of the work context with the needs of the personal one. In this way, mindful employees are in a better position to make the best out of the two contexts while keeping them in balance.

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Chapter 7

Conclusion

The evidence and theoretical framework provided in this dissertation shed light on mindfulness and its interpersonal associations. Based on it, we draw several conclusions:

1. **Mindfulness is an interpersonal phenomenon**. We found that higher levels of mindfulness at work were related to relationship satisfaction in the romantic partner, positive affect and relaxation in the coworker and intersubgroup trust in diverse teams. Thus, present-moment awareness is key for personal and work relations.
2. **Mindfulness is a state worthy of research.** Mindfulness fluctuates through the day and has significant associations with daily outcomes. This allows the study of mindfulness in different contexts, which provides wider and more detailed insights about its interpersonal implications.
3. **Mindfulness is an organizational asset**. Relaxation and lower work-family conflict indirectly contribute to performance, while organizational citizenship behaviors *are* performance. Team mindfulness is an efficient resource to deal with activated demographic faultlines.
4. **Mindfulness operates through affective experiences**. Happiness, positive affect, trust and lower negative affect mediated the mindfulness-outcomes link. This complements the prevalent view that mindfulness is a (negative) emotion regulation strategy, and shows that it can also make affect brighter.
5. **Mindfulness is a personal resource**. Mindfulness is related to resource acquisition (happiness and positive affect), conservation (lower work-family conflict and team negative affect) and recovery (relaxation). Resources are later invested in a way that fosters personal (happiness), interpersonal (positive affect, relationship satisfaction) and organizational (organizational citizenship behaviors and performance) outcomes. Therefore, mindfulness empowers employees to lead happier lives, do their best at work and improve their social relations.

Mindfulness transcends the individual. As workers ourselves, we offer these findings as tools, ideas and strategies to benefit individuals, their couples and, ultimately, organizations. In the long run, they are the crucial link between personal and global growth.