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## THE PROTECTIVE ROLE OF DISPOSITIONAL MINDFULNESS AND MINDFUL PARENTING FOR ADOLESCENTS' INTERNALIZING AND EXTERNALIZING SYMPTOMS

Bilbao, 2022

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*When sitting, just sit.  
When eating, just eat.  
When walking, just walk.  
When talking, just talk.  
When listening, just listen.  
When looking, just look.  
When touching, just touch.  
When thinking, just think.  
When playing, just play,  
And enjoy the feeling of each moment and each day.*

NARAYAN LIEBENSON,  
*When Singing Just Sing: Life as Meditation*



## AGRADECIMIENTOS

Mediante estas líneas me gustaría expresar mi más sincero agradecimiento a todas aquellas personas que me habéis acompañado en esta etapa; aquellas que comenzasteis conmigo, las que habéis formado parte de mi día a día, las que os unisteis por el camino, y todas aquellas que desde la distancia estáis presentes en todo momento.

En primer lugar, quiero dar las gracias a mis directoras de tesis: Liria e Izaskun. Gracias por vuestra ayuda, paciencia y dedicación; por ser la luz que me ha guiado durante todo el proceso de doctorado, y por darme las herramientas necesarias para ser independiente. Me gustaría agradecer también la labor de Esther, directora de *Deusto Stress Research* (DSR), por concederme la oportunidad de ser una más en el equipo. La mayor parte de esta tesis ha sido posible gracias a lo que me has enseñado a lo largo de todos estos años.

Me gustaría reconocer también el apoyo de mi familia. A mis padres, por estar siempre presentes, por ser el ancla y los cimientos en los que apoyarme, y por transmitirme todos los valores. Jaume, por ofrecerme una visión diferente de la vida, tu temple y tu constancia. Abuelos y tía, por el cariño incondicional y la presencia que me habéis regalado a lo largo de todos estos años. Gracias, Pere, por tu apoyo incondicional, por tu paciencia infinita, y por tus sabios consejos.

Gracias a mis amigas, Amaia, Esti y Nerea, por todos los momentos que hemos compartido juntas, y por ser siempre un gran apoyo. A mis amigos, Hector y Unai, por todas nuestras aventuras y por vuestro apoyo incondicional. Gracias Agurne, por estar siempre presente a lo largo de todos estos años. Iris, por ser mi persona vitamina. Gracias Rebekka por formar parte de mi vida desde la distancia.

Gracias *Emergency Meeting*, por ser los mejores compañeros de este bonito viaje; por estar en todos los momentos complicados de la tesis, y, sobre todo, por haber podido compartir con vosotros los mejores momentos. Por celebrar los rechazos, y más aún los *reject and resubmit*. Joana, por la paciencia y tranquilidad que transmites, por los buenos ratos y la convivencia, por enseñarme toda la psicología que no se aprende con los libros. Aida, por tu sinceridad, tu buen hacer, tu compromiso y tu organización, por darme estabilidad y ser muchas veces mi punto de referencia, mi guía, y experimentar esta última etapa del doctorado juntas. Ángel, por tu ayuda incondicional, por estar siempre, y por hacer sencillo todo lo que parece tan complicado.

Gracias al resto de miembros de DSR, por todo lo que me habéis aportado. Nere, Ainara, Joana por todo lo que me enseñáis cada día, y porque no me imagino DSR sin vosotras; por toda vuestra ayuda, sobre todo en los primeros momentos. Lucía y Anik, por todo lo que me enseñasteis. Y por los que habéis estado en algún momento, Andreaa, Maite, Eneko, Ainhoa, Aitor. Gracias.

Gracias Laura por los meses en Cluj. Por todo tu tiempo y dedicación. Gracias a todas aquellas personas que conocí durante mi estancia en Research in Individual Differences and Legal Psychology (RIDDLE) Lab. Flavia, Bogdan, Maria, Narcisa.

Agradezco también al resto de personas que han pasado en algún momento por DSR, dejando una huella tras su paso; aquellas personas que ahora siguen otros caminos, los que están lejos, y los que, aunque se fueron pronto, estuvieron durante mis inicios. Esta tesis tiene una pequeña parte de todos y cada uno de vosotros.

Finalmente agradecer tanto a la Universidad de Deusto, por la financiación mediante la ayuda FPI, como a los centros escolares, por su participación en el estudio. Gracias a todos los docentes que dedicasteis vuestro tiempo a organizar este proyecto. Gracias a todos los alumnos/as, padres, madres y tutores que respondisteis los cuestionarios.

Muchas gracias a todos,

Estíbaliz

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## ABSTRACT

The main objective of this doctoral thesis is to explore the beneficial role of dispositional mindfulness and mindful parenting in promoting adolescent mental health. The thesis focuses on dispositional mindfulness concerning stressful situations for adolescents, such as ostracism and COVID-19. The thesis also addresses the role of dispositional mindfulness and mindful parenting in protecting against general internalizing and externalizing psychological symptoms in adolescents.

The thesis is divided into six chapters. Chapter I provides an overview of mental health during adolescence. First, the most relevant epidemiological data on mental health in adolescence are described, including the consequences of adolescents' psychological symptoms and the most relevant theoretical models. Second, the consequences of ostracism and COVID-19 for adolescent mental health are presented, and the chapter considers how dispositional mindfulness could be a protective factor in these situations. Third, a review of dispositional mindfulness and mindful parenting and their relationship with adolescent mental health is presented. Fourth, the chapter presents the main conclusions of this review and the questions that give rise to the paper's objectives and hypotheses.

The following chapters (Chapters II, III, IV, and V) correspond to the four empirical studies of which the doctoral thesis is composed. They are presented through the following scientific articles:

- Royuela-Colomer, E., Orue, I., Ren, D., & Fernández-González, L. (2022). The association between dispositional mindfulness and need threat following ostracism in Spanish adolescents: The moderating role of age. *Psicothema*, 34(1), 117-125. <https://doi.org/10.7334/psicothema2021.147>

- Royuela-Colomer, E., Orue, I., Fernández-González, L., & Calvete, E. (2022). The association between exposure to COVID-19, internalizing symptoms, and dispositional mindfulness in adolescents: A longitudinal pre- and during-pandemic study, 1-13. *Child Psychiatry & Human Development*. <https://doi.org/10.1007/s10578-022-01349-0>
- Royuela-Colomer, E., Fernández-González, L. & Orue, I. (2021). Longitudinal associations between internalizing symptoms, dispositional mindfulness, rumination and impulsivity in adolescents. *Journal of Youth and Adolescence*, 50, 2067–2078. <https://doi.org/10.1007/s10964-021-01476-2>
- Royuela-Colomer, E., Orue, I., Visu-Petra, L., & Fernández-González, L. (under review). The protective role of mindful parenting for externalizing problems in adolescents

The first and third studies have been published in high-impact scientific journals (Q1 in Journal Citation Reports [JCR]), while the remaining two are currently under review in two journals included in the JCR.

The first study found an association between dispositional mindfulness and need threat following ostracism, with this association being significant only in older adolescents. The second study demonstrated that, during the first two waves of the pandemic, increased contact with COVID-19 predicted an increase in adolescents' internalizing symptoms, and this relationship was mediated by a decrease in levels of dispositional mindfulness. The third study identified several longitudinal relationships between dispositional mindfulness, internalizing symptoms (anxiety, stress, and depression), impulsivity, and rumination. The two studies included in the fourth article showed a protective role of mindful parenting against externalizing symptoms in

adolescents. The relationship between emotional symptoms and behavioral problems was only significant in those adolescents whose parents had a low level of *being in the moment with the child* facet of mindful parenting. In addition, antisocial behavior presented temporal stability only in those adolescents whose parents had low levels of the mindful parenting facet of *mindful discipline*.

The main conclusion of this thesis is that both dispositional mindfulness and mindful parenting have a protective role against internalizing and externalizing symptoms in adolescents. This thesis suggests that age is an essential factor to consider in situations of social exclusion, and factors such as impulsivity and COVID-19 contact negatively affect dispositional mindfulness. These findings have practical implications for developing and implementing mindfulness and mindful parenting-based mental health prevention and promotion programs during adolescence.

## RESUMEN

El objetivo principal de esta tesis doctoral es explorar el rol beneficioso del rasgo de mindfulness y el mindful parenting en la promoción de la salud mental en la adolescencia. Por un lado, la tesis se centra en el rasgo de mindfulness en relación a dos situaciones que pueden asociarse con malestar y estrés en los y las adolescentes, como son el ostracismo y la COVID-19. Por otro lado, la tesis aborda el papel protector del rasgo de mindfulness y el mindful parenting frente a los síntomas psicológicos generales, tanto internalizantes como externalizantes, de los y las adolescentes.

La tesis doctoral se divide en seis capítulos. El primer capítulo ofrece una visión general sobre la salud mental durante la adolescencia. En primer lugar, se describen los datos epidemiológicos más relevantes en cuanto a salud mental en la adolescencia, incluyendo sus consecuencias y centrándose en los modelos teóricos más relevantes. En segundo lugar, se presentan las consecuencias del ostracismo y la COVID-19 para la salud mental de los y las adolescentes, y como el rasgo de mindfulness podría ser un factor protector ante estas situaciones. En tercer lugar, se presenta una revisión sobre el rasgo de mindfulness y el mindful parenting y su relación con la salud mental en los y las adolescentes. Para finalizar, en este apartado se recogen las principales conclusiones de esta revisión, así como las cuestiones que dan lugar a los objetivos e hipótesis de la tesis doctoral.

Las siguientes secciones (Capítulos II, III, IV y V) corresponden a los cuatro estudios empíricos de los que se compone la tesis doctoral. Se presentan a través de los siguientes artículos científicos:

- Royuela-Colomer, E., Orue, I., Ren, D., & Fernández-González, L. (2022). The association between dispositional mindfulness and need threat

following ostracism in Spanish adolescents: The moderating role of age. *Psicothema*, 34(1), 117-125. <https://doi.org/10.7334/psicothema2021.147>

- Royuela-Colomer, E., Orue, I., Fernández-González, L., & Calvete, E. (2022). The association between exposure to COVID-19, internalizing symptoms, and dispositional mindfulness in adolescents: A longitudinal pre- and during-pandemic study, 1-13. *Child Psychiatry & Human Development*. <https://doi.org/10.1007/s10578-022-01349-0>
- Royuela-Colomer, E., Fernández-González, L. & Orue, I. (2021). Longitudinal associations between internalizing symptoms, dispositional mindfulness, rumination and impulsivity in adolescents. *Journal of Youth and Adolescence*, 50, 2067–2078. <https://doi.org/10.1007/s10964-021-01476-2>
- Royuela-Colomer, E., Orue, I., Visu-Petra, L., & Fernández-González, L. (under review). The protective role of mindful parenting for externalizing problems in adolescents

Los estudios primero y tercero están publicados en revistas científicas de alto impacto (Q1 en Journal Citation Reports [JCR]), mientras que los dos restantes se encuentran actualmente en revisión en dos revistas con impacto JCR.

El primer estudio encontró una asociación entre el rasgo de mindfulness y la amenaza percibida tras el ostracismo moderada por la edad, siendo esta asociación significativa solo en los y las adolescentes más mayores. El segundo estudio demostró que, durante las dos primeras olas de la pandemia, un mayor contacto con la COVID-19 predijo un aumento en los síntomas internalizantes de los y las adolescentes, y esta relación estuvo mediada por una disminución en los niveles del rasgo de mindfulness. El tercer estudio identificó varias relaciones longitudinales entre el rasgo de mindfulness,

los síntomas internalizantes (ansiedad, estrés y depresión) y la impulsividad y rumiación. Los dos estudios incluidos en el cuarto artículo mostraron un papel protector del mindful parenting frente a los síntomas externalizantes de los y las adolescentes. Por un lado, la relación entre los síntomas emocionales y problemas de conducta solo fue significativa en aquellos adolescentes cuyos progenitores tenían un nivel bajo en la faceta *estar en el momento con el hijo/a*. Por otro lado, la conducta antisocial presentó una estabilidad temporal solo en aquellos hijos/as cuyos progenitores tuvieron niveles bajos en la faceta *disciplina consciente*.

La conclusión principal de esta tesis es que tanto el rasgo de mindfulness como el mindful parenting ejercen un rol protector frente a los síntomas internalizantes y externalizantes de los y las adolescentes. Es importante destacar que, en situaciones de exclusión social, la edad es un factor importante a considerar, y que factores como la impulsividad y el contacto con la COVID-19 afectan negativamente al rasgo de mindfulness. Los hallazgos de esta tesis podrían tener importantes implicaciones a la hora de desarrollar e implementar programas de prevención y promoción de la salud mental durante la adolescencia basados en mindfulness y mindful parenting.

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# Chapter I: Introduction

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## CHAPTER I: INTRODUCTION

This chapter provides a general outline of mental health during adolescence, focusing on the negative consequences of two stressful situations: ostracism and COVID-19. The chapter then introduces the beneficial role of dispositional mindfulness and its association with rumination and impulsivity in adolescents. The final section discusses mindful parenting as a protective factor during adolescence. The chapter ends with the thesis' theoretical justification.

### 1. Mental Health in Adolescence

#### *1.1. Epidemiological Data*

Adolescence is marked by social, psychological, biological, and hormonal changes, often associated with increased stress and impaired mental health (Rapee et al., 2019; Romeo, 2013). Internalizing symptoms (e.g., depression and anxiety) and externalizing symptoms (e.g., conduct problems and antisocial behavior) are common among adolescents (Graber, 2013; J. Liu, 2004). In general mental health disorders increase significantly in the transition between childhood and adolescence (Costello et al., 2011; Ghandour et al., 2019). The prevention of these early symptoms during adolescence is crucial, as they are a risk factor for various mental health disorders that may persist into adulthood (Cicchetti & Rogosch, 2002).

In 2018, the World Health Organization (WHO) published a study of the prevalence and distribution of mental disorders among approximately 14,000 first-year college students from eight different countries, including Spain (Auerbach et al., 2018). The results showed that 35% of students were diagnosed with at least one mental disorder, including major depression, mania or hypomania, generalized anxiety disorder, panic disorder, alcohol use disorder, and substance use disorder. The most striking result from

this study was that mental health symptoms begin to manifest during early or mid-adolescence.

Several studies have explored the prevalence of mental health symptoms and psychiatric disorders among children and adolescents. For example, Costello et al. (2011) found that one in five adolescents met the criteria for a psychiatric disorder, and Merikangas et al. (2010) suggested a figure of one in four. In a meta-analysis exploring the worldwide prevalence of mental disorders, 13.4% of children and adolescents had a mental health problem, specifically 6.5% any anxiety disorder, 2.6% any depressive disorder, 3.4% attention-deficit hyperactivity disorder (ADHD), and 5.7% any disruptive disorder (Polanczyk et al., 2015). Similarly, a study that included 12,000 adolescents from 11 European countries found a prevalence of 5.8% and 10.5% for any anxiety or depressive disorder, respectively (Balázs et al., 2013). This study also explored subthreshold symptoms, which were even higher: 32% for anxiety and 29.2% for depression.

Data from epidemiological studies from the last two decades suggest that there has been an increase in the prevalence of mental health disorders in children, adolescents, and youth (Collishaw & Sellers, 2020). According to a report published by UNICEF using pre-pandemic data from 2019, 13.2% of adolescents aged 10 to 19 worldwide suffered from a mental health disorder (UNICEF, 2021). The prevalence was higher among European adolescents (16.3%), with the highest prevalence (20.8%) in Spain. According to this report, the most prevalent mental disorders among adolescents in Europe are anxiety and depression (54.8%), ADHD (19.5%), conduct disorder (18.1%), and bipolar disorder (4%).

Several studies evidenced this increasing trend in mental health problems among adolescents. For instance, a study of adolescents and young adults in the USA found a

significant increase in the prevalence of depression from 8.7% to 11.3% between 2005 and 2014 (Mojtabai et al., 2016). Another study reported an increase in major depressive disorder from 8.7% to 13.2% between 2008 and 2017 among adolescents aged 12 to 17 (Twenge et al., 2019). Similarly, a meta-analysis of mental health in adolescents found an increase in depressive symptoms from 24% between 2001 and 2010 to 37% between 2011 and 2020 (Shorey et al., 2021).

Depression is not the only issue, as there is an increased incidence of other mental health problems. For instance, one study among UK adolescents found an increase from 2005 to 2015 in depressive symptoms, self-harm, emotional difficulties, conduct problems, ADHD, and peer problems (Patalay & Gage, 2019). The study also reported that adolescents slept less and had a higher body mass index in 2015 compared to 2005. The growth in mental health problems in adolescents is a significant issue for society as it has negative and long-lasting consequences.

### ***1.2. The Consequences of Mental Health Problems in Adolescence***

Mental health problems have adverse and long-lasting consequences for adolescents, their families, and society, and they pose a risk for adult mental health and adjustment. For example, adolescent' psychopathology is associated with poor academic achievement, problematic internet use, social exclusion, unwanted or early pregnancy, self-harm, and suicide attempts (Clayborne et al., 2019; Evans, 2018; Orri et al., 2020; Reinhard et al., 2020). Moreover, the co-occurrence of symptoms is common among adolescents, and some symptoms are associated with developing mental health disorders or other symptoms that can worsen prognosis and treatment (Essau & de la Torre-Luque, 2021; Taylor et al., 2020).

Adolescent mental health predicts adult health and social outcomes. According to a recent meta-analysis of longitudinal studies, internalizing and externalizing symptoms

in young people predict future depressive symptoms, legal problems, anxiety, and suicide attempts (Soto-Sanz et al., 2019). Similarly, other studies found that symptoms in adolescence predict work incapacity (Balázs et al., 2013), worse social functioning in adulthood (Bongers et al., 2008), and problematic alcohol use in young adulthood (Meque et al., 2019). Several studies have concluded that adolescent depression increases the risk of later mental health problems (McLeod et al., 2016). Specifically, it increases the chances of depression in adulthood (D. Johnson et al., 2018). Furthermore, according to a recent longitudinal study, adolescent depression is associated with adult anxiety, substance use disorders, and poor social functioning (Copeland et al., 2021).

### ***1.3. Models of Adolescents' Mental Health***

According to developmental conceptualizations, psychopathology in children and adolescents follows developmental pathways and trajectories emerging from dynamic interactions between contextual and individual factors (Sroufe, 2013). Although these factors can pose a risk or lead to vulnerability in the individual, they can also foster resilience or play a protective role. As Compas (2009) indicated, “protective factors are characteristics of the individual or the environment that are associated with positive outcomes in the face of risk, whereas vulnerability factors are associated with negative outcomes in at-risk individuals” (p. 266).

Several studies have considered the risk and protective factors in adolescent mental health. The risk factors include genetic predispositions; adverse childhood experiences, such as parental separation or family violence; poverty and socioeconomic status; parental mental illness; drug or alcohol use; family factors (e.g., parenting styles and parenting stress); lifestyle (e.g., diet, sleep, exercise); problems with peers; problematic computer and social media use; and social and cognitive vulnerabilities, such

as rumination and negative inferential style (Arseneault, 2018; Hankin et al., 2015; Ruiz-Hernández et al., 2018; Schweizer et al., 2021; Taylor et al., 2020).

Protective and resilience factors can mitigate the effects of the risk factors and vulnerabilities. These factors include personal characteristics such as optimism, emotion regulation, mindfulness, self-regulation, and inhibitory control; positive habits (e.g., involvement in physical activity); family context and parental factors, namely mindful parenting or parenting practices; and positive relationships with others, including a sense of belonging, feeling connected to others, and social support (Chambers et al., 2015; Essau & de la Torre-Luque, 2021; Fosco et al., 2019; Maglica et al., 2021; Mesman et al., 2021; Pallozzi et al., 2017; Yang et al., 2021).

Several aspects must be considered when studying risk and protective factors for child and adolescent psychopathology. First, risk and protective factors can be stable or change through development; hence, longitudinal studies are essential in this field (Compas, 2009). Second, it is vital to study the underlying mechanisms and the circumstances under which risk and protective factors operate and for whom (Compas, 2009). Thus, mediation and moderation analyses are essential in developmental research. Moderation analyses reveal the complex interactions between risk and protective factors and individual characteristics, such as age or sex. That is, moderation explores whether a third variable has an effect on the strength or direction of the relationship between a predictor and an outcome variable. In contrast, mediation analyses are suitable for studying the process and mechanisms through which two variables are related.

Third, despite knowing that certain factors pose a risk for adolescents, not everyone who possesses them will directly develop a mental health problem; these problems arise in interaction with other factors. According to the diathesis-stress model, a combination of risk factors in conjunction with a trigger (usually in the environment) is

necessary (Broerman, 2020). Consequently, in the absence of a trigger such as a stressful event, an adolescent or child may be vulnerable but never develop mental illness.

Fourth, the interrelations between risk and protective factors are complex and dynamic. Indeed, in line with transactional models of psychopathology, the association between symptoms and risk and protective factors can be reciprocal and bidirectional (Hankin & Abramson, 2001; Leve & Cicchetti, 2016). Hence, risk and protective factors can increase or reduce psychological symptoms, and symptoms can directly influence vulnerabilities and protective factors.

#### ***1.4. Summary***

Adolescence is associated with increased mental health problems, which have negative consequences for adolescents and predict future mental health. Therefore, it is essential to identify the protective factors for mental health during this stage of life and how these factors can protect against mental health problems in specific risk situations. The following section focuses on ostracism and COVID-19, two particularly stressful circumstances that pose a psychopathology risk for adolescents, and the protective role of dispositional mindfulness.

## **2. Impact of Ostracism and COVID-19 on Adolescents' Mental Health**

### ***2.1. Ostracism and Social Exclusion***

#### **2.1.1. Social Interactions During Adolescence**

Social interactions with peers are fundamental during development. As children reach adolescence, they spend an increasing amount of time with peers and, as they grow up, their patterns of interaction become more complex. Additionally, peer groups are a source of influence that modulates personality, identity formation, and other aspects of adolescents' lives (B. B. Brown & Larson, 2009; Choukas-Bradley & Nesi, 2020). Social

interactions with peers are fundamental for healthy psychological and physical development during adolescence (Prinstein & Giletta, 2020; Sroufe et al., 2009).

Currently, many adolescents' social interactions take place online. In a 2020 Spanish national survey on information and communication technologies, 94.5% and 99.8% of adolescents aged 10–15 and 16–24, respectively, reported regular internet use. Moreover, it is estimated that 68.8% of adolescents over 12 years have mobile phones, which rises to 95.5% for adolescents over 15 years of age (Instituto Nacional de Estadística, 2020). Similarly, a study among 956 Spanish adolescents concluded that youths spend much time on the internet and use it primarily as a means of communication, with WhatsApp and social networks being the most frequently used applications (Reolid-Martínez et al., 2016).

The internet has significantly changed how adolescents socialize, and online interaction differs from peer-to-peer relations in several aspects. For example, online interactions are available 24/7, offer an opportunity to communicate with unknown people, and, in most cases, are unsupervised by adults (Monks & van Zalk, 2020). The use of the internet for socializing has benefits, such as the development of new relationships or the maintenance of long-distance friendships, but it also entails risks, including problematic internet use and cyberbullying victimization (Kuss et al., 2013; Machimbarrena et al., 2018; Tokunaga, 2010).

A significant aspect of positive social relationships, both online and offline, is acceptance from others. Everyone requires a sense of belonging, but this can be threatened by social exclusion situations that can occur every day (Baumeister et al., 2007). For example, a meta-analysis found that social rejection lowers mood and self-esteem and may lead to aggression if there is an attempt to gain control over the situation (Gerber &

Wheeler, 2009). Thus, the study of social rejection is a major area of interest within social developmental psychology.

### **2.1.2. Ostracism**

Ostracism is a form of social rejection that involves being ignored and excluded (Williams, 2007) and entails negative consequences. Ostracized individuals report an increase in negative mood and emotions (depression or anxiety), a decrease in positive moods, a feeling of fundamental needs being threatened (such as the need to belong), and an increase in suicidal thoughts (Abrams et al., 2011; Chen et al., 2020; Pharo et al., 2011; Timeo et al., 2019). For example, Chen et al. (2020) demonstrated a causal association between ostracism and suicidal thoughts and found that perceived meaning in life was a mediating mechanism in this association. Another study found a longitudinal association between ostracism and depression, indicating that ostracism is predicted and predicts depression three years later (Rudert et al., 2021). A 2020 systematic review described a vicious cycle between ostracism and psychopathology among psychiatric patients (including people with borderline personality disorders, major depressive disorder, anxiety, autism spectrum disorder, schizophrenia, substance use disorders, and eating disorders), proposing that ostracism influences and is influenced by psychopathology (Reinhard et al., 2020).

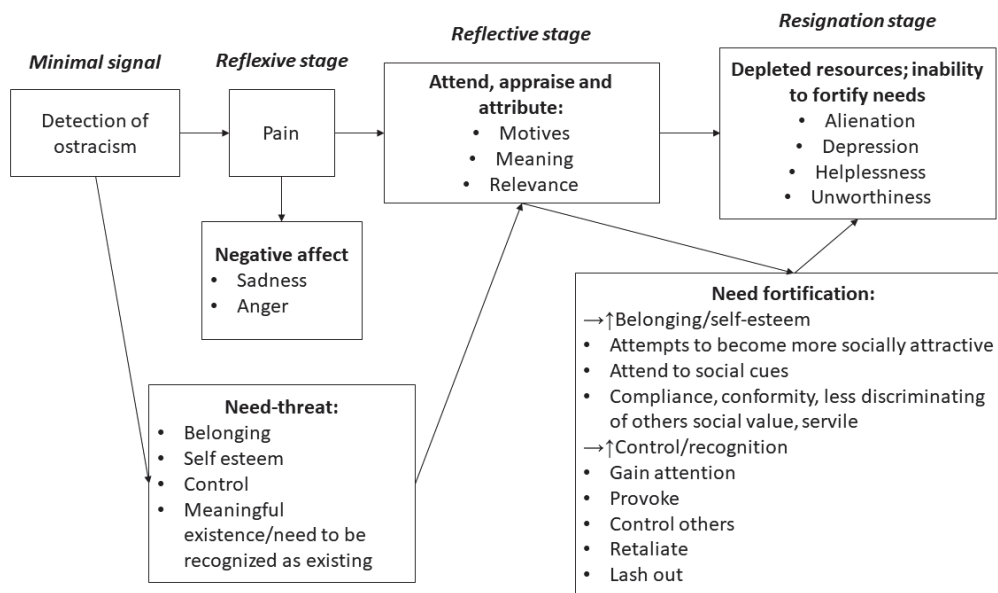
### **2.1.3. Need Threat Model**

To see how individuals respond to ostracism, Williams (2009) introduced the temporal need threat model of ostracism. According to this model (Figure 1), there is a reflexive stage during the ostracism episode and immediately after it in which short periods of ostracism are associated with a sense of pain that increases negative affect (sadness and anger) and threatens four basic psychological needs: the sense of belonging, the need to maintain high self-esteem, the need to perceive control over the social

environment, and the need for a meaningful existence. Many studies have found that these four needs are frequently threatened in adults (Chen et al., 2020; Williams et al., 2000), children, and adolescents (Pharo et al., 2011).

**Figure 1.**

*Temporal Need Threat Model of Ostracism (Williams, 2009)*



*Note.* Source: Williams, K. D. (2009). Chapter 6, Ostracism. In *Advances in Experimental Social Psychological Psychology* (Vol. 41, pp. 275–314). [https://doi.org/10.1016/S0065-2601\(08\)00406-1](https://doi.org/10.1016/S0065-2601(08)00406-1)

Following the reflexive stage, there is a reflective stage, during which the individual tries to recover and cope with ostracism by engaging in a variety of responses, including behaviors that demonstrate a desire to be liked and include aggressive and antisocial behaviors, a stunned and affectless state, or attempts to flee from the situation. Finally, if ostracism continues, the coping resources are depleted, leading to a resignation stage, which involves feelings of depression and helplessness.

Cyberball is one of the most widely used paradigms and manipulations of ostracism (for a review of other paradigms, see Williams, 2007). This paradigm is

adequate to study how adults and adolescents react to being ignored and excluded online (Hartgerink et al., 2015; Wölfer & Scheithauer, 2013). Chapter II gives a detailed description of the Cyberball paradigm and its procedures.

#### **2.1.4. Ostracism in Adolescents**

Situations of ostracism are common among adolescents and are increasing due to the frequent use of social media platforms. Adolescents face daily situations that may involve some form of ostracism, including when someone deliberately or inadvertently forgets to communicate the time or place for a meeting to someone in the group or when someone is ignored on a social media platform or expelled from a WhatsApp group. The issue of ostracism in young people is central to studies of adolescents' socio-emotional development, because they are particularly vulnerable to ostracism's negative consequences (Abrams et al., 2011; Pharo et al., 2011; Timeo et al., 2019).

In the past two decades, there has been a growing interest in exploring the detrimental effects of social exclusion and ostracism among adolescent populations. A 2019 literature review concluded that ostracism negatively affects children and adolescents' emotions, cognitive functions, behaviors, and health (Timeo et al., 2019). Being ostracized in adolescence has been associated with decreased positive mood and self-esteem and a decrease in fundamental needs (Pharo et al., 2011; Ruggieri et al., 2013b; Sebastian et al., 2010). This effect might be more harmful to adolescents who have experienced previous victimization episodes (Ruggieri et al., 2013a). Additionally, ostracism modulates adolescents' behaviors by increasing aggression (Gabbadini & Riva, 2018) and decreasing prosocial behaviors (Coyne et al., 2011). Overall, these recent studies indicate that ostracism leads to significant, far-reaching, and adverse consequences in children and adolescents.

Studies exploring differences between adults and young populations have concluded that adolescents are more sensitive to social exclusion than adults (Pharo et al., 2011; Sebastian et al., 2010). For example, Pharo et al. (2011) found that the impact of ostracism on the four basic needs was more substantial in adolescents and emerging adults than young adults. Similarly, Sebastian et al. (2010) reported more substantial affective consequences of ostracism on adolescents compared to adults. Neuroimaging studies have also supported developmental differences (Bolling et al., 2011; Tang et al., 2019), identifying variances in brain activity between adults and children and adolescents during social exclusion. This result suggests an enhanced reaction to social exclusion during adolescence. Therefore, social exclusion seems to be especially harmful to adolescents, for whom social relationships play a critical role, and who, being in the process of development, do not yet possess adequate resources to cope with ostracism.

#### **2.1.5. Coping with the Consequences of Ostracism in Adolescents**

Although many studies have explored the impact of ostracism during adolescence and how it differs between young and adult populations, few researchers have examined the protective mechanisms and personal characteristics that could mitigate the effect of ostracism on adolescents. Timeo et al. (2019) proposed several coping strategies that adolescents could use to deal with exclusion once it has occurred, grouped into changing perspectives and restoring the threatened needs.

Changing perspective strategies include cognitive processes aimed at reinterpreting the exclusion situation, thinking differently about the situation, seeing things from a broader perspective, and changing the meaning of the exclusion experience. There are four strategies in this category. First, adopting a detached perspective, self-distancing from the situation, and seeing things as an external observer could help reduce emotional reactions to the situation. Second, adopting a positive reappraisal can reframe

a negative situation into a positive one, such as thinking that personality is not fixed and everyone can change, known as implicit theories of personality (Yeager et al., 2013). Third, adolescents might benefit from a mindful approach, accepting exclusion situations as harmful but normal and approaching them with awareness instead of ruminating on them. Fourth, refocusing by moving the attention to other things and distracting the mind from the current exclusion situation can help reduce anxiety in the short term.

In contrast, strategies to restore the threatened needs seek to reinforce the self rather than analyze the external situation. There are three strategies in this category: self-affirmation to remind a person of their positive characteristics and values; thinking about positive social relationships with friends or family as a reminder of social bonds; and increasing and restoring a sense of control and power.

In this vein, dispositional mindfulness could be the basis for many of these strategies as it entails the capacity of observing, accepting, and refocusing attention; therefore, mindfulness could be beneficial in the face of social exclusion. In support of this idea, several studies have reported an association between ostracism and mindfulness. For example, one study found that the combination of high levels of dispositional mindfulness and low levels of perceived threat is related to less decline in positive mood and friendliness following exclusion in the Cyberball game (Clear et al., 2021). Similarly, a neuroimaging study found that the association between dispositional mindfulness and ostracism distress was mediated by lower activation in brain areas associated with the inhibition of negative affect and the generation of social distress, which might facilitate emotion regulation following social exclusion episodes (Martelli et al., 2018). A recent study indicated that dispositional mindfulness buffers the impact of social media exclusion on distress, negative emotion, hostility, and antisocial tendency (Poon & Jiang,

2020). These studies indicate an association between dispositional mindfulness and ostracism in adults; however, no studies have explored this association in adolescents.

## ***2.2. COVID-19***

The emergence of COVID-19 in December 2019, later qualified as a pandemic by the WHO, poses an unprecedented challenge for society. The pandemic has severely disrupted every aspect of life, forcing people to adapt to novel and unique situations never encountered previously, causing instability and uncertainty. In the initial stages of COVID-19, Spain was one of the most affected countries (Salgotra et al., 2020), quickly implementing multiple severe restrictions.

On March 14, 2020, Spain declared a state of emergency. The initial restrictions included home confinement, border closures, and cessation of all non-essential activities, necessitating school and university closures. The state of emergency was initially established for 15 days, but it was extended for three months and six days, ending on June 21, 2020. The restrictions were relaxed on May 2, when people were allowed to leave home at prescribed hours. It is essential to note that, unlike adults, who were allowed to buy groceries or perform essential work activities at the beginning of the pandemic, children and adolescents were confined to their homes for six weeks.

Despite children and adolescents having lower susceptibility to COVID-19 infection and seldom developing severe cases of the disease (Mantovani et al., 2021; Viner et al., 2021), they suffer the indirect consequences of the pandemic, such as the measures taken to reduce its spread, and the consequences of the virus on family members and relatives. The pandemic disrupted essential areas of development, such as peer relationships, education, or participation in extracurricular and physical activities. In addition, internet and social media use sharply increased as students used them for online school classes, maintaining social relationships, keeping themselves entertained, and

reducing distress during quarantine and lockdown (Cauberghe et al., 2021; Meade, 2021). Researchers and clinicians warned of the devastating effects of the pandemic on children and adolescents (Novins et al., 2021).

### **2.2.1. COVID-19 and Mental Health in Adolescents**

Initial evidence indicates a worsening of adolescent mental health following the emergence of COVID-19. Several reviews have indicated an increase in symptoms of depression, anxiety, stress, and posttraumatic stress (Giannopoulou et al., 2021; Jones et al., 2021; Meade et al., 2020; Meherali et al., 2021; Samji et al., 2021). Similarly, several studies have suggested a decrease in health-related quality of life, satisfaction with life, and resilience (Jiang et al., 2021; Myhr et al., 2021; Nobari et al., 2021; Ravens-Sieberer, Kaman, Erhart, Devine, et al., 2021; Ravens-Sieberer, Kaman, Erhart, Otto, et al., 2021). Studies have also reported an increase in nonsuicidal self-injury, eating disorders, and sleep problems (Ren et al., 2021; Vall-Roqué et al., 2021; Zetterqvist et al., 2021). Furthermore, screen time and social media use increased during confinement, producing psychological distress in adolescents (Caffo et al., 2021; Francisco et al., 2020).

Many factors attributed directly and indirectly to the pandemic have damaged adolescent mental health. These aspects include social isolation, COVID-19-related fears (i.e., health and safety concerns and fear of someone close becoming infected); increased parental stress and family conflict; loss of pleasant, daily activities and routines (i.e., school, extracurricular activities, and sports); reduced physical activity; academic worries and adjustment to online teaching; and increased internet and screen use (Francisco et al., 2020; Hsieh et al., 2021; Lessard & Puhl, 2021; Meade, 2021; Melero et al., 2021; Novins et al., 2021; Samji et al., 2021). In one study, adolescents indicated that the most stressful aspects of the pandemic were not being able to see their friends, fear of someone close contracting COVID-19, developing severe symptoms, and the possibility of death

(Magson et al., 2021). In addition, other studies found that fear and uncertainty were particularly distressful for adolescents (Ghosh et al., 2020; Panda et al., 2021), and exposure to excessive information related to COVID-19 was associated with poor mental health (Marchi et al., 2021).

It is noteworthy that many of these studies refer to the early stages of the pandemic, and the long-term and cumulative effect of the pandemic may involve a more significant effect on mental health. A recent study among young people in Spain reported levels of anxiety, stress, and depression higher than in previous studies (Vall-Roqué et al., 2021). The authors suggested that this elevated prevalence could be attributed to the initial studies being conducted at the beginning of the pandemic, not reflecting the current reality. At the beginning of the pandemic, adolescents may not have been fully aware of the severity and scope of the situation. Indeed, researchers have recently used the term “pandemic fatigue” to describe the feeling that the pandemic is more prolonged than initially expected and the fear of restrictions being implemented again at any time, which may be associated with distress in young individuals (Branquinho et al., 2022). Therefore, we could be facing a much worse situation than previous studies have suggested.

### **2.2.2. Coping with the Consequences of COVID-19 in Adolescents**

Numerous studies have investigated the protective factors and personal characteristics that could mitigate the impact of COVID-19 on adolescent mental health. Some researchers have focused on the benefits of social support, with several studies reporting that feeling connected and having social support during lockdown was associated with less distress (Jones et al., 2021; Magson et al., 2021; Postigo-Zegarra et al., 2021). In addition, in a sample of Spanish adolescents, being in a romantic relationship was related to reduced depression, anxiety, and stress symptoms during confinement (Tamarit et al., 2020). Similarly, several studies have found that good parent-child

relationships and family climate protect against the pandemic's negative consequences (Caffo et al., 2021; Kerekes et al., 2021; Ravens-Sieberer, Kaman, Erhart, Devine, et al., 2021). It is also apparent that a sense of belonging at school is a potential protective factor for adolescents' mental health during the pandemic (Ramirez et al., 2021).

In terms of individual characteristics, studies have emphasized the beneficial role of resilience, self-efficacy, effective coping strategies, and positive emotion regulation strategies (Hsieh et al., 2021; Hussong et al., 2021; Marchi et al., 2021; Mesman et al., 2021). In this vein, mindfulness has been identified as a protective factor for mental health during the pandemic (Hsieh et al., 2021; Miller et al., 2021). One study found that fear of COVID-19 was inversely associated with mindfulness (Belen, 2021). Moreover, a study involving a natural catastrophe found that this event was followed by a reduction in mindfulness levels, which could worsen emotion regulation and coping (An et al., 2018). The vast majority of the work in this area has focused on adult or college samples, and more studies are needed on the association between dispositional mindfulness and COVID-19 in adolescents.

### ***2.3. Summary***

Ostracism and COVID-19 are two stressful situations associated with an impairment of mental health, especially during adolescence. The studies reviewed above indicate that dispositional mindfulness could be a protective factor in these two risk situations. The following section describes the construct of dispositional mindfulness and its association with adolescent mental health.

## **3. Mindfulness as a Protective Factor Against Mental Health Problems**

Mindfulness originated in the Buddhist tradition more than 2,500 years ago. The word mindfulness is a translation of the Buddhist Pali word "Sati," which means present,

attention, and awareness. The interest in mindfulness in the context of health and wellbeing began in the 1980s when Jon Kabat-Zinn (1982) developed Mindfulness-Based Stress Reduction (MBSR), an eight-week group program for patients with chronic pain. The first study of MBSR highlighted a reduction in pain levels attributed to the regular practice of mindfulness meditation (J. Kabat-Zinn, 1982). Additionally, Kabat-Zinn (1982) suggested that mindfulness allowed patients to observe mental events without being caught up in them, increasing intentional awareness and allowing people to recognize and cope with stressful situations. Since this initial research, new attempts have been made to operationalize the mindfulness construct and determine its health benefits.

### *3.1. Dispositional Mindfulness: Conceptualization and Theoretical Models*

According to Kabat-Zinn (2003), mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the experience moment by moment” (J. Kabat-Zinn, 2003, p. 145). Mindfulness can be dispositional (i.e., a trait or a basic tendency) or cultivated (i.e., trained or practiced; Rau & Williams, 2016). As a disposition, mindfulness is the natural tendency to pay attention to what is happening in the present moment with an open and nonjudgmental attitude (K. W. Brown & Ryan, 2003).

Dispositional mindfulness is associated with psychological health. A recent systematic review of the benefits of dispositional mindfulness in non-clinical populations, which included 93 papers, reported a negative association between dispositional mindfulness and mental health symptoms (e.g., depression), a positive association with adaptive cognitive processes (e.g., less rumination or catastrophizing), emotional processing, and regulation (Tomlinson et al., 2018). Moreover, evidence suggests that dispositional mindfulness increases with mindfulness practice, and this increase has been considered one of the mechanisms by which mindfulness-based interventions improve

wellbeing and reduce psychological symptoms (Lau et al., 2006; Maddock & Blair, 2021).

Existing research has described the multidimensional nature of dispositional mindfulness. Some researchers have distinguished two elements of dispositional mindfulness: the self-regulation of attention toward the present moment; and an attitude of curiosity, openness, and acceptance of the present moment (Bishop et al., 2004). A more comprehensive model of dispositional mindfulness differentiates these five facets (Baer et al., 2006, 2008): (1) *observing* (noticing internal or external experiences, such as aromas); (2) *describing* (being able to label feelings, sensations, and experiences with words); (3) *acting with awareness* (attending to the present moment rather than acting automatically); (4) *nonjudging of inner experience* (the non-evaluation of thoughts and feelings); and (5) *nonreactivity to inner experience* (the ability to perceive feelings and emotions without reacting to them.)

*Acting with awareness* is one of mindfulness' core components and one of the facets that contributes most to mental health (K. W. Brown et al., 2011; K. W. Brown & Ryan, 2003; Roemer et al., 2021). *Acting with awareness* involves present-centered attention that enables self-regulation by focusing on what is happening in the moment. It promotes conscious decisions instead of automatic responses, inspiring behaviors and reactions in line with individual values and long-term interests (K. W. Brown & Ryan, 2003). Furthermore, *acting with awareness* implies perceiving thoughts, feelings, and sensations without being caught in a ruminative thinking pattern, but it does not involve suppressing them. Alternatively, awareness implies recognizing thoughts and internal states and kindly returning attention to the present moment (Bishop et al., 2004).

Brown and Ryan (2003) developed the *Mindful Attention Awareness Scale* (MAAS) to measure *acting with awareness* via a 15-item scale. The MAAS has valid and

reliable psychometric properties and has been adapted and validated in several languages for various age groups, including Spanish adolescents (K. W. Brown et al., 2011; Buz et al., 2021; Calvete et al., 2014; Lawlor et al., 2014; Soler et al., 2012). In addition, the items from the MAAS served as a basis for the development of the acting with awareness facet from the *Five Facet Mindfulness Questionnaire* (FFMQ; Baer et al., 2006, 2008). According to a 2018 meta-analysis, the MAAS is the most widely used instrument to measure dispositional mindfulness, followed by the FFMQ (Tomlinson et al., 2018).

*Acting with awareness* has been associated with positive health outcomes, such as higher levels of positive affect and life satisfaction and reduced stress, rumination, and negative affect in adults and adolescents from the general population and clinical samples (K. W. Brown et al., 2011; K. W. Brown & Ryan, 2003). Moreover, a recent study of young adults indicated that among the five mindfulness facets, *acting with awareness* was the strongest inverse predictor of distress (Roemer et al., 2021). A 2019 meta-analysis found that the *acting with awareness* facet and *nonjudging* had the most significant correlations with negative affect in adults (Carpenter et al., 2019). Another recent meta-analysis of longitudinal studies found that these two facets (*acting with awareness* and *nonjudging*) predicted a reduction in depression and anxiety symptoms in adults (Prieto-Fidalgo et al., 2021). In the case of children and adolescents, these authors only explored the role of *acting with awareness* and reported that it was longitudinally related to anxiety and depressive symptoms.

### ***3.2. Dispositional Mindfulness and Mental Health in Adolescents***

Interest in studying mindfulness in young populations has increased in recent years. Some of the benefits of dispositional mindfulness in children and adolescents include reduced internalizing and externalizing symptoms; better stress coping and reduced perceived stress; improved wellbeing, quality of life, self-esteem, emotional

regulation, and impulse control; and less emotional reactivity and rumination (Cheung & Ng, 2019; Lucas-Thompson et al., 2021; Ma & Fang, 2019; Pallozzi et al., 2017; Tumminia et al., 2020; Valikhani et al., 2020; Yu et al., 2021). Furthermore, evidence from a recent study among approximately 6,000 Chinese adolescents during the COVID-19 pandemic reported a negative association between dispositional mindfulness and pandemic anxiety, depression, and perceived stress (T. Liu et al., 2022). In addition, several studies have suggested that dispositional mindfulness could be beneficial against the negative consequences of ostracism since dispositional mindfulness aids adolescents in not getting trapped in a ruminative thinking pattern (Timeo et al., 2019).

As mentioned in section 3.1, stressors increase through adolescence and worsen mental health. In this regard, some studies suggest that dispositional mindfulness can protect adolescents against the negative impact of stress on mental health. For example, Marks et al. (2010) reported that dispositional mindfulness buffers the impact of stressors on internalizing symptoms, while rumination exacerbates this association. Similarly, Lucas-Thompson et al. (2021) tested a stress buffer model of dispositional mindfulness and concluded that the latter mitigated the effect of stress on internalizing symptoms; the association between perceived stress and internalizing symptoms was lower for those with higher levels of dispositional mindfulness.

In addition to buffering the impact of stressors on mental health, several studies have proposed that dispositional mindfulness improves adolescents' mental health through improved emotion regulation (Chambers et al., 2015; Ma & Fang, 2019). Dispositional mindfulness is associated with an awareness of emotions, approaching them with clarity, accepting them as they are, and avoiding maladaptive emotion regulation strategies, such as using inappropriate coping strategies and behaviors to regulate unpleasant emotions. In addition, dispositional mindfulness is associated with less

emotional reactivity and fewer impulse control difficulties, facilitating self-regulation and adaptive emotion regulation (Cheung & Ng, 2019; Short et al., 2016). Moreover, mindfulness might also improve adolescents' mental health by reducing rumination, a maladaptive emotion regulation strategy (Yu et al., 2021).

Current evidence suggests that dispositional mindfulness is beneficial for adolescent mental health, particularly in stressful situations such as those caused by ostracism and COVID-19. Based on the risk and protective factors and transactional models of psychopathology mentioned in the previous section (Compas, 2009; Leve & Cicchetti, 2016), it is essential to explore the relationship between mindfulness as a protective factor for adolescents' mental health and risk factors. This thesis follows the transdiagnostic models of psychopathology, which suggest that certain elements are risk factors or maintaining factors for different pathologies (Dalgleish et al., 2020). Specifically, the following subsections focus on rumination and impulsivity, two transdiagnostic factors in adolescent psychopathology (Chamberlain & Grant, 2019; S. L. Johnson et al., 2013; McLaughlin & Nolen-Hoeksema, 2011; Rood et al., 2009; Wilkinson et al., 2013), which are negatively associated with dispositional mindfulness (de Bruin et al., 2014; Maltais et al., 2020; Peters et al., 2011).

### ***3.3. Mindfulness and Rumination***

Rumination is a maladaptive emotion regulation strategy that involves responding to distress by focusing repetitively and passively on its symptoms, causes, and consequences (Nolen-Hoeksema et al., 2008). Rumination has been widely established as a transdiagnostic factor present in multiple psychological problems among adolescents and is a vulnerability factor for psychopathology (Mazzer et al., 2019; McLaughlin & Nolen-Hoeksema, 2011; Rood et al., 2009). For example, a longitudinal study of people in early adolescence found that rumination predicted a higher rate of major depressive

episodes and a more significant duration of those episodes (Abela & Hankin, 2011). Moreover, the study reported that rumination moderated the association between adverse life events and subsequent depression and depressive symptoms, so this association was stronger for adolescents with higher levels of rumination. Another study found that rumination predicts depressive symptoms and that symptoms and stress promote ruminative thinking styles (Calvete et al., 2015). Therefore, exploring the factors that could protect against developing a ruminative thinking style is essential for reducing psychological symptoms during adolescence.

Several studies have explored dispositional mindfulness and rumination in adolescents. Cross-sectional studies have reported a negative association between dispositional mindfulness and rumination (Pallozzi et al., 2017; Yu et al., 2021). However, evidence from longitudinal studies is mixed, with some reporting a longitudinal association (Ciesla et al., 2012; Swords & Hilt, 2021; Tumminia et al., 2020), while others fail to find this longitudinal association (Royuela-Colomer & Calvete, 2016). Moreover, some longitudinal studies have reported that rumination mediates the association between dispositional mindfulness and psychological symptoms (Ciesla et al., 2012; Tumminia et al., 2020).

### ***3.4. Mindfulness and Impulsivity***

Impulsivity is another aspect closely related to dispositional mindfulness, and it is also considered a transdiagnostic factor for psychopathology. Impulsivity is defined as “a predisposition toward rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individuals or others” (Moeller et al., 2001; Stanford et al., 2009). Impulsivity is generally seen as a factor strongly related to externalizing problems in adolescents, such as delinquency, risk-taking, or alcohol use (Fosco et al., 2019; Romer, 2010; Stautz & Cooper, 2013).

Evidence suggests an association between internalizing symptoms and impulsivity. For example, a study comparing depressed versus healthy adolescents found higher levels of impulsivity among depressed individuals (Onat et al., 2019). Another study found an association between impulsivity and depressive symptoms, suggesting that impulsive individuals might use inappropriate emotion regulation strategies when faced with negative events. One study indicated that emotion-related impulsivity is a risk factor for adolescents' internalizing and externalizing symptoms (Carver & Johnson, 2018). Considering the high correlation between impulsivity and dangerous behaviors such as suicide and self-harm (Beach et al., 2021; Lockwood et al., 2017), it is crucial to identify the factors that protect individuals and are associated with lower levels of impulsivity.

Dispositional mindfulness is one factor associated with lower levels of impulsivity. Although most studies relating dispositional mindfulness to impulsivity have been conducted with adult or college student samples (Lu & Huffman, 2017; Maltais et al., 2020; Peters et al., 2011), evidence suggests that this relationship also exists in adolescents (García-Rubio et al., 2019; Lyvers et al., 2014). Moreover, several studies of adolescents have shown a negative association between dispositional mindfulness and inhibitory control (Oberle et al., 2012; Riggs et al., 2015; Shin et al., 2016), which is closely related to impulsivity and refers to the capacity to inhibit an automatic thought, emotion, or behavior in favor of a more desirable response (Diamond, 2013). One review found a beneficial effect of mindfulness practice on inhibitory control in adolescents (Gallant, 2016). Therefore, dispositional mindfulness and its ability to attend to the present moment with awareness and nonjudging, associated with a sense of calm, could be beneficial in reducing the impulsive tendencies associated with negative affective states.

It is noteworthy that several studies have linked impulsivity and rumination (Hasegawa et al., 2018; Hilt et al., 2014). For example, in a longitudinal study of college students, a bidirectional association was reported between rumination and impulsivity, and both intensified depressive symptoms (Hasegawa et al., 2018). A study involving impulsive individuals reported an interaction between rumination and negative affect, predicting subsequent impulsive behaviors (Selby et al., 2016). These studies suggest that individuals engage in impulsive behaviors to regulate their negative emotional states. Another paper reported that rumination might trigger impulsive behaviors, such as alcohol consumption, self-harm, or suicide (Watkins & Roberts, 2020). Dispositional mindfulness proposes an alternative way of relating to negative emotional states escaping from rumination and impulsivity. It promotes a present-centered awareness, embracing every moment with curiosity and acceptance and avoiding the automatic pattern of responses or impulsive reactions to internal and external events.

### ***3.5. Summary***

This section has analyzed the role of dispositional mindfulness as an individual protective factor for adolescents' mental health. The next section explores mindful parenting, a construct closely related to mindfulness. It focuses on the benefits of approaching parenting with open awareness and a nonjudging attitude in parent-child interactions.

## **4. Mindful Parenting**

### ***4.1. Introduction to Mindful Parenting***

Parenting is a particularly challenging and stressful period for many families. Becoming a parent demands extra responsibilities within the family unit, and parents face situations they have never encountered before. Parents try to respond to these new

demands positively; however, as the child grows up, parents need to adjust their behavior accordingly, making the parenting process dynamic and complex. In addition, a behavior that works for a particular child might not work for another.

Along with the unique sources of stress associated with being a parent, there are diverse family structures, including single-parent or divorced families, families with children with developmental or emotional problems, and adoptive families. In addition, many parents face economic difficulties or have demanding and time-consuming jobs that leave them with no time or energy to invest in their children. Moreover, environmental factors and external circumstances influence parenting and parents' inner states, emotions, and cognitions, such as perfectionism, blame, shame, self-judgment, symptoms of anxiety and depression, and clinical psychopathology (Bögels & Restifo, 2014).

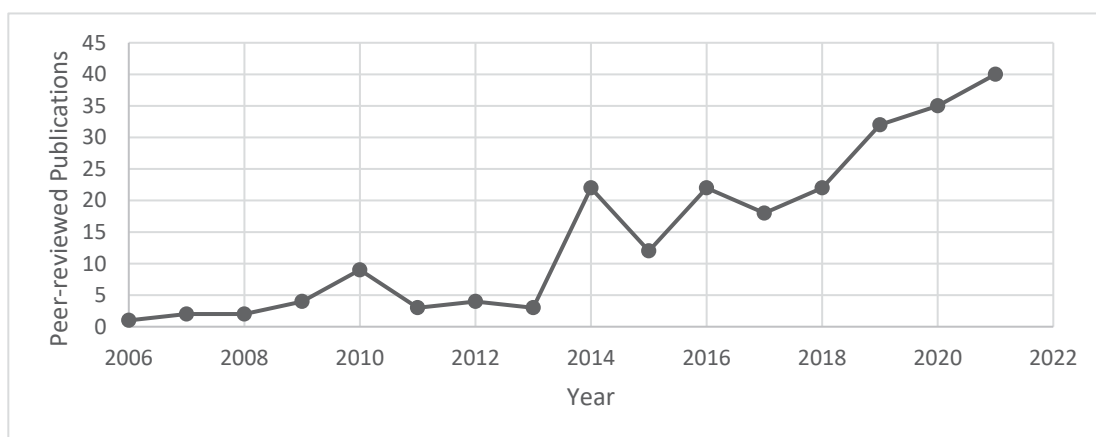
These factors indicate that parenting is challenging and demanding and encompasses a fundamental developmental stage for children. It is not about being the perfect parent; often, children's only desire is to be treated with love, kindness, and attention and listened to without judgment. It is essential for children to develop a sense of belonging and safety inside their families and feel that they have a fundamental and unique role in the family.

Recently, there has been a growing interest in integrating mindfulness into parent-child interactions (i.e., mindful parenting). A 2021 review defined mindful parenting as "a parenting process in which parents do their best to give awareness, attention, nonjudgmental acceptance, and compassion, with high quality of self-regulation, to themselves and to their children in their moment to moment interaction" (Ahemaitijiang et al., 2021, p. 3). However, mindful parenting is not a new concept; Myla and Jon Kabat-Zinn first introduced it in their 1997 book *Everyday blessings: The inner work of mindful parenting*. The authors defined mindful parenting as intentionally bringing an open and

nonjudging awareness to parenting practices and child interactions (M. Kabat-Zinn & Kabat-Zinn, 1997). In a revised version of the book published in 2014, the authors asserted that the frenetic lifestyle of recent years, combined with the inherent stress of parenting, had made mindful parenting essential (M. Kabat-Zinn & Kabat-Zinn, 2014).

The increasing interest in mindful parenting can be illustrated by the rapid growth in the number of published studies on the topic. As shown in Figure 2, research on mindful parenting has increased exponentially with a high peak in the last five years. Another indicator is that the *Mindfulness* journal dedicated a special issue to mindful parenting at the beginning of 2021. This issue included several theoretical articles about the definition of mindful parenting, along with empirical correlational, longitudinal, and intervention studies. The authors concluded that mindful parenting is a feasible element that can be incorporated into parental interventions, both for the general population and families at risk (e.g., families with low economic resources or with psychopathologies.) Additionally, the long-term benefits of mindful parenting include better parent-child communication, less parental stress, and improved child psychosocial health (Parent & DiMarzio, 2021).

**Figure 2.**  
*Mindful Parenting Peer-reviewed Publications*



*Note.* Own elaboration with data from Web of Science using the search term “Mindful Parenting” on December 14<sup>th</sup> 2021.

#### ***4.2. Theoretical Models of Mindful Parenting***

In *Everyday Blessings* (1997/2014), Myla and Jon Kabat-Zinn described three fundamental elements of mindful parenting: sovereignty, empathy, and acceptance. Sovereignty involves letting the child be their authentic self and recognizes their true nature. Empathy entails viewing things from the child's perspective. Sometimes parents need to distance themselves from their feelings and perceptions to adopt their children's views. Acceptance involves parents letting things be as they are, at this moment, even if they would prefer them to be different. It requires accepting children as they are and not trying to change them based on parents' expectations and desires.

Similarly, Duncan et al. (2009) proposed a model of mindful parenting that consists of the following characteristics:

1. Listening with full attention. The capacity to listen to the child with full attention involves awareness of what children have to say and paying attention to their communication cues. Listening with full attention is especially important during adolescence when parents should encourage and help children express their thoughts and feelings accurately, which can help reduce conflicts and disagreements.

2. Nonjudgmental acceptance of self and child. A genuine acceptance without judgment involves being aware of parents' expectations, attributions, and beliefs about their child and parenting practices. It is essential to accept that parents will sometimes face difficult situations while recognizing that making mistakes and learning from them is part of parenting. Accepting does not mean that parents have to approve any inappropriate behavior in the child; it is about explaining which behaviors are acceptable.

3. Emotional awareness of self and child. Parents need to be aware of their own and their children's emotions to recognize emotional patterns that can trigger automatic

cognitive processes or behaviors, influencing parental practices. Thus, emotional awareness facilitates making conscious choices instead of reacting automatically.

4. Self-regulation in the parenting relationship. Self-regulation in parenting entails not reacting automatically or impulsively and reflecting before responding to child behaviors or emotional expressions. Parents can also promote practices to improve children's self-regulation skills, such as labeling and talking about emotions.

5. Compassion for the self and the child. Self-compassion and compassion for the child consist of being empathically concerned about oneself and the child. It also involves parents adopting a less strict attitude toward parental practices, avoiding self-blame when something does not go as expected, and reducing the fear of social judgment. Parents benefit from acknowledging the efforts involved in parenting instead of focusing on the accomplishments or goals of parenthood.

McCaffrey et al. (2017) suggested that mindful parenting is composed of two independent factors: *mindful discipline* (a parent-focused facet of mindful parenting characterized by nonreactivity in parenting, parenting awareness, and goal-focused parenting); and *being in the moment with the child* (a child-focused facet of mindful parenting that includes present-centered attention, empathic understanding of the child, and acceptance). *Being in the moment with the child* includes the child-focused dimensions of compassion for the child, emotional awareness of the child, and listening with full attention. In contrast, the *mindful discipline* facet covers the parent-focused dimensions of nonjudgmental acceptance of parenting, emotional awareness of the self, and emotional nonreactivity. The content of these two facets is consistent with the content of the five mindful parenting characteristics proposed by Duncan et al. (2009). However, Duncan's model does not differentiate between parent and child components of mindful

parenting, which has been empirically demonstrated (de Bruin et al., 2012; McCaffrey et al., 2017).

Several theoretical models have sought to explain how mindful parenting works. For example, Bögels et al. (2010) proposed six mechanisms of change in mindful parenting interventions: reduced parental stress, preoccupation, and reactivity; increased self-care; improved marital functioning; and the prevention of intergenerational transmission of dysfunctional parenting patterns. Similarly, Duncan et al. (2009) proposed that incorporating mindful awareness into parenting interactions enhances children's wellbeing indirectly by improving parenting (e.g., improving parent-child communication and enhancing parenting self-efficacy), parental wellbeing (e.g., decreasing psychological symptoms), child management practices (e.g., providing consistent discipline), and parent-child affection.

#### ***4.3. The Benefits, Predictors, and Correlates of Mindful Parenting***

Several studies have explored the factors associated with mindful parenting, the benefits for parents, children, and the parent-child relationship, and the mediating mechanisms (Ahemaitijiang et al., 2021; Anand et al., 2021; Burgdorf et al., 2019). Numerous studies report a positive association between parental dispositional mindfulness and mindful parenting, indicating that both are related but independent constructs (E. Kim et al., 2019; McCaffrey et al., 2017; Orue et al., 2020). A 2021 meta-analysis reported a moderate association between parental dispositional mindfulness and mindful parenting ( $r = 0.46$ ) and concluded that parents with higher levels of dispositional mindfulness tend to apply a more mindful approach in their interpersonal relationships (Kil et al., 2021). Similarly, several intervention studies have suggested that mindful parenting programs increase parental dispositional mindfulness (Meppelink et al., 2016; Shorey & Ng, 2021). Furthermore, several studies highlight that parents' dispositional

mindfulness increases mindful parenting, which in turn predicts parental practices and child outcomes (Parent et al., 2016, 2021).

Mindful parenting can play an essential role in parent-child relationships, such as improving parent-child communication and relationship quality (Coatsworth et al., 2018; Lippold et al., 2021; McCaffrey et al., 2017). For example, Lippold et al. (2015) reported an association between mindful parenting and better parent-child communication, mediated by less adverse parental reactions to disclosure, fewer feelings of parental overcontrol, and better affective quality of the relationship. The research group headed by Lippold provided further longitudinal evidence supporting the association between mindful parenting and parent-child communication (Lippold et al., 2021). The study indicated that mindful parenting predicts more adolescents' disclosure and parent solicitation. Similarly, several studies have suggested an association between mindful parenting and characteristics that could promote better parent-child relationships and communication, such as maternal warmth (Wang et al., 2018), parental emotional availability (Benton et al., 2019), secure attachment style (Moreira et al., 2016), reduced parental emotional reactivity, and fewer negative emotions during parent-child conflict (Chaplin et al., 2021; Emerson et al., 2021; Turpyn et al., 2021; Turpyn & Chaplin, 2016).

Additionally, evidence suggests that mindful parenting is negatively related to several adverse aspects that can harm family functioning, such as parental stress and parental psychopathology (Emerson et al., 2021; E. Kim et al., 2019; Moreira & Canavarro, 2018). For example, two meta-analyses found that parenting stress was reduced following mindful parenting interventions, and this effect was maintained in the long term (Anand et al., 2021; Burgdorf et al., 2019). Evidence also indicates a negative association between parental psychological symptoms and mindful parenting, suggesting that parents suffering from psychopathological symptoms tend to be more self-focused

and pay less mindful awareness to their children and their interactions (Moreira & Canavarro, 2018).

In terms of parenting styles, many studies have indicated that mindful parenting is negatively associated with permissive and authoritarian or disciplinarian parenting styles and is positively associated with authoritative parenting styles (Gouveia et al., 2016; McCaffrey et al., 2017; Moreira & Canavarro, 2017; Orue et al., 2020). A recent meta-analysis showed a positive association between mindful parenting and positive parenting—including warmth, affection, responsiveness, praise, proactivity, authoritative style, positive reinforcement, supportiveness, and acceptance—and a negative association with adverse or dysfunctional parenting practices, such as laxness, over-reactivity, neglect, hostility, and overprotective behaviors (Kil et al., 2021).

These studies provide empirical evidence for Duncan's (2009) theoretical model. This model proposes that mindful parenting is associated with parenting, child management practices, and parent-child affection, which lead to more positive youth outcomes and reduced youth problem outcomes. There is a growing body of literature analyzing the benefits of mindful parenting for children and adolescents. For example, mindful parenting has been related to higher levels of resilience (Orue et al., 2020), dispositional mindfulness (Moreira & Canavarro, 2018), wellbeing (Moreira et al., 2018; Moreira & Canavarro, 2018), life and family satisfaction (Benton et al., 2019; Maglica et al., 2021), and positive emotion regulation (Moreira & Cristina Canavarro, 2020). However, the association between mindful parenting and adolescents' mental health symptoms is not yet clear.

Evidence from two meta-analyses is mixed regarding mindful parenting interventions' effects on children's symptoms. Burgdorf et al. (2019) found that mindful parenting interventions reduce externalizing symptoms by lessening parental stress and

also reduce internalizing symptoms; however, the underlying mechanisms were unclear. Another meta-analysis reported an improvement in internalizing symptoms following mindful parenting interventions, but the authors did not find evidence for an improvement in externalizing symptoms (Anand et al., 2021).

Cross-sectional studies exploring the association between mindful parenting and symptoms in adolescents are contradictory. Several studies have found a negative association between mindful parenting and children's symptoms. For example, Parent et al. (2016) reported that internalizing and externalizing symptoms were related to mindful parenting. This study also found no differences among three developmental stages (young childhood, 3 to 7 years old; middle childhood, 8 to 12 years old; and adolescence, 13 to 17 years old). Similarly, Maglica et al. (2021) indicated that mindful parenting was related to less risky behaviors, namely violent behaviors and substance abuse.

In contrast, some studies have found no direct association between mindful parenting and internalizing and externalizing symptoms (Han et al., 2021; Wang et al., 2018; Yang et al., 2021). These studies suggest that the association between mindful parenting and symptoms might not be direct but mediated by other mechanisms, such as parenting practices, communication, or maternal warmth. However, the studies are cross-sectional, and evidence from longitudinal studies is preferable when exploring mediation mechanisms.

In terms of longitudinal evidence, several studies have demonstrated that factors such as family conflict, positive and negative parenting practices, and parent's depressive symptoms mediate the association between mindful parenting and children's internalizing and externalizing symptoms (J. J. Kim & Gonzales, 2021; Parent et al., 2021; Park et al., 2020). Regarding longitudinal evidence, a recent study suggested that mindful parenting can influence children's symptoms and that children's symptoms can influence parenting

practices and mindful parenting (J. J. Kim & Gonzales, 2021). Therefore, mindful parenting can be disrupted by children's externalizing behaviors. Another longitudinal study determined that the benefits of mindful parenting on children may depend on children's previous levels of dispositional mindfulness (Calvete et al., 2021). The authors indicated that mindful parenting could be more beneficial for children with low levels of dispositional mindfulness.

#### ***4.4. Summary***

This evidence suggests that the relationship between mindful parenting and adolescents' psychopathology is complex and dynamic and may depend on other individual variables and family processes. Moreover, most existing research has focused on mediation mechanisms but has not explored the moderator role of mindful parenting. Since adolescents' externalizing symptoms are a significant concern for parents, and because previous studies exploring the association between mindful parenting and adolescents' mental health are contradictory, it would be insightful to explore whether mindful parenting can buffer the development of externalizing symptoms in adolescents.

### **5. Conclusions and Theoretical Justification**

As the studies reviewed in the introduction suggest, adolescence is a period of vulnerability for mental health and, in recent years, there has been a dramatic increase in mental health symptoms and disorders among children and adolescents (Collishaw & Sellers, 2020; Shorey et al., 2021). Developmental psychology research has emphasized the importance of studying risks and vulnerabilities in conjunction with resilience and protective factors for adolescent mental health since these issues have a dynamic and complex association (Compas, 2009). Regarding protective factors, evidence suggests that dispositional mindfulness is beneficial for adolescents' mental health since it is associated with fewer psychological symptoms and increased wellbeing (K. W. Brown et

al., 2011; Pallozzi et al., 2017). In particular, the present study focuses on the protective role of dispositional mindfulness in general and two specific situations that create stress in adolescents: ostracism and COVID-19.

Ostracism situations cause emotional distress and threaten the four basic needs: belonging, self-esteem, control, and meaningful existence (Hartgerink et al., 2015). The consequences of ostracism are especially significant during adolescence since social relationships play a crucial role during this stage of life (Choukas-Bradley & Nesi, 2020; Pharo et al., 2011). Most studies have examined the consequences of ostracism, but few have examined the factors that could protect or mitigate the adverse effects of ostracism on adolescents' mental health (Timeo et al., 2019). Moreover, it is essential to understand whether protective factors depend on individual characteristics, such as age or sex. Although no empirical studies have explored the association between dispositional mindfulness and need threat in adolescents, evidence from studies with adult samples indicates a beneficial role of dispositional mindfulness in social exclusion situations (Poon & Jiang, 2020). Moreover, Timeo et al. (2019) suggested that dispositional mindfulness could benefit adolescents in the face of ostracism.

Regarding COVID-19, preliminary work among adolescents points toward increased psychological symptoms following the pandemic (Jones et al., 2021). However, most of the studies are cross-sectional and do not include pre-pandemic data for comparison. Moreover, few studies have examined the protective factors that could mitigate the effects of the pandemic on adolescents' mental health, specifically the role of dispositional mindfulness. Evidence from adult samples suggests that dispositional mindfulness might be a protective factor in the context of COVID-19 (Belen, 2021), but no study has explored this association in adolescents.

Several longitudinal studies have explored the association between dispositional mindfulness and mental health in adolescents (Calvete et al., 2019; Cortazar & Calvete, 2019; Gómez-Odriozola & Calvete, 2020). In this context, it is essential to study the longitudinal relationships between dispositional mindfulness and specific transdiagnostic risk factors (rumination and impulsivity) and their association with psychological symptoms since it is crucial to understand the relationships between risk and protective factors.

Mindful parenting is a further protective factor considered in this thesis. Family context can be a risk factor for mental health during adolescence, but it also offers opportunities to protect adolescents from developing mental health symptoms (Barroso et al., 2018; Burgdorf et al., 2019). Specifically, mindful parenting is associated with positive outcomes for children and adolescents (Ahemaitijiang et al., 2021); however, research regarding externalizing symptoms is contradictory (Anand et al., 2021; Yang et al., 2021). Few longitudinal studies have explored the role of mindful parenting on externalizing symptoms (J. J. Kim & Gonzales, 2021), and no study has explored whether mindful parenting could act as a moderator buffering the effect of mental health symptoms on externalizing symptoms.

## **6. Objectives and Hypotheses**

This thesis explores the beneficial role of dispositional mindfulness' in specific risk situations (i.e., ostracism and COVID-19) and in promoting adolescents' mental health in general, as well as the beneficial role of mindful parenting. To this end, four different studies are proposed. Table 1 summarizes the studies, objectives, and hypotheses.

**Table 1.**  
*Summary of the Studies' Objectives and Methods*

STUDY	OBJECTIVES	METHOD
<p>Royuela-Colomer, E., Orue, I., Ren, D., &amp; Fernández-González, L. (2022). The association between dispositional mindfulness and need threat following ostracism in Spanish adolescents: The moderating role of age. <i>Psicothema</i>, 34(1), 117-125.  <a href="https://doi.org/10.7334/psicothema2021.147">https://doi.org/10.7334/psicothema2021.147</a></p>	<ol style="list-style-type: none"> <li>1) Adapt and gather validity evidence for the need threat scale in Spanish adolescents</li> <li>2) Explore the association between dispositional mindfulness and need threat during the Cyberball in adolescents, and the moderator role of sex and age</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Study type:</b> Cross-sectional</li> <li>• <b>N</b> = 750</li> <li>• <b>Female</b> = 52.4%</li> <li>• <b>Mean age (SD)</b> = 14.51 (1.43)</li> </ul>
<p>Royuela-Colomer, E., Orue, I., Fernández-González, L., &amp; Calvete, E. (2022). The association between exposure to COVID-19, internalizing symptoms, and dispositional mindfulness in adolescents: A longitudinal pre- and during-pandemic study, 1-13. <i>Child Psychiatry &amp; Human Development</i>.  <a href="https://doi.org/10.1007/s10578-022-01349-0">https://doi.org/10.1007/s10578-022-01349-0</a></p>	<ol style="list-style-type: none"> <li>1) Examine the association between COVID-19 contact, mindfulness, and internalizing symptoms in Spanish adolescents</li> <li>2) Explore the sex invariance of the model</li> <li>3) Identify classes of adolescents according to their level of contact with COVID-19</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Study type:</b> Longitudinal</li> <li>• <b>N</b> = 383</li> <li>• <b>Female</b> = 58%</li> <li>• <b>Mean age (SD)</b> = 15.62 (1.32)</li> </ul>

STUDY	OBJECTIVES	METHOD
<p>Royuela-Colomer, E., Fernández-González, L. &amp; Orue, I. (2021). Longitudinal associations between internalizing symptoms, dispositional mindfulness, rumination and impulsivity in adolescents. <i>Journal of Youth and Adolescence</i> 50, 2067–2078.  <a href="https://doi.org/10.1007/s10964-021-01476-2">https://doi.org/10.1007/s10964-021-01476-2</a></p>	<ol style="list-style-type: none"> <li>1) Examine the longitudinal associations between dispositional mindfulness, rumination, impulsivity, and internalizing symptoms (depression, anxiety, and stress) during adolescence</li> <li>2) Explore the model's sex invariance</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Study type:</b> Longitudinal</li> <li>• <b>N</b> = 352</li> <li>• <b>Female</b> = 57.4%</li> <li>• <b>Mean age (SD)</b> = 14.47 (1.34)</li> </ul>
<p>Royuela-Colomer, E., Orue, I., Visu-Petra, L., &amp; Fernández-González, L. (under review). The Protective role of mindful parenting for externalizing problems in adolescents</p>	<ol style="list-style-type: none"> <li>1) Explore the association between internalizing and externalizing symptoms and its association with mindful parenting</li> <li>2) Explore the longitudinal association between mindful parenting and externalizing symptoms</li> </ol>	<p style="text-align: center;"><b><u>Study 1</u></b></p> <ul style="list-style-type: none"> <li>• <b>Study type:</b> Cross-sectional</li> <li>• <b>N</b> = 420</li> <li>• <b>Female</b> = 81.9% (mothers) / 54.3% (adolescent girls)</li> <li>• <b>Parents' age (SD)</b> = 48.03 (3.79)</li> <li>• <b>Adolescents' age (SD)</b> = 14.04 (1.35)</li> </ul> <p style="text-align: center;"><b><u>Study 2</u></b></p> <ul style="list-style-type: none"> <li>• <b>Study type:</b> Longitudinal</li> <li>• <b>N</b> = 194</li> <li>• <b>Female</b> = 81.2% (mothers) / 65.6% (adolescent girls)</li> <li>• <b>Parents' age (SD)</b> = 47.85 (3.87)</li> <li>• <b>Adolescents' age (SD)</b> = 13.93 (1.18)</li> </ul>



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## Chapter II: Study One

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*Do not let the behavior of others destroy your inner peace.*

Dalai Lama

### **The Association Between Dispositional Mindfulness and Need Threat Following Ostracism in Spanish Adolescents: The Moderating Role of Age**

Royuela-Colomer, E., Orue, I, Ren, D, & Fernández-González, L. (2022)

*Psicothema*, 34(1), 117-125.

<https://doi.org/10.7334/psicothema2021.147>

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## Chapter III: Study Two

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*When you come out of the storm, you won't be the same person who walked in.  
That's what this storm's all about.*

*Kafka on the shore, Haruki Murakami*

**The Association Between Exposure to COVID-19, Internalizing Symptoms,  
and Dispositional Mindfulness in Adolescents: A Longitudinal Pre- and During-  
Pandemic Study**

Royuela-Colomer, E., Fernández-González, L., Orue, I., & Calvete, E. (2022), 1-15. *Child Psychiatry & Human Development*  
<https://doi.org/10.1007/s10578-022-01349-0>

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## Chapter IV: Study Three

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*You can't stop the waves, but you can learn to surf.*

Jon Kabat-Zinn

### **Longitudinal Associations Between Internalizing Symptoms, Dispositional Mindfulness, Rumination and Impulsivity in Adolescents**

Royuela-Colomer, E., Fernández-González, L., & Orue, I. (2022)

*Journal of Youth and Adolescence*, 1-12.

<https://doi.org/10.1007/s10964-021-01476-2>

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## Chapter V: Study Four

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*When I can choose to be kind instead of cruel, to understand rather than judge, to accept rather than reject, my children, no matter what their ages, are nourished and strengthened.*

Myla Kabat-Zinn

### **The Benefits of Mindful Parenting for Externalizing Symptoms in Adolescents**

Royuela-Colomer, E., Fernández-González, L., Visu-Petra, L., & Orue, I.  
(under review)

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# **Chapter VI: Summary and Conclusions**

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## CHAPTER VI: SUMMARY AND CONCLUSIONS

This chapter summarizes this doctoral thesis' main contributions, including specific and general conclusions drawn from the four empirical studies. These studies' strengths and limitations are then addressed, including recommendations and suggestions for future research. The chapter concludes by explaining the implications of the doctoral thesis.

### 1. Conclusions

The four empirical studies in this thesis assess the protective role of dispositional mindfulness and mindful parenting on adolescents' mental health. The general objective of the thesis was to explore the beneficial role of dispositional mindfulness and mindful parenting in general and in the specific stressful situations of ostracism and COVID-19. Each study covered a specific aspect within the overall theme of the thesis; therefore, when considering conclusions, the most noteworthy results of each study are presented first, followed by a summary integrating the overall findings.

#### *1.1. First Study*

The first study examined the relationship between dispositional mindfulness and need threat following ostracism in an online game (Cyberball) and whether adolescents' age and sex moderated this association. In addition, since there was no Spanish version of the need threat scale for adolescents (NTS; Williams et al., 2000), the NTS was adapted for this population.

This study yielded several significant conclusions. Contrary to expectation, the study did not find a significant association between dispositional mindfulness and need threat scale controlling for adolescents' sex and age. However, it was observed that this relationship was moderated by age, as there was a small negative relationship between

dispositional mindfulness and the need threat scale in older adolescents (15 years and older). These findings suggest that considering adolescents' brain and psychological maturation may be essential when assessing the effects of dispositional mindfulness.

Specifically, dispositional mindfulness could improve older adolescents' ability to regulate emotions, be less reactive, reduce rumination, and respond more adaptively to stressful situations, such as being ostracized. Dispositional mindfulness may help older adolescents admit that ostracized situations are commonplace, making them approach social exclusion situations with a mindful attitude, curiosity, openness, acceptance, and equanimity. The fact that dispositional mindfulness has a small effect on need threat suggests that ostracism is universal and generates distress in all individuals, with personal factors having little influence on its immediate effects, as suggested in previous studies (McDonald & Brent Donnellan, 2012). Nevertheless, the small effect observed in older adolescents is noteworthy.

Two secondary results of this study need highlighting. First, as previous studies concluded (Tang et al., 2019), this study suggests that the psychological damage caused by social exclusion increases as a function of age during adolescence. As children enter adolescence, social relationships become more important to them, and being excluded and ignored may be more detrimental to older adolescents. Second, our results suggest that girls are more disadvantaged than boys since girls scored higher in need threat and lower in dispositional mindfulness. These results further support the idea that social relationships play a significant role for adolescent girls, who are more sensitive to social distress than boys (Rose & Rudolph, 2006). Moreover, the lower levels of dispositional mindfulness in girls compared to boys could be attributed to the higher prevalence of rumination in girls, preventing them from paying full and conscious attention to the present moment (Abela & Hankin, 2011).

### ***1.2. Second Study***

The second study addressed the effects of the COVID-19 pandemic on adolescents' mental health and its association with dispositional mindfulness. Latent class analyses were used to classify adolescents according to their degree of contact with COVID-19 during the first and second pandemic waves (from March to October 2020). We then examined whether contact with COVID-19 predicted internalizing symptoms, controlling for previous internalizing symptoms and non-pandemic-related stressors. Additionally, it was examined whether dispositional mindfulness moderated or mediated the association between contact with COVID-19 and internalizing symptoms. Furthermore, the model sex invariance was tested.

This study identified three COVID-19-contact profiles: (1) no contact at all or just knowing someone infected with COVID-19 (friend, family, or acquaintance outside home); (2) knowing someone outside the home (friend, family, or acquaintance) who had been infected or hospitalized or had died due to COVID-19; and (3) being infected or living with someone who had been infected or hospitalized with COVID-19. One of the study's most significant findings was that closer contact with COVID-19 (i.e., profiles 2 and 3) predicted internalizing symptoms while controlling for previous internalizing symptoms and other stressors unrelated to COVID-19. Specifically, both profiles (2 and 3) predicted an increase in anxiety symptoms, and only profile 2 predicted an increase in stress symptoms. Our findings confirmed the negative impact of COVID-19 contact on adolescents' internalizing symptoms, as highlighted by previous cross-sectional studies (Jones et al., 2021). In particular, closer contact with COVID-19 may have placed greater stress on adolescents whose coping resources, such as meeting friends or participating in pleasant or physical activities, had decreased during the pandemic and confinement (Meade, 2021).

Contrary to previous studies suggesting a buffering effect of dispositional mindfulness when faced with stress, our results did not confirm a moderation role for dispositional mindfulness (Ciesla et al., 2012). The results indicated that dispositional mindfulness mediated the association between contact with COVID-19 and internalizing symptoms (stress and depression). That is, contact with COVID-19 during the first two waves was associated with a reduction in dispositional mindfulness, and this reduction explains the increase in internalizing symptoms. In addition, there were some sex differences in the model, although due to the small sample size these should be taken with caution.

The reduction in dispositional mindfulness levels might explain the impact of contact with COVID-19 on internalizing symptoms in adolescents. Living on automatic pilot is related to a reduced awareness of thoughts and behaviors, higher levels of stress, poor emotion regulation, not being aware of coping resources (such as social support), and not being aware of positive events (Pallozzi et al., 2017; Tomlinson et al., 2018). It appears that having a mindful attitude in the face of adversity might be beneficial, but traumatic experiences, such as closer contact with COVID-19 during the first seven months of the pandemic, might diminish dispositional mindfulness levels in adolescents.

### ***1.3. Third Study***

The third study explored the longitudinal associations between dispositional mindfulness and internalizing symptoms during adolescence. The study included the role of rumination and impulsivity, two transdiagnostic factors for psychopathology during adolescence. Additionally, sex differences were analyzed.

This research provided insights into the transactional relationships between risk and protective factors for developing internalizing symptoms during adolescence, and the following conclusions can be drawn. First, dispositional mindfulness protects adolescents

against internalizing symptoms (stress and depression) and impulsivity in the long term; and a reduction in impulsivity is one of the mechanisms by which dispositional mindfulness could benefit adolescents' mental health. Second, regarding risk factors, the study suggested that anxiety symptoms are a risk factor that can exacerbate other psychological symptoms, such as rumination, depression, and stress. In addition, impulsivity reduces dispositional mindfulness and increases stress symptoms in the long term. It also predicts depressive symptoms in boys. It is noteworthy that rumination, per se, was not a risk factor. Hence, its detrimental effect might occur when it interacts with other symptoms or variables. Third, although the association between risk and protective factors appears to be similar in girls and boys, the higher prevalence of symptoms in girls suggests that they are at a disadvantage and have lower levels of dispositional mindfulness.

To summarize, this study confirms the beneficial role of dispositional mindfulness in adolescents' mental health. Schools and educational institutions might benefit from mindfulness-based interventions involving intentional attention to the present moment and not being carried away by impulsive tendencies and automatic reactions. This study also highlights the risk factors that should be considered when developing prevention and intervention strategies for adolescents, such as anxiety and impulsivity. Moreover, special attention should be paid to adolescent girls, as they appear to be at higher risk of internalizing symptoms and have lower levels of dispositional mindfulness.

#### ***1.4. Fourth Study***

The fourth paper explored how mindful parenting protects against externalizing symptoms in adolescents. Two studies were conducted: a cross-sectional study exploring the relationship between adolescents' internalizing and externalizing symptoms and the moderating role of mindful parenting, all reported by parents; and a longitudinal study

based on adolescent and parent self-reported data. Specifically, the second study explored whether mindful parenting predicted antisocial behavior one year later, controlling for previous antisocial behavior and whether mindful parenting moderated the temporal stability of antisocial behavior.

The first study showed a co-occurrence between internalizing and externalizing symptoms, which is in line with previous research (Essau & de la Torre-Luque, 2021). In addition, *being in the moment with the child* facet of mindful parenting moderated the association between internalizing and externalizing symptoms. Specifically, in adolescents whose parents had low levels of *being in the moment with the child*, the association between internalizing and externalizing symptoms was significant, whereas in parents with high levels of mindful parenting, this association was not significant. Considering acting out theories (Kofler et al., 2011), which suggest that internalizing symptoms precede externalizing symptoms, our results suggest that emotional symptoms may lead to behavioral problems only in adolescents whose parents display low levels of *being in the moment with the child*. Nevertheless, it is essential to note that these data are cross-sectional. Therefore, future studies should explore this association longitudinally.

The second study showed no association between mindful parenting and antisocial behavior one year later, but mindful parenting significantly moderated the temporal stability of antisocial behavior. For parents with low levels of *mindful discipline*, the association between W1 and W2 antisocial behavior in their adolescents was significant, which was not the case in parents with high levels of *mindful discipline*. It could be that there is no direct relationship between antisocial behavior and mindful parenting, but perhaps the moderation role could be explained by other mechanisms. For example, parents who have higher levels of *mindful discipline* may also be more communicative with their children or apply positive parenting practices, which may help improve their

children's behavior. Therefore, future studies should explore other mechanisms that could act as mediators using longitudinal designs. It is also noteworthy that some recent studies have suggested that children's symptoms may influence parenting practices (Kil et al., 2021), and yet this study only measured mindful parenting once, which is a clear limitation.

Overall, these findings suggest that applying a mindful attitude to parent-child interactions could be beneficial for externalizing symptoms in adolescents. Adolescents who feel that their parents are present for them, with a nonjudgmental and empathic attitude and a genuine interest in them, might communicate more with their parents and consult them when they do not feel emotionally well, instead of engaging in externalizing symptoms to reduce distress. Additionally, a nonjudgmental attitude of parenting practices and consistent discipline could help mitigate the temporal stability of antisocial behavior. Hence, the prevention and reduction of externalizing symptoms might be assisted by mindful parenting practices based on explaining to children why they are being disciplined. This approach would help develop a sense of structure rather than a feeling that the discipline is inconsistent.

## **2. General Conclusion**

The findings of this thesis provide further insight into dispositional mindfulness and mindful parenting as protective factors for adolescents' mental health. In addition, it can be concluded that certain risk factors —namely situations of ostracism and COVID-19, and individual factors such as anxiety symptoms and levels of impulsivity—worsen adolescents' mental health. As for protective factors, the beneficial role of dispositional mindfulness for internalizing symptoms and the consequences of ostracism in older adolescents are significant, bearing in mind that specific situations, such as COVID-19, can undermine dispositional mindfulness. Mindful parenting is also relevant, as it has a

protective role in adolescents' mental health, specifically by buffering externalizing symptoms.

The following are the most significant conclusions of this thesis:

- Dispositional mindfulness protects adolescents from symptoms of depression, stress, impulsivity, and the negative consequences of specific situations such as ostracism. However, in ostracism situations, it is essential to consider that dispositional mindfulness' beneficial effects depend on age and might only be seen in older adolescents.
- Stressful situations, such as contact with COVID-19, might diminish adolescents' dispositional mindfulness levels, which could explain the increase in internalizing symptoms. Similarly, individual characteristics, such as impulsivity, could have a long-term adverse effect on mindfulness levels.
- Age, sex, anxiety symptoms, or impulsivity are crucial mental health risk factors. Specifically, being female and an older adolescent might be risk factors for ostracism distress. Furthermore, girls might be more vulnerable to higher levels of rumination and internalizing symptoms and lower levels of dispositional mindfulness. Our results also suggest that anxiety is a risk factor for rumination and symptoms of depression and stress, while impulsivity might be a risk factor for stress symptoms.
- Our results suggest that COVID-19 negatively influences adolescent mental health by increasing internalizing symptoms. Specifically, contact with COVID-19 (i.e., knowing someone who was infected, hospitalized, or died, or being infected by COVID-19) might predict an increase in internalizing symptoms.

- Mindful parenting is beneficial for adolescents' mental health. This study proposes that *being in the moment with the child* can buffer the association between emotional symptoms and conduct problems, while *mindful discipline* can reduce antisocial behavior over time.

### 3. Strengths, Limitations, and Future Directions for Research

This thesis is not without limitations. First, the results have limited generalizability. For example, the included studies comprise a convenience sample of adolescents from the general population with a medium-high socioeconomic status. Thus, results cannot be generalized to at-risk adolescents (e.g., clinical samples or adolescents with special needs) or those from lower socioeconomic backgrounds. Therefore, the association between risk and protective factors such as mindfulness and mindful parenting in adolescents at risk or with previous mental health problems needs to be studied. Another issue that affects the generalizability of the results and conclusions about the predictive relationships between the study variables is the high attrition rate in the sample size of the longitudinal studies. One of the schools that initially agreed to participate and completed measures at wave 1 dropped out at wave 2 due to COVID-19.

Second, although we included a widely used mindfulness measure (MAAS-A) that covers the *acting with awareness* facet of mindfulness, there is consensus that mindfulness is better understood as a multifaceted construct (Baer et al., 2008). Therefore, our results are limited to the *acting with awareness* facet of mindfulness, not the whole mindfulness construct. This issue could be tackled by including multidimensional measures of mindfulness that enable the exploration of mindfulness facet profiles, as the combination of particular mindfulness facets seems more beneficial than others (Calvete et al., 2021).

Third, findings from studies one, two, and three may be limited by the self-report and social desirability bias, as we only included data provided by adolescents in classroom settings. Future research should include data from other informants, such as parents, teachers, or other students from the same class. Additionally, it would be insightful to include other measures applied on a case-by-case basis, such as performance and executive functioning tasks or psychophysiological measures, instead of relying on self-report assessments alone.

Despite these limitations, this thesis provides new information on the relationships between risk and protective factors for adolescent mental health. The fundamental strength of these studies is that one included parent and children data, and three used longitudinal data, which provides more insight than cross-sectional data and enables variable patterns to be determined over time. In addition, the studies presented are novel and address gaps in the literature, as some of the relationships explored have not been examined before. This study represents the first time that dispositional mindfulness and ostracism have been explored together in Spanish adolescents. It is also the first time a longitudinal study has explored the relationships between dispositional mindfulness, symptoms, internalizing, and transdiagnostic factors such as rumination and impulsivity. Moreover, we believe that this is the first study to explore the impact of COVID-19 on Spanish adolescents' mental health using a longitudinal design and controlling for pre-pandemic mental health symptoms. Furthermore, this is the first thesis to explore the moderating role mindful parenting has in externalizing symptoms.

#### **4. Implications**

The studies presented in this doctoral thesis have significant theoretical and practical implications for understanding the role of dispositional mindfulness and mindful parenting in promoting mental health through adolescence in general and in two specific

risk situations. This section presents the research's implications in fields including clinical or educational settings.

First, the results support the idea of a complex and dynamic relationship between symptoms, risk, and protective factors during adolescence. The research extends knowledge of bidirectional and transactional models of psychopathology, which emphasize the longitudinal associations between psychopathology, risk, and protective factors (Leve & Cicchetti, 2016). Additionally, the results strengthen theoretical models of dispositional mindfulness in adolescents by including situations in which dispositional mindfulness has not been explored before, such as social exclusion or COVID-19, and by including the bidirectional associations between several variables that had not been studied together before (i.e., internalizing symptoms, impulsivity, and rumination). The study also expands knowledge of mindful parenting and the importance of studying child and parent variables together, as the family context is crucial for children's emotional and behavioral development and can significantly affect their behavioral problems.

Second, detecting risk factors for adolescent mental health can assist in implementing and targeting preventive programs for vulnerable adolescents and tailor those programs to tackle the most relevant aspects of adolescents' mental health. In the case of interventions to reduce the negative impact of ostracism, these should primarily target older adolescents and girls. Moreover, these interventions may benefit from including mindfulness practices. In the case of interventions aimed at reducing or preventing internalizing symptoms, it is essential to consider girls and those adolescents who present high levels of anxiety and impulsivity.

In the case of COVID-19, adolescents who have had more contact with the disease are at a higher risk of increasing their internalizing symptoms, so prevention strategies should focus on this group in particular. Furthermore, because the decrease in

dispositional mindfulness due to increased contact with COVID-19 could explain the increase in symptoms, it would be beneficial to introduce mindfulness programs for this group. This study's results provide a starting point when developing school mental health prevention programs.

Third, the results show that individual factors, such as dispositional mindfulness, are beneficial for adolescents, and that adolescents can benefit from family factors such as mindful parenting. Thus, mindful parenting programs could benefit adolescents, especially those who display antisocial behaviors, suffer internalizing symptoms, or are at risk of developing behavioral problems. Furthermore, in line with other studies suggesting bidirectionality between mindful parenting and adolescent symptoms (J. J. Kim & Gonzales, 2021), these programs might benefit both children and parents.

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