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Original

Implementation of a program based on mindfulness for the reduction of aggressiveness in the classroom☆

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A B S T R A C T

Classroom aggressiveness is emerging at an ever earlier stage and is more common in Secondary Education. The objective of the present work is to evaluate the effectiveness of a mindfulness-based intervention on variables related to classroom social environment in early adolescence. Eighty three students aged 11–13 were distributed into three groups: control group, intervention without practice (mindfulness intervention in the classroom) and intervention with practice (mindfulness in the class and meditation practice at home). Mindfulness in the class and practice at home intervention improved classroom social environment and impulsivity self-regulation with respect to the other groups. This type of intervention in early adolescence reveals different effects. When practice at home is encouraged it contributes to achieve greater classroom benefits. These preliminary findings are promising and mindfulness intervention plus practices at home should be considered as an implement to reduce school violence.

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Implementación de un programa basado en mindfulness para la reducción de la agresividad en el aula

R E S U M E N

La agresividad en el aula cada vez aparece más tempranamente y es más frecuente en la educación secundaria obligatoria. El objetivo del presente trabajo es evaluar la eficacia de una intervención basada en mindfulness sobre variables relacionadas con el clima social en el aula en la adolescencia temprana. Han participado en el estudio 83 estudiantes entre 11 y 13 años de primero de educación secundaria distribuidos en tres grupos: un grupo *control*, un grupo de *intervención sin práctica* (intervención enmindfulness en el aula) y un grupo de *intervención con práctica* (intervención en mindfulness en el aulay práctica en casa). Los resultados muestran que el grupo con intervención en mindfulness en el aula y práctica en casa mejora el clima social del aula y la autorregulación de la impulsividad con respecto a los otros dos grupos. La intervención en mindfulness en la adolescencia temprana revela diferentes efectos sobre el aula según la implicación voluntaria del alumnado. Los hallazgos preliminares señalan que la intervención en mindfulness en el aula y la práctica en casa debería ser considerada como una herramienta para la reducción de la violencia escolar.

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Introduction

When intimidation, social isolation, and different forms of aggressiveness indicating social rejection are frequent and ongoing, they affect the classroom climate and can lead to bullying (Georgiou & Stavrinides, 2008; Williford, Boulton, & Jenson, 2014). In the classroom, students internalize values that can either increase respect and mutual support in social relationships or, conversely, increase aggressiveness and conflict. Aggressive behaviour, impulsiveness,

and hostility in adolescence can be resistant to change after interventions. One strategy for reducing interpersonal aggressiveness that has emerged in recent years is mindfulness. Although studies suggest the feasibility of mindfulness for reducing certain forms of aggressiveness in the adult population (Harnett & Dawe, 2012; Kuyken et al., 2013), there is no clear evidence of the effect on adolescent relationships.

Students aged between 12 and 16 experience a particularly dynamic transition stage during which numerous physiological, hormonal, and structural changes take place in the brain (Siegel, 2015). Moreover, they gradually distance themselves from their parents and become closer to their peers. This change increases tension as they lose what is familiar and safe, giving rise to possible victimization and aggression. Thus, aggressiveness adopts different functional forms such as deliberate strategies for feeling safe when entering a new social group or efforts to protect against feeling rejected (Jiménez, Estévez, & Murgui, 2014). A climate of conflict and violence in the classroom can potentially emerge between the ages of 12 and 15 (López-González & Oriol, 2016), along with a rise in bullying (Pellegrini & Long, 2002). In this context, impulsiveness appears as a discriminating factor between aggressive and non-aggressive adolescents (Andreu, Peña, & Penado, 2013; Oberle, Schonert-Reichl, & Zumbo, 2011).

One of the most important mechanisms linked to the relation classroom-interpersonal aggressiveness is psychosocial distance, which enables the differentiation between acceptable and unacceptable students (Goodboy, Martin, & Rittenour, 2016). Normalization is one of the standard problems of aggressiveness in the classroom; in other words, the belief that the behaviour that fosters it is a normal occurrence among the young. Such normalization tends to conceal behaviours of discrimination or rejection. The practice of mindfulness enables the mind to be alert and to perceive uncomfortable situations more clearly by removing them from a blurry and reactive environment (Lester, Cross, Shaw, & Dooley, 2012; Wang, Brittain, McDougall, & Vaillancourt, 2016; Williford et al., 2014). However, the main endeavour behind research on mindfulness in the classroom has focused on studying the ways in which stress and resilience are faced (Zenner, Herrnleben-Kurz, & Walach, 2014; Zhou, Liu, Niu, Sun, & Fan, 2017).

The term 'mindfulness' is defined as a process of self-regulated attention that enables a state of awareness of the present moment (Langer & Moldoveanu, 2000). This process facilitates positive behaviours. In fact, mindfulness-based programmes can develop self-observation, a skill that has the potential to inhibit emotional reactivity and promote self-control (Borders, Earleywine, & Jajodia, 2010; Friese, Messner, & Schaffner, 2012). What is more, according to Riggs and Brown (2017), mindfulness practice improves the perception of what is happening at the present moment and has a beneficial effect on bullying or victimization. Mindfulness practice could help individuals to detect impulsive behaviours by experiencing sensations, emotions, and thoughts more clearly and distinctively (Holas & Jankowski, 2013). Attention to what is happening in the classroom would foster a more transparent and accurate perception of situations of violence, thereby preventing classroom conflict.

Very few studies on adolescents evaluate the efficacy of a mindfulness programme at school to reduce social discrimination and aggressive behaviours that affect the social climate of the classroom. Only recently Riggs and Brown (2017) proposed implementing mindfulness practices to improve the conscious perception of the present rather than being alert to victimization states. Therefore, the practice of mindfulness, duly adapted to the needs of adolescence and the educational setting, could foster self-regulation strategies among students. This practice can promote healthy interpersonal relations and improve the perception of a safer social climate in the classroom. Fix and Fix (2013) systematic review concludes that mindfulness-based programmes can effectively reduce individual aggression. These authors recommend a deeper understanding of the mechanisms that render mindfulness programmes useful for treating aggressive behaviour.

Following a review of the literature on the effectiveness of mindfulness in several areas (e.g. stress, anguish, prosocial behaviours, hostility, verbal or physical aggression) of school performance, no study appears to have evaluated the moderating role of encouraging students to practice mindfulness at home and its effects. Analyses of the effectiveness of mindfulness have usually been more molar and the criterion has been coded within the duration of intervention sessions, without quantifying generic statements such as "participants were encouraged to practise at home" or "participants were given a weekly text" (Klingbeil et al., 2017).

Bearing in mind the importance of self-regulatory behaviour in schools and the paucity of studies addressing the subject, this paper evaluates whether classroom-based mindfulness training has significant effects on the impulsiveness and quality of socio-emotional interactions of first-year secondary students. Moreover, it analyzes the application of different formats of mindfulness intervention (classroom-based mindfulness training, and classroom-based mindfulness training and home practice) on the social climate of the classroom and impulsiveness.

First, this study hypothesizes that participants in classroom-based mindfulness training and participants in classroom-based mindfulness training and home practice will present a more positive improvement in emotional and behavioural regulation, increase the positive social climate of the classroom, and reduce impulsiveness. Second, this study hypothesizes that participants in classroom-based mindfulness training and home practice will score more positively in emotional and behavioural regulation, and in the quality of social interactions, compared with the group of participants in classroom-based mindfulness training and no home practice and the control group.

Method

Design

We used a repeated measures experimental design, with a between-group factor, Mindfulness intervention (control group, classroom-based mindfulness training group, and classroom-based mindfulness training and home practice group), and an intra-group factor, Time (pre- vs. post-intervention assessment). The control and intervention groups were from two different classrooms.

Participants

The sample is composed of 83 first-year students aged between 11 and 13 ($M = 11.98$, $SD = .31$) in compulsory secondary education (ESO), from a state school in the province of Castellón (Spain). In socio-cultural and economic terms, most of the students were from middle class backgrounds, and the presence of students with social problems was therefore negligible. No significant conflicts were detected at the school or in the classes that participated in the study. The students' academic results, based on their marks for university entrance exams, were normal.

Girls made up 50.6% ($n = 42$) and boys, 49.44% ($n = 41$). The number of students participating in the intervention group was 61 (73.4%), while 22 (26.6%) belonged to the control group. The number of participants per group enabled a 90% chance of detecting statistical errors attributable to sample bias (Cohen, 2013), thereby placing effect size through sampling error at a high level ($d = 1.00$, $\alpha = .05$). Of the participants in the Intervention group, 30 belonged to Group 1 (classroom-based mindfulness intervention) and 31

to Group 2 (classroom-based mindfulness intervention and home practice). None of the participants belonged to any other extracurricular programme of a socio-emotional nature.

Instruments

The students were asked their age and sex, which were the only socio-demographic data gathered.

The questionnaire was adapted from the *Test Bull-S forma A*, an instrument to assess the dynamic of bullying among schoolchildren, based on the sociogram technique (Cerezo, 2000, 2009). Item 13, which refers to the frequency with which aggressive situations occur at the centre according to students' perceptions, has been adapted in line with the objective of this study. In the version used in this study, based on the statement "According to your personal experience, aggressive situations at the centre happen. . .", participants responded to four items ("Every day"; "1–2 a week"; "seldom"; "never"), presented on a Likert-type scale, ranging from 1 = totally agree to 7 = totally disagree. These four items were used to create the variable *Bullfrequency*. The internal consistency of the measure in the pre-intervention assessment (T1) was as follows: Cronbach's alpha (α) = .630, McDonald's omega coefficient (Ω) = .703, Variance Extracted Index (VEI) = .434; and in post-intervention assessment (T2): α = .401, Ω = .675, VEI = .492. The reduced internal consistency can be due to the intervention, but it basically implies that the measure is unstable.

The adapted questionnaire *Life in School* (Arora, 1994) is composed of 25 items presented on a Likert-type scale, ranging from 1 = never to 9 = often, which respond to the statement "This week another person in class. . .". These items assess the social climate of the classroom and are used at primary and secondary education centres to calculate the extent of bullying among pupils (Tauste, 2012). It contains two factors: *positive social climate* and *negative social climate*. The dimension *positive social climate* is composed of 9 items (e.g. "S/he helped me with my homework", "S/he was nice to me", "S/he helped me carry my things"). A high score indicates a positive social climate. The internal consistency of T1 was as follows: α = .823, Ω = .830, VEI = .356; and in T2: α = .763, Ω = .767, VEI = .273, respectively. *Negative social climate* is composed of 16 items (e.g. "S/he made me do things I didn't want to do", "S/he teased me about my family", "S/he made fun of me"). A high score indicates a negative social climate. The internal consistency of T1 was as follows: α = .925, Ω = .929, VEI = .473; and of T2: α = .883, Ω = .890, VEI = .360.

The *Bogardus Social Distance Scale* (BSDS) is composed of five items presented on a Likert-type scale, ranging from 1 = no to 9 = yes. The participants respond to the statement "Think about the type of person you least identify with, whether they are a different race or have a different religion, values, etc. Would it be unpleasant. . .?". The items follow an ascending cumulative range (". . .if they came to visit the city?"; ". . .to have them as a neighbour in your area?"; ". . .to have them as a neighbour in the same building as you?"; ". . .to have them as a friend?"; ". . .to have them as a member of your family?"). It assesses the psychosocial distance of social groups and is an indirect measure of social discrimination (Bogardus, 1933). It reflects attitudes, level of contact, and prejudice of one group towards another (Wark & Galliher, 2007). It is a cumulative scale in which agreement with subsequent items implies acceptance of the previous ones, which converts it into a subset of the Guttman Scale. A lower score indicates less *social distance* (T1: α = .904, Ω = .907, VEI = .670; T2: α = .925, Ω = .935, VEI = .747). We chose this scale for our research because it can be applied quickly and is easily understood by 12-year-old students.

The Spanish version of the *Barratt Impulsiveness Scale* (BIS-11-A) comprises 25 items in which participants are required to report the frequency of different behaviours, ranging from 1 = seldom or never to 4 = always or nearly always. For the evaluation of impulsiveness, we used the Spanish version of the scale by Martínez-Loredo, Fernández-Hermida, Fernández-Artamendi, Carballo and García-Rodríguez (2015). The items are distributed over two factorial dimensions. The first includes aspects related to *general impulsiveness* (attentional, cognitive, and motor), composed of 14 items assessed in such a way that the higher the score, the greater the impulsiveness (T1: α = .763, Ω = .770, VEI = .254; T2: α = .685, Ω = .719, VEI = .227). The second factor refers to *planned impulsiveness*, and the original scale comprised 11 items. However, because feasibility for this sample did not reach .25, we decided to eliminate the items that reduced scale coherence. Finally, the scale was composed of 9 items evaluated so that higher scores indicated more behaviour planning (T1: α = .532, Ω = .436, VEI = .155; T2: α = .564, Ω = .541, VEI = .173). Despite being reviewed, the *planned impulsiveness* scale has a low internal consistency, which indicates that the model is unstable in this population.

To carry out the intervention, we used *Method Eline Snel® mindfulness programme for children* (Snel, 2013). This method is a version of the child-teenage programme Mindfulness Based Stress Reduction (MBSR) (Gold et al., 2010; Kabat-Zinn, 2003). The structure of the programme follows a model of practice in guided mindfulness, stories, short explanations, and group dynamics in each session. During the programme, students use a workbook and support materials. Audio materials can be downloaded for home practice. To monitor meditation practice at home, at the beginning of each session, students are asked the following question: "Have you practised using the meditation audio this week?". The question is dichotomous: 1 = yes or 2 = no. At least 31 students said they had practised using the audio once or more times per week throughout the programme (n = 31, M = 1.45, SD = .77).

Procedure

The research was carried out throughout the school year of 2017–2018. All participants were from the same school. All participants gave their informed consent to take part in the programme, and their families gave their authorized consent for students to participate in the study. This school was chosen because the teacher accredited to give the programme was employed there. With the prior consent and authorization of the families, we contacted the school management team to inform them of our research objectives and to request the involvement of students, teachers, and families. Once the management team had authorized their collaboration, we approached the students to request their voluntary participation. Only four of the nine classes at the school agreed to participate.

The mindfulness programme took place at the centre during school time and was led by an accredited teacher who worked there. An hour-long session was held during tutorial time once a week for 10 consecutive weeks from January to March 2018. Efforts were made at all times to ensure that these sessions did not interfere with timetabled classes. Participating students were randomly distributed in two groups: an intervention group that attended mindfulness programme sessions and a control group that did not. The students in the control group followed the normal curricular content in tutorial time. These tutorials were led by the same teacher as for the intervention group. After each session in the intervention group, participants received a meditation audio as part of the programme. Half of the intervention group, chosen at random, were not expressly asked to use the audio. The other half were urged to practice at home using the audio. Students who did not use the audio at any time were included in the intervention subgroup with no home practice 'Classroom-based mindfulness intervention'. Students who used the audio to practise at least once were included in the intervention subgroup with home practice 'Classroom-based mindfulness intervention and home practice'.

Table 1
MANOVA of the Intervention groups by pre- versus post-intervention Change (T2-T1)

	M	SD	F	df	p	ω^2
Bullfrequency change			1.73	2	.18	.03
Intervention with practice	.27	1.81				
Intervention without practice	.43	1.76				
Control	−.42	1.17				
Positive social climate change			6.09	2	.004	.12
Intervention with practice	.66	.93				
Intervention without practice	−.27	.94				
Control	.26	1.26				
Negative social climate change			5.29	2	.007	.11
Intervention with practice	.10	.40				
Intervention without practice	−.17	.88				
Control	.46	.71				
Social distance change			1.45	2	.24	.02
Intervention with practice	.25	.48				
Intervention without practice	−.01	.60				
Control	.10	.76				
Generalized impulsiveness change			1.83	2	.17	.03
Intervention with practice	.05	.38				
Intervention without practice	.22	.31				
Control	.10	.37				
Planned impulsiveness change			5.77	2	.005	.12
Intervention with practice	.13	.46				
Intervention without practice	−.15	.49				
Control	−.26	.30				

Pre-test measures were carried out by asking participants to complete individual questionnaires before beginning the 10-week mindfulness training programme. At the end of the programme, participants were asked to complete questionnaires, which provided post-test measures for the different variables.

This research has been approved by the Institutional Research Board of the Universitat Jaume I, Castellón (Spain), and undertaken in accordance with the protocol presented and approved by that institution (2436). The protocol has followed the international code of ethics in humanities and sciences of the Centre for Research Ethics and Bioethics.

Data analysis

We used SPSS software (version 25). The instrument section includes indices for calculating the feasibility of the instruments, Cronbach's alpha, McDonald's Omega and the VEI. Descriptive data were obtained from the results. In order to evaluate the effect of the intervention, we calculated the differential scores (T2-T1) in each dependent variable to establish a measure of Change (T2-T1) pre- versus post-intervention. Finally, we modelled the intervention effect on the change between the variables by monitoring the interaction effects using a MANOVA. Levene's and Box's M tests were included to assess the homogeneity of the variances and covariances between the groups. Effect size was calculated using eta squared (η^2) for the general model and omega squared (ω^2) for the effects in each variable of the model. Finally, we performed post-hoc measures to identify between-group differences.

Results

The multivariate analysis of the three *Intervention* groups by pre- versus post-intervention *Change* (T2-T1) shows that the effect of the mindfulness-based programme is significant ($F = 3.68$, $df = 12$; $p < .000$; $\eta^2 = .233$). Size effect, though small, is sufficient to consider the results relevant. Levene's test for equality of variance errors is significant in the dependent variables for each group except in the variable Negative social climate. Box's M test shows that the variance matrices of the dependent variables differ for each group ($M = 67.157$, $p = .001$).

More specifically, results of comparisons between the different groups show that the effect of the classroom-based mindfulness programme varies according to personal involvement, and to whether meditation is practised at home (Table 1). The effect of the programme is observed in three of the variables studied. First, the results show significant changes in *positive social climate*. An improvement in *positive social climate* was observed in the classroom-based mindfulness and home practice intervention group in absolute terms and in relation to the classroom-based mindfulness intervention group ($p = .002$). Second, significant changes were observed in *negative social climate*. The classroom-based mindfulness intervention group reduced the negative social climate and improved significantly when compared with the control group ($p = .005$). Third, significant changes were also observed in relation to *planned impulsiveness*. The classroom-based mindfulness intervention and home practice group reduced impulsiveness, showing a significant change in relation to the control group ($p = .006$) and in relation to the classroom-based mindfulness with no home practice intervention group ($p = .036$).

Discussion

This study analyzes the effects of different intervention conditions in mindfulness (classroom-based mindfulness intervention and classroom-based mindfulness intervention with home practice), compared with a control group with no intervention, on the social climate of the classroom and on impulsiveness. The results generally disclose that application of a mindfulness programme is significant with respect to non-application. Moreover, student involvement through home practice is associated with positive changes in the improved social climate of the classroom and in the self-regulation of impulsive behaviours. These results are in line with studies that pinpoint mindfulness as being effective in developing healthy habits and increasing adaptive social interaction behaviours (Franco, Amutio, López-González, Oriol, & Martínez-Taboada, 2016; López-González, Amutio, & Herrero-Fernández, 2018; López-González, Amutio, Oriol, & Bisquerra, 2016). The results include additional knowledge, since student commitment considerably improves the efficacy of the mindfulness intervention programme.

More specifically, the commitment to practice outside the classroom reveals significant changes in the positive social climate of the classroom, as well as a significant reduction in the planned impulsiveness dimension, thereby partially confirming our hypothesis. We found no changes in the reduction of general impulsiveness nor in social discrimination. In this study, impulse planning and perception of a favourable social climate are not affected by the intervention that included home practice. However, the reduction in the negative social climate is associated with the intervention with no home practice. That is, changes were observed in the judgement and emotional reactivity that encourage thinking about a more friendly social climate in the classroom, associated with the mindfulness intervention.

These results support existing evidence in the sense that mindfulness in adolescence facilitates the self-regulation of negative emotional states (Rempel, 2012; Vickery & Dorjee, 2016). The scant literature on mindfulness practice in adolescents indicates that this type of intervention reduces every dimension of the levels of impulsiveness and aggressiveness (Fishbein et al., 2016; Franco et al., 2016). Although there is no in-depth study of which causal mechanism in mindfulness practice better discriminates the reduction of these dimensions, it is evident that total involvement in the self-regulation of attention and emotion leads to learning adaptive social relations and to improving the social climate of the classroom in adolescence. Furthermore, although not comparable, the greatest effect of the group practising at home supports Klingbeil et al. (2017) evidence, since the longer the intervention, the higher the effectiveness, the dedication of time in minutes being a significant moderator of effectiveness. The significant effect of the classroom-based mindfulness and home practice intervention group, in comparison with the other two groups, occurs despite the low frequency of personal involvement in home practice, since most students only practised one and a half days on average. It might be worth establishing motivational strategies for students to increase their commitment to practising mindfulness when away from teacher supervision.

To date, no study has analyzed the connection between personal involvement in mindfulness (e.g. practising at home) and impulsiveness, and the effects on the social climate of the classroom in adolescence. However, there is evidence that mindfulness relaxation has some effect on the classroom climate (López-González et al., 2018) and impulsiveness (Franco et al., 2016). This stage differs from adulthood in which regulating emotions is more challenging and conscious awareness of the self is more difficult to implement. In fact, executive functions are still developing and the amygdala appears to provoke greater reactivity to stressful situations in comparison with adults (Skinner & Zimmer-Gembeck, 2016).

Recently, López-Castedo, Álvarez, Domínguez and Álvarez (2018) indicated that the number of attacks increases considerably in the fifth year of primary school and the second year of secondary education (13–14 years). It is a critical period in which programmes to reduce rates of violent behaviour in adolescence are required. The study could focus on the effect of mindfulness programmes on the educational centre, above and beyond the direct effect on students. Likewise, that home practice is an important factor in terms of the effects on positive social climate and the reduction of planned impulsiveness suggests that implementing mindfulness could entail, in addition to monitoring practice beyond the classroom, continued practice once the programme has ended. Home practice requires motivation to include mindfulness in the personal domain, which suggests that personal motivation to practise beyond teacher supervision can be an important factor for effect. Future longitudinal research could determine whether the effects of personal commitment to practising the programme are maintained in time. Furthermore, it would also be advisable

to contemplate which other mindfulness mechanisms are more effective, in order to design a more significant programme implementation profile.

This research is not exempt of limitations. Firstly, small sample size means that the results cannot be generalized, making it necessary to undertake additional studies with a larger sample. Secondly, students in the control group and the intervention groups with and without home practice were from the same educational centre, a circumstance which could negatively affect the efficacy of the programme. Students who participated in the intervention can change their attitude in interactions with other students who did not, thereby influencing or winning them over in the classroom. Consequently, similar effects to those seen in the intervention groups could be observed in the control group, thus masking their effect. One solution would be to select control and intervention groups from different educational centres. Thirdly, another methodological concern is that the measure of programme effectiveness was carried out by the same source, giving rise to the possibility of a common source bias. Accordingly, the usage of teacher observations and records would have resulted in more information about classroom climate. Finally, in the case of bullfrequency, feasibility was lower in the post-intervention measure, suggesting that the intervention could have undermined the internal consistency of the items. It is therefore advisable to use measures whose consistency is not susceptible to this type of intervention, in order to focus analysis on changes in score distribution. This limitation includes the low feasibility of planned impulsiveness in our sample, which may undermine usage of the scale for this type of study were it to present the same weakness in subsequent analyses. Finally, given that the students had no specific conflicts, the mindfulness programme is not presented as a problem-solving intervention. However, it is useful as an activity whose implementation in the classroom can prevent student difficulties arising from social interaction. Despite the limitations, this research has repercussions for the design of mindfulness intervention programmes, since responsible commitment in adolescence to the home practice of mindfulness considerably improves the positive social climate perceived in the classroom and reduces unplanned impulsiveness.

References

Andreu, J. M., Peña, M. E., & Penado, M. (2013). Impulsividad cognitiva, conductual y no planificadora en adolescentes agresivos reactivos, proactivos y mixtos. *Anales de Psicología*, *29*(3), 734–740. http://dx.doi.org/10.6018/analesps.29.3.175691

Arora, T. (1994). Measuring bullying with the "Life in School" checklist. *Pastoral Care in Education: An International Journal of Personal, Social and Emotional Development*, *12*(3), 11–15.

Bogardus, E. S. (1933). A social distance scale. *Sociology and Social Research*, *17*, 265–271. http://dx.doi.org/10.4135/9781412983907.n197

Borders, A., Earleywine, M., & Jajodia, A. (2010). Could mindfulness decrease anger, hostility, and aggression by decreasing rumination? *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *36*(1), 28–44. http://dx.doi.org/10.1002/ab.20327

Cerezo, F. (2000). *El Test Bull-S. Test de evaluación sociométrica de la violencia entre escolares*. Bizkaia: Grupo Albor-Cohs. www.gac.com.es

Cerezo, F. (2009). Bullying: análisis de la situación en las aulas españolas. *International Journal of Psychology and Psychological Therapy*, *9*(3), 367–378. http://www.redalyc.org/articulo.oa?id=56012884006

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. New York, NY: Routledge. http://dx.doi.org/10.4324/9780203771587

Fishbein, D., Miller, S., Herman-Stahl, M., Williams, J., Lavery, B., Markovitz, L., & Johnson, M. (2016). Behavioral and psychophysiological effects of a yoga intervention on high-risk adolescents: A randomized control trial. *Journal of Child and Family Studies*, *25*(2), 518–529. http://dx.doi.org/10.1007/s10826-015-0231-6

Fix, R. L., & Fix, S. T. (2013). The effects of mindfulness-based treatments for aggression: A critical review. *Aggression and Violent Behavior*, *18*(2), 219–227. http://dx.doi.org/10.1016/j.avb.2012.11.009

Franco, C., Amutio, A., López-González, L., Oriol, X., & Martínez-Taboada, C. (2016). Effect of a mindfulness training program on the impulsivity and aggression levels of adolescents with behavioral problems in the classroom. *Frontiers in Psychology*, *7*(1385), 1–8. http://dx.doi.org/10.3389/fpsyg.2016.01385

Friese, M., Messner, C., & Schaffner, Y. (2012). Mindfulness meditation counteracts self-control depletion. *Consciousness and Cognition*, *21*(2), 1016–1022. http://dx.doi.org/10.1016/j.concog.2012.01.008

Georgiou, S. N., & Stavrinides, P. (2008). Bullies, victims and bully-victims: Psychosocial profiles and attribution styles. *School Psychology International*, *29*(5), 574–589. http://dx.doi.org/10.1177/0143034308099202

Gold, E., Smith, A., Hopper, I., Herne, D., Tansey, G., & Hulland, C. (2010). Mindfulness-based stress reduction (MBSR) for primary school teachers. *Journal of Child and Family Studies*, *19*(2), 184–189. http://dx.doi.org/10.1007/s10826-009-9344-0

Goodboy, A. K., Martin, M. M., & Rittenour, C. E. (2016). Bullying as an expression of intolerant schemas. *Journal of Child and Adolescent Trauma*, *9*(4), 277–282. http://dx.doi.org/10.1007/s40653-016-0089-9

Harnett, P. H., & Dawe, S. (2012). The contribution of mindfulness-based therapies for children and families and proposed conceptual integration. *Child and Adolescent Mental Health*, *17*, 195–208. http://dx.doi.org/10.1111/j.1475-3588.2011.00643.x

Holas, P., & Jankowski, T. (2013). A cognitive perspective on mindfulness. *International Journal of Psychology*, *48*(3), 232–243. http://dx.doi.org/10.1080/00207594.2012.658056

Jiménez, T. I., Estévez, E., & Murgui, S. (2014). Ambiente comunitario y actitud hacia la autoridad: relaciones con la calidad de las relaciones familiares y con la agresión hacia los iguales. *Anales de Psicología*, *30*(3), 1086–1095. http://dx.doi.org/10.6018/analesps.30.3.160041

Kabat-Zinn, J. (2003). Mindfulness-based stress reduction (MBSR). *Constructivism in the Human Sciences, 8*(2), 73–83.

Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., Haddock, A., & Clifton, J. (2017). Mindfulness-based interventions with youth: A comprehensive meta-analysis of group-design studies. *Journal of School Psychology*, *63*, 77–103. http://dx.doi.org/10.1016/j.jsp.2017.03.006

Kuyken, W., Weare, K., Ukoumunne, O. C., Vicary, R., Motton, N., Burnett, R., & Huppert, F. (2013). Effectiveness of the mindfulness in schools programme: Non-randomised controlled feasibility study. *The British Journal of Psychiatry*, *203*(2), 126–131. http://dx.doi.org/10.1192/bjp.bp.113.126649

Langer, E. J., & Moldoveanu, M. (2000). The construct of mindfulness. *Journal of Social Issues*, *56*(1), 1–9. http://dx.doi.org/10.1111/0022-4537.00148

Lester, L., Cross, D., Shaw, T., & Dooley, J. (2012). Adolescent bully-victims: Social health and the transition to secondary school. *Cambridge Journal of Education*, *42*(2), 213–233. http://dx.doi.org/10.1080/0305764X.2012.676630

López-Castedo, A., Álvarez, D., Domínguez, J., & Álvarez, E. (2018). Expressions of school violence in adolescence. *Psicothema*, *30*(4), 395–400. http://dx.doi.org/10.7334/psicothema2018.130

López-González, L., Amutio, A., & Herrero-Fernández, D. (2018). The relaxation-mindfulness competence of secondary and high school students and its influence on classroom climate and academic performance. *European Journal of Education and Psychology*, *11*(1), 5–17. https://bit.ly/2MXxLlB

López-González, L., Amutio, A., Oriol, X., & Bisquerra, R. (2016). Hábitos relacionados con la relajación y la atención plena (mindfulness) de estudiantes de secundaria: influencia en el clima de aula y el rendimiento académico. *Revista de Psicodidáctica*, *21*(1), 121–138. http://dx.doi.org/10.1387/RevPsicodidact.13866

López-González, L., & Oriol, X. (2016). The relationship between emotional competence, classroom climate and school achievement in high school students. *Cultura y Educación*, *28*(1), 130–156. http://dx.doi.org/10.1080/11356405.2015.1120448

Martínez-Loredo, V., Fernández-Hermida, J. R., Fernández-Artamendi, S., Carballo, J. L., & García-Rodríguez, O. (2015). Spanish adaptation and validation of the Barratt Impulsiveness Scale for early adolescents (BIS-11-A). *International Journal of Clinical and Health Psychology*, *15*(3), 274–282. http://dx.doi.org/10.1016/j.ijchp.2015.07.002

Oberle, E., Schonert-Reichl, K. A., & Zumbo, B. D. (2011). Life satisfaction in early adolescence: Personal, neighbourhood, school, family, and peer influences. *Journal of Youth and Adolescence*, *40*(7), 889–901. http://dx.doi.org/10.1007/s10964-010-9599-1

Pellegrini, A. D., & Long, J. D. (2002). A longitudinal study of bullying, dominance, and victimization during the transition from primary school through secondary school. *British Journal of Developmental Psychology*, *20*(2), 259–280. http://dx.doi.org/10.1348/026151002166442

Rempel, K. (2012). Mindfulness for children and youth: A review of the literature with an argument for school-based implementation. *Canadian Journal of Counselling and Psychotherapy*, *46*(3), 201–220. https://bit.ly/2KsUJiU

Riggs, N. R., & Brown, S. M. (2017). Prospective associations between peer victimization and dispositional mindfulness in early adolescence. *Prevention Science*, *18*(4), 481–489. http://dx.doi.org/10.1007/s11121-017-0750-z

Siegel, D. J. (2015). *The developing mind: How relationships and the brain interact to shape who we are.* New York, NY: Guilford Publications.

Skinner, E. A., & Zimmer-Gembeck, M. J. (2016). *The development of coping: Stress, neurophysiology, social relationships, and resilience during childhood and adolescence.* Switzerland: Springer. http://dx.doi.org/10.1007/978-3-319-41740-0.10

Snel, E. (2013). *Sitting still like a frog: Mindfulness exercises for kids (and their parents).* Boston: Massachusetts: Shamballa Publications, Inc. https://bit.ly/2YKe6N4

Tauste, S. N. (2012). Adaptación y validación al español del cuestionario M̈y Life in Schoolën una muestra de estudiantes jienenses de secundaria. *Revista Electrónica de Investigación y Docencia (REID)*, *8*, 161–183. https://bit.ly/2H37HSB

Vickery, C. E., & Dorjee, D. (2016). Mindfulness training in primary schools decreases negative affect and increases meta-cognition in children. *Frontiers in Psychology*, *6*(2025), 1–13. http://dx.doi.org/10.3389/fpsyg.2015.02025

Wang, W., Brittain, H., McDougall, P., & Vaillancourt, T. (2016). Bullying and school transition: Context or development? *Child Abuse and Neglect*, *51*, 237–248. http://dx.doi.org/10.1016/j.chiabu.2015.10.004

Wark, C., & Galliher, J. F. (2007). Emory Bogardus and the origins of the social distance scale. *The American Sociologist*, *38*(4), 383–395. http://dx.doi.org/10.1007/s12108-007-9023-9

Williford, A., Boulton, A. J., & Jenson, J. M. (2014). Transitions between subclasses of bullying and victimization when entering middle school. *Aggressive Behavior*, *40*(1), 24–41. http://dx.doi.org/10.1002/ab.21503

Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). Mindfulness-based interventions in schools: A systematic review and meta-analysis. *Frontiers in Psychology*, *5*(603), 1–20. http://dx.doi.org/10.3389/fpsyg.2014.00603

Zhou, Z. K., Liu, Q. Q., Niu, G. F., Sun, X. J., & Fan, C. Y. (2017). Bullying victimization and depression in Chinese children: A moderated mediation model of resilience and mindfulness. *Personality and Individual Differences*, *104*, 137–142. http://dx.doi.org/10.1016/j.paid.2016.07.040