Chapter 13
Exploring the Effects of a Mindfulness Program for Students of Secondary School

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ABSTRACT
This study analyzes the effects of a mindfulness program on a group of students in the first year of Compulsory Secondary Education from three public schools. A total of 61 students participated. A group comparison design (randomized controlled trial) with pretest-posttest measurement was used on an experimental and a control group. The statistical analyses show a significant improvement of academic performance, as well as an increase in all self-concept dimensions and a significant decrease in anxiety states and traits. These results are in agreement with other studies that have found mindfulness programmes to be effective in the educative system. The importance of mindfulness techniques in the educative system is also discussed.

INTRODUCTION
Many studies have established a causal relationship between a student’s academic self-concept and academic performance, to the point where academic self-concept is considered the basis of a student’s future success or failure (Marsh, 1990; Skaalvik & Hagtvet, 1990), finding that a high self-concept contributes to scholastic success, which in turn favors development of a positive self-concept (Liu, Kaplan, & Risser, 1992; Roberts, Sarigiani, Peterson, & Newman, 1993). Corbière, Fracaroli, Mbekou, and Perron (2006) also found a significant and positive correlation between academic self-concept, academic interest, and academic achievement. Other studies show that the higher a student’s positive self-concept is, the better the conditions motivating study (anxiety, concentration and aptitude for school work) and the stronger study and deep-learning strategies used,

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which also makes positive self-concept favor the student’s use of more cognitive learning strategies, thereby facilitating more profound, elaborate information processing (González-Pienda et al., 2002; Núñez et al., 1998).

This active involvement in the learning process increases when the student feels self-competent believes in his own abilities and has high expectations for self-effectiveness (Millar, Behrens, & Greene, 1993). This also increases when tasks are evaluated and when he feels responsible for the learning goals, which improves his academic performance (Núñez, González-Pienda, García, González-Pumariega, & García, 1995). It has also been demonstrated that high levels of stress in the academic environment cause attention and concentration deficits, difficulties in memorizing and problem solving, deficits in study skills, low productivity and academic performance (Pérez, Martín, Borda, & Del Río, 2003).

Anxiety is also one of the main factors negatively affecting academic performance. Carbonero (1999) says that anxiety can lead to deterioration of academic performance because the student focuses on negative thoughts about his abilities more than on the task itself. Rivas (1997) notes that students with high anxiety levels tend to focus their attention on how hard the task is, on their academic failures and on their lack of personal skills. High levels of anxiety therefore tend to alter the student’s psychological functioning to the extent that memory, attention and concentration are affected and diminished, disturbing academic performance, as this requires attention, concentration and sustained effort to be maintained at an optimum, effective level (Rains, 2004). Research, such as the studies by Del Barrio (1997) and Mestre (1992) has demonstrated both an increase in emotional disorders (anxiety and depression) in teenagers, as well as the relationship between these disorders and the student’s academic performance. Therefore, promoting and training the affective strategies based on self-control, techniques increasing attention and improving self-knowledge, can exert a positive effect on the student’s academic performance (Camero, Martín, & Herrero, 2000).

Psychology is currently employing meditation under the label mindfulness as an intervention technique or clinical method. Mindfulness has been demonstrated to be effective in a number of medical, psychological and educational problems, so it has captured the attention of psychology and has been included in a wide variety of psychological interventions and therapies, whether explicit or implicit, exclusive or integrated as one more component in a treatment program composed of a multitude of clinical elements or techniques (Baer, 2003; Germer, Siegel, & Fulton, 2005; Hayes & Feldman, 2004; Hayes, Follete, & Linehan, 2004). Mindfulness in contemporary psychology has been adopted as an approach for increasing awareness and responding skillfully to mental processes that contribute to emotional distress and maladaptive behaviours (Bishop et al., 2004). The practice of mindfulness teaches one to approach internal experiences with curiosity and acceptance, which allows for intensive self-observation without judgement, elaboration, or attempts to fix or change the experience. Mindfulness has been described as a process of bringing a certain quality of attention to moment-by-moment experience (Kabat-Zinn, 1990).

Meditation or mindfulness techniques, have shown their effectiveness in improving psychological discomfort in its various forms of anxiety (Barnes, Treiber, & Davis, 2001; Epply, Abraham, & Shear, 1989; Kabat-Zinn et al., 1992), depression (Teasdale et al., 2000), insomnia (Jacobs, Benson, & Friedman, 1993), and general wellness (Brown & Ryan, 2003). Other effects of meditation related more directly to stress and anxiety are reduced nervousness, worry and emotional discomfort, and increased muscular relaxation and emotional calm (Mañas, Luciano, & Sánchez, 2008; Mañas, Sánchez, & Luciano, 2008). It also