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Effects of a non-instructional prosocial intervention program on children's metacognition skills and quality of life

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ABSTRACT

This preliminary study aimed to investigate the relationship between a non-instructional prosocial experience (helping others) intervention program and children's metacognition and quality of life in a school setting. During the 10 week intervention the children sat goals concerning helping others (planning), helped each other (acting) and evaluated their own performance (self-evaluation). Overall results showed that children's overall quality of life and self-esteem were significantly higher after intervention compared to before. No changes on metacognitive skills were found; however, evaluating girls and boys independently, boys scored significantly higher on evaluation of metacognitive awareness after the intervention compared to before. The importance of supporting student's prosocial experience and self-evaluation at school are discussed.

1. School aged children's prosocial experience and associations with quality of life

Helping others is a prosocial experience which fulfills the need for physical and emotional support for the one who gives and the one who receives help (Barrett & Yarrow, 1977). Young children are able to distinguish one's own emotional states from others' and prosocial behavior can be observed in preschool aged children (Brownell, Ranmani, & Zrewas, 2006; Eisenberg-Berg & Lennon, 1980; Hawley, Little, & Pasupathi, 2002; Yarrow & Waxler, 1976). Experimental studies have demonstrated school aged children's prosocial behavior in structured settings in which adults gave clear social and communicative support (Brownell, Svetlova, & Nichols, 2009). At school age, children master corresponding understanding of others' and own needs, motivational roots of prosocial behavior develop, and they voluntarily share valued resources with others (Brownell, Svetlova, & Nichols, 2009; Hoffman, 2007; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). It has been shown that school aged children can set goals according to their own capabilities and they are also able to plan and review their own strategies (Brown & Smiley, 1977). Previous research suggests an association between prosocial experience and Quality of Life (QoL). For example, Martin and Huebner (2007) found that prosocial experiences are strongly correlated with increase in life satisfaction in early adolescence. Solomon, Battistich, Watson, Schaps, and Lewis (2000) created a program based on student-centered approaches to classroom management and the training of teachers to emphasize social understanding, prosocial values and provides helping activities among the students. Students who participated in the program improved their social attitude, social inclination, their feeling of connection to their school, prosocial development, personal well-being and satisfaction. Gebauer, Riketta, Broemer and Maio (2008) found that the prosocial motivation was positively related to their satisfaction and self-esteem. The study found positive effects on satisfaction and academic

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achievement through prosocial experience. As Anderson and Costello (2009) described, prosocial behavior is characterized by helping others behavior and it can be motivated by a concern for other's well-being.

2. Metacognition and its association to QoL among school age children

Another area that is recently gaining new attention is metacognition. Flavell (1979) was one of the first to use the term "metacognition" as an individual ability to refer to one's knowledge concerning one's own cognitive processes, and products or learning-relevant properties of information. There are two components of metacognition; "metacognitive knowledge (or knowledge about cognition)" and "metacognitive regulation" (Flavell, 1979, 1987; Schraw & Dennison, 1994; Schraw, 1998). Flavell (1979) further divided "metacognitive knowledge" into three types: (1) knowledge of "person", which includes anything one recognizes about his strengths and weaknesses in learning and processing information; (2) knowledge of "tasks", which includes knowledge about the demands of the nature of a task and the processing demands required to complete the tasks; and (3) knowledge of "strategy", which is knowledge about the types of strategies likely to be most useful to successfully accomplish a task. Furthermore, he also divided "Metacognitive regulation" into three types: (1) "planning", which includes appropriate selection of strategies or resources that affect task performance; (2) "monitoring", awareness of comprehension and task performance; and (3) "evaluating and re-evaluating", checking the final product of a task and the efficiency at which the task was performed.

Metacognitive skills develop throughout childhood. Veenman, Wilhelm, and Beishuizen (2004) assessed metacognitive skills among 4-, 6-, 8-graders and university students and found that their abilities increased with age. In another study Veenman and Spaans (2005) similarly demonstrated a growth in metacognitive skills in children between 13 and 15 years of age. Metacognition strategies have been introduced in schooling to support students' aims to improve their success, enhance their effective performance and develop a sense of independence. In the classroom, valid educational methods are required in order to enhance children's ability to grasp their own specific strengths and limitations with respect to prosocial experiences. These abilities might include utilizing the fullest extent of their prosocial capabilities, taking the initiative in solving problems, acquiring effective solution strategies and adequately evaluate their performance. Improving metacognitive strategies might help students to learn and perform more effectively. Several kinds of tools and strategies have been used to support student's metacognitive strategies, and these have mostly been studied with experimental designs and with a focus on improving academic skills (Nietfeld & Shraw, 2002; Thiede, Anderson, & Therriault, 2003). Anderson (2008) studied components of metacognition for language learning, preparing and planning for learning, selecting and using strategies, monitoring learning, orchestrating strategies and evaluating learning. The "think-aloud protocol" has been suggested as an effective pedagogical tool in which learners who are engaged in the same task help each other; and "self-assessment" as another tool where learners improve their abilities through metacognitive awareness. Garofalo and Letter (1985) concluded from research that metacognitive training improves students' mathematical performance and that metacognitive skills training should be an integrated part of teaching. However, these studies were conducted in learning settings and focused solely on academic learning outcomes and not prosocial experience.

Metacognition might also be linked to prosocial behavior and QoL. Educational services for children have become more multifaceted and good QoL should be considered an important requirement for schools (Weintraub & Erez, 2009; WHO, 2003). Some research has discussed the relationship between the learner's perception of self-regulation and their QoL. Studies have shown that, if learners are proactive with their efforts to learn, for example by setting goals for themselves, their levels of self-satisfaction improve (Zimmerman, 2000, 2002; Schunk & Zimmerman, 2007). In particular, goal-setting and self-evaluation as self-regulatory processes can raise student's QoL. Another study by Carlo, Crockett, Wolff and Beal (2012) based on reports from mothers found that their children's self-regulation was strongly associated with prosocial behavior at home. Thus, regulation seems to play a significant role in the individual's development and quality of social behavior.

Summing up, while these strategies seem to point to a link between metacognition and QoL, few studies have been conducted that address this association in school. Further, it is important to conduct research with this focus and specifically to carry it out in an everyday school context and in a way that is child-centered and non-instructional. No studies, to our knowledge, have studied how an intervention on improving prosocial experience can support children's metacognitive abilities and QoL. It will be useful to investigate how an intervention towards promoted prosocial experience, though planning, acting and self-evaluation, may effect children's QoL and metacognitive abilities in a school setting.

3. Gender

Previous research has shown that there are gender differences in prosocial behavior. Moffitt, Caspi, Rutter and Silva (2001) showed that boys during puberty are much more antisocial than girls, and Eisenberg and Fabes (1998) similarly reported that girls scored higher on prosocial behavior than boys. The girls' prosocial behaviors were based on an emotional reaction or altruism, whereas boys were more likely to report engaging in prosocial behavior in public settings (Carlo, Hausmann, Christiansen, & Randall, 2003). Girls tend to be engaged in conversational interaction, whereas boys like to spend time playing in peer groups (Veenstra, 2006). It is important to control for gender differences when evaluating how an intervention on prosocial experience works.