



# Transition to Primary School of Children in Economic Disadvantage: Does a Preschool Teacher Training Program Make a Difference?

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Accepted: 4 July 2021

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## Abstract

Transition to school may be experienced as a critical event for both children and their families. Within an ecological framework of transition, the scope of the concept of school readiness in recent years has decentered from the child to the environment, including the readiness of (pre)school education to develop core skills in children. This study aims to understand the extent to which preschool teachers' completion of training in the Incredible Years®-Teacher Classroom Management program (IY-TCM) during children's last preschool year has an impact when children transition to primary school, and how this contributes to reducing differences between children with and without economic disadvantage. Forty-four teachers from classes with a high percentage of students in economic disadvantage completed questionnaires about 192 five/six-year-old children. Results from cross-sectional analyses showed that children whose preschool teachers attended the IY-TCM program, when compared to children whose teachers did not, were significantly higher in social skills, adaptation to school and school achievement at the end of the first term, and had parents more involved in education but with a lower bonding with the teachers (medium to large effect sizes). Although not statistically significant ( $p = .08$ , Hedge's  $g = .29$ ), results of longitudinal analyses are trending in the expected direction, suggesting that the IY-TCM could help to reduce socio-economic disparity. Results are discussed bearing in mind the importance of a preschool education that addresses the development of self-regulation and social skills in children, and the value of both initial and continuous training for preschool teachers.

**Keywords** Transition to school · Preschool teachers training · Incredible Years® Teacher Classroom Management (TCM) · Social disadvantage

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This article is partially based on data used in the Masters' thesis of two of the co-authors (Cruz, 2017; Santos, 2017), available in Portuguese.

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## Introduction

The transition from preschool to school represents an important moment in a child's developmental course, and while it may evoke positive feelings of joy and enthusiasm, accompanied by expectations of increased responsibility and independence, the qualitative shift that it involves may be challenging for both the child and the family (Einarsdóttir, 2003; Sollars & Mifsud, 2016). In Portugal, preschool education is under the scope of the Ministry of Education and is meant for children aged from 3 to 5 years. Although it is optional, a 2009 law made preschool free and universal for 5 year-old children (Decree-Law 85/2009, a measure extended to 4 year-old children by Decree-Law 65/2015), and the national statistics indicate that at present about 97.7% of 5-year-olds actually attend a preschool setting (*Conselho Nacional de Educação, CNE, 2020*). This universal

availability of preschool education means that most Portuguese children at the age of 6 (or perhaps 5, depending on their date of birth) are faced with the experience of transitioning from preschool to the first grade of primary school, which is also the first stage of compulsory education. This transition, therefore, becomes an important area of research, given the way it is experienced by children; in their environments and will have profound implications in terms of the children's future academic success; thus, it has come to be regarded as a sensitive period in this respect (Dumcius et al., 2014; OECD, 2017; Rimm-Kaufman & Pianta, 2000).

Previous research has well documented the multiple changes that characterize the transition from preschool to first grade. Children move from a child-centered environment where time and space are organized according to each child's likes and needs, to a less flexible, curriculum-centered environment that prioritizes cognitive learning and academic success over caring (Balduzzi et al., 2019; Brooks & Murray, 2018). Unlike the preschool context, where children's creativity and idiosyncrasies may be viewed as assets, in primary school the learning goals are essentially the same for all the students in the class and are designed to increase their skills (Correia & Marques-Pinto, 2016; Rothe et al., 2014). At the same time, children have to recognize and follow different routines, which involve being alert and active while sitting for longer periods (Rimm-Kaufman & Pianta, 2000; Sollars & Mifsud, 2016). This change, from a playful environment to one that is mostly focused on learning, may cause children to feel a loss of control over their learning (Balduzzi et al., 2019), leading many to experience this transition as something akin to a culture shock (Broström, 2005). Also at the social level, children become more independent from adults and shift from an environment where they primarily interact with adults, to one where they mainly interact with a new group of peers, including older students (Rimm-Kaufman & Pianta, 2000).

As highlighted by research findings, transition to school may be experienced as a critical event not only by children but also by their families (Balduzzi et al., 2019; Correia & Marques-Pinto, 2016; Sollars & Mifsud, 2016). Regarding this topic, parents' concerns pertain to both the academic and social spheres. On the one hand, they want their children to have enough knowledge and academic learning skills to meet their teachers' expectations (Arndt et al., 2013). On the other hand, they may worry that school does not fulfill the children's social and emotional needs, or may note that the children miss their preschool friends or may be potentially bullied by older school mates (Sollars & Mifsud, 2016). They see the new school context as demanding and much more "serious" for the child than the preschool, and the anxiety aroused by this representation may be conveyed to the child (Correia & Marques-Pinto, 2016). At the same time, communication between parents and teachers in primary school

tends to be less frequent (e.g., more focused on problems), less flexible, and more formal (e.g., subject to prior appointment), and the interactions between adults (parent-teacher and parent-parent) are in general, less encouraged (Correia & Marques-Pinto, 2016; Rimm-Kaufman & Pianta, 2000).

The psychological and emotional challenges faced by children and families during the transition to primary school can be particularly difficult for children and families from disadvantaged backgrounds (Balduzzi et al., 2019; Rothe et al., 2014; Van Laere & Boudry, 2019). In fact, in situations of economic deprivation, the same factors that place the child at risk for poor academic outcomes (e.g., less stimulating home environment, parents who are less committed to their education and to collaborating with school, and who lack of knowledge of the (pre)school culture and expectations) may also compromise a smooth transition and adaptation to the new school and learnings. At the same time, there is strong evidence to support the idea that high quality early education is the first step to counterbalance disadvantage (Dumcius et al., 2014; European Commission, 2011; OECD, 2017; Skopek et al., 2017).

Within an ecological and dynamic perspective of transition, children's readiness must be understood as being directly and indirectly influenced by their contexts (e.g., school, family, peers), the relationships among them, and the way such contexts and relationships change over time (Rimm-Kaufman & Pianta, 2000). In view of these issues, the scope of the concept of school readiness has expanded considerably in recent years, having decentered from the child to the environment, including four important components: "ready families", "ready communities", "ready early childhood education", and "ready schools" (Dumcius et al., 2014; European Commission, 2011). In Portugal, transition strategies that encompass multiple contexts and agents are advocated by the Curricular Guidelines for Preschool Education (meant to be an open and flexible curriculum framework, as opposed to a closed program, CNE, 2020), in a chapter dedicated to educational continuity and transitions and in line with international guidelines (see Van Laere et al., 2019 for a review). These strategies include the coordination between preschool and primary school teachers (e.g., passing on information about the developmental and learning level of each child), the children's involvement (e.g., discussing transition topics with the child, visiting the new school), the facilitation of transition at the institutional level (e.g., having spaces such as the library or school canteen used by children of both levels), and the participation of parents/families (e.g., providing them information about the new school and being available to answer to their questions) (Silva et al., 2016). This last issue capitalizes on the partnership relationship between the parents and the teacher throughout the preschool years, which will favor the parents' participation in the transition and the next educational stage

(Silva et al., 2016). However, as pertinent as these recommendations may be, the specific actions actually undertaken by teachers in order to facilitate the children's transition may be dependent on their actual possibilities (e.g., being awarded time to prepare the transition; primary school teachers having the list of new students ahead of time), their awareness about the issues raised by transition and their sensitivity to the child's and family's needs in this particular stage of their development (Balduzzi et al., 2019; Dumcius et al., 2014; Silva et al., 2016).

Moreover, in accordance with the same Curricular Guidelines for Preschool Education (Silva et al., 2016), "supporting transition and ensuring continuity does not mean anticipating the learning methodologies and strategies considered appropriate for the next stage, but rather providing at each stage the learning experiences and opportunities that allow children to develop their potential, and creating favorable conditions for them to succeed at the next stage" (Silva et al., 2016, p. 97). Therefore, the preschool teacher and environment play a major role in preparing the child for a smooth transition process. In this context, socio-emotional, self-regulation, and problem-solving skills have emerged during the last decade as key goals for education during the early years, in parallel with pre-academic skills (Durlak & Weissberg, 2011; Durlak et al., 2011; European Commission, 2011; Silva et al., 2016; Taylor et al., 2017). In fact, literature has increasingly emphasized that the development of such skills promotes children's readiness for schooling and positive cognitive and academic development (Cadima et al., 2015; Hutchings et al., 2013; Webster-Stratton & Bywater, 2015). Teachers, themselves, acknowledge the importance of a child's school readiness characteristics over those stressing academic performance, as demonstrated by a survey conducted by Niklas et al. (2018) in six countries on three different continents. In this study, when asked to choose eight among 17 characteristics they considered to be important for a smooth transition to school, 1198 early years educators and primary school teachers chose "independence" (83.47%), "social competence" (78.46%), "concentration" (66.19%), and "motivation" (57.43%) significantly more often than average, while "basic literacy and numeracy skills" (chosen by 26.38% of the participants) were viewed significantly less often as important school readiness characteristics. Therefore, the quality of early education is closely related with the teachers' ability to create an educational environment that promotes those skills in children which, in turn, can be linked to the training and professional development of the teachers themselves (Dumcius et al., 2014; Durlak et al., 2011).

The Incredible Years®-Teacher Classroom Management (IY-TCM), a program developed by Carolyn Webster-Stratton (2003), is used with teachers of children from 3 to 8 years of age. According to the author, the program should

be offered in six monthly full-day training workshops, to groups of 14–15 preschool or primary school teachers, and conducted by qualified facilitators with certified training to lead teachers' groups (Webster-Stratton & Bywater, 2015). The IY-TCM aims to provide teachers with strategies for better classroom management, leading children to increase social, emotional and academic skills, as well as problem solving and self-regulation skills, promoting friendship and positive peer interactions, while reducing aggressive and oppositional behaviors. In addition, the training aims to encourage effective and active ways to involve parents in school and to promote coherence and consistency in the application of educational strategies, in the school and family contexts (Webster-Stratton & Bywater, 2015).

Several studies have documented the efficacy of the IY-TCM in improving both teachers' outcomes (e.g., increases in positive classroom management strategies and reduction in negative strategies, increased self-confidence) (Allen et al., 2019; Carlson et al., 2011), and children's outcomes (e.g., reduction in problem behaviors and increase in social skills and problem-solving). For a related systematic review, see Nye et al., (2018). Among these studies we highlight the cluster randomized controlled trial of which the present investigation constitutes a development (Seabra-Santos et al., 2018). The research was undertaken with the support of the EEA Grants Program "Public Health Initiatives 2009–2014", which aimed to improve public health and reduce health inequalities, with a core focus on mental health. Participants were 1030 children aged 3–6 years, from 65 preschool classrooms selected for their high percentage of children coming from families in economic need. After the IY-TCM intervention, teachers who had attended the training showed a greater increase in observed positive behaviors, namely in the use of specific praise (Major et al., 2016), and preschoolers in the experimental classes showed more improvements in their social skills and a greater reduction in problem behavior (Seabra-Santos et al., 2018). Besides, children with lower levels of social skills (high risk) at baseline and those from economically disadvantage backgrounds showed greater improvements in social skills, but these effects were not observed for problem behavior (Seabra-Santos et al., 2018).

Although several studies have documented the effectiveness of the IY-TCM program in improving some important children and teacher outcomes, to our knowledge, its usefulness in preparing children and parents for the transition to primary school has never been studied, particularly when economic disadvantage is present. This study aims to answer the following questions: (1) To what extent does a preschool teacher's attendance at training in the IY-TCM program have an impact on a child's transition to primary school in terms of: (1a) the child's adaptation and behavior? and (1b) parental involvement in school?; (2) Does the intervention

contribute to mitigating differences between those children with and without economic disadvantage?

## Method

### Procedures

The present study is a second stage of a previous study that evaluated the efficacy of the IY-TCM as a preventive stand-alone intervention among Portuguese preschoolers from low-income areas in the District of Coimbra, where being entitled to receive free lunch was taken as a proxy indicator of economic need. That earlier study consisted of a cluster randomized control trial in which preschools in disadvantaged areas were randomly assigned to an experimental (IY-TCM) or to a control condition. Teachers in the experimental condition participated in IY-TCM training, implemented in six monthly full-day workshops and four sessions of individual in-class support by trained facilitators. Each IY-TCM group was composed of 16–17 preschool teachers who were trained to use positive skills in managing their classrooms, as well as in promoting social, emotional, academic, and problem solving skills in children, in a partnership relationship with the families. The program uses a collaborative approach, which involves active learning methods such as role-play, video modeling, home based activities, and group discussion aimed at identifying social learning principles.

The average attendance rate was 5.5 days out of 6 ( $SD = 0.70$ ). Teachers in the control condition were offered the training in the subsequent school year. Evaluations were carried out before the teacher training (pre-intervention) and after the training was completed (post-intervention, seven months after baseline). The characteristics of children and preschool teachers who participated in that study, as well as the results from the RCT, were reported in a previous paper (Seabra-Santos et al., 2018). A third evaluation was completed during the first term of the following school year (post-transition). The study presented in this paper is focused specifically on children who, meanwhile, had started primary school.

At the beginning of the following school year, we contacted the primary school teachers who had in their classrooms children who had participated in the previous study, and explained the project's goals, without identifying the students whose preschool teachers had or had not participated in the IY-TCM training during the previous year (experimental/control). Teachers completed questionnaires only 3 months after the beginning of the school year, as this time period would allow them to get to know the children better. The questions concerning issues of adaptation to school and information on the children's academic

performance (school grades) were collected via a phone call after the end of the first term.

The Portuguese Data Protection Commission (CNPD, No. 3953/2016), along with the administration of all the participating schools, authorized the research. In addition, all the parents and teachers of the participating children signed an informed consent.

### Participants

From the children who had participated in the previous study, we elected for this research those who had meanwhile enrolled in primary school (inclusion criterion). The number of children who met the criterion was 333. From those, some were excluded based on the following criteria: those who moved to a different school group/geographical area ( $n = 24$ ); those whose primary school was in a building different from the preschool and number of students was lower than 3 ( $n = 38$ ); and those whose parents did not sign the informed consent ( $n = 61$ ). From the eligible children, there were 18 whose teachers did not complete the questionnaires. The remaining 192 children participated in the study, which represents 58% of the initial number. From those, 91 were from the experimental condition (IY-TCM) and 101 from the control condition from the previous study.

The main characteristics of children and teachers are represented in Table 1. Regarding children, 108 were boys and 84 were girls, 5–7 years-old ( $M = 75.27$ ;  $SD = 3.63$ ; both in months). Forty-three percent of those children had been entitled to free-lunch while in preschool, which was far greater than the national rate of 18% for the same period (Seabra-Santos et al., 2018). The experimental and control groups were equivalent with regard to gender, age, and percentage of children entitled to free lunch.

These students were nested in 44 classrooms, where most of the participating teachers (77%) were females, with ages ranging from 38 to 62 years ( $M = 49.05$ ;  $SD = 6.93$ ). Most had a degree in education higher than a Bachelor's (80%) and they had been working as teachers for 16–36 years ( $M = 24.09$ ;  $SD = 6.15$ ). The average class size was  $M = 18.64$  ( $SD = 4.60$ ), whereas the number of children participating in the study ranged from one to 12 per class ( $M = 4.36$ ;  $SD = 2.62$ ). Most teachers had only received in their classes children from the experimental group ( $n = 20$ ), or only from the control group ( $n = 19$ ), while there were some teachers who had children from both groups ( $n = 5$ ).

**Table 1** Children and primary teachers' demographic characteristics

Demographic characteristics	IY-TCM	Control	All	<i>p</i>
<i>Children</i>				
<i>N</i>	91	101	192	
Age, in months: <i>M (SD)</i>	75.21 (3.85)	75.33 (3.44)	75.27 (3.63)	.823 <sup>a</sup>
Age, in years: <i>n (%)</i>				.850 <sup>b</sup>
5-year-olds	17 (19)	17 (17)	34 (18)	
6-year-olds	73 (80)	84 (83)	157 (82)	
7-year-olds <sup>c</sup>	1 (1)	0 (0)	1 (1)	
Gender: <i>n (%)</i>				.384 <sup>b</sup>
Boys	48 (53)	60 (59)	108 (56)	
Girls	43 (47)	41 (41)	84 (44)	
Entitled to free lunch in preschool: <i>n (%)</i>				1.00 <sup>b</sup>
Yes	39 (43)	44 (44)	83 (43)	
No	52 (57)	57 (56)	109 (57)	
<i>Teachers</i>				
<i>N</i>			44	
Age: <i>M (SD)</i>			49.05 (6.93) (Min: 38; Max: 62)	
Gender: <i>n (%)</i>				
Female			34 (77)	
Male			19 (23)	
Training: <i>n (%)</i>				
Bachelor's in Education			5 (11)	
Bachelor's in Education, with complementary training			4 (9)	
Degree in Education higher than Bachelor's degree			35 (80)	
No. of years teaching: <i>M (SD)</i>			24.09 (6.15) (Min: 16; Max: 36)	
<i>Classroom</i>				
Class size: <i>M (SD)</i>			18.64 (4.60) (Min: 10; Max: 26)	
No. of children in study ( <i>M, SD</i> )			4.36 (2.62) (Min: 1; Max: 12)	

<sup>a</sup>Significant differences tested using independent samples t-test

<sup>b</sup>Significant differences tested using a chi-square test of independence

<sup>c</sup>Excluded from the comparison analysis due to low frequency

## Measures

### Sociodemographic Questionnaire—Children and Parents

Questionnaire developed for this study in order to collect children's data (e.g., age and gender) and parents' data (e.g., age, level of education).

### Sociodemographic Questionnaire—Teachers

This questionnaire was also created for this study to collect data relative to teachers' characteristics (e.g., age, gender), training (e.g., level of training), and professional background (e.g., number of years as a teacher), as well as information

about the group of children they were teaching (e.g., number of students in the class).

### Child Behavior

The Preschool and Kindergarten Behavior Scales-Second Edition (PKBS-2; Merrell, 2002; Portuguese version by Major & Seabra-Santos, 2014) evaluate the children's social skills and problem behaviors. The PKBS-2 is a behavior rating scale that can be completed by parents, teachers or other caregivers, meant to evaluate the behavior of 3–6 year-old children. In this study the PKBS-2 was completed by the teachers. It includes 80 items distributed over two scales (all the  $\alpha$  values that follow were obtained for this study): 34 in a Social Skills scale ( $\alpha = 0.95$ )

consisting of three subscales—Social Cooperation/Adjustment ( $\alpha=0.90$ ), Social Interaction/Empathy ( $\alpha=0.90$ ) and Social Independence/Assertiveness ( $\alpha=0.86$ )—; and 46 items on a Problem Behavior scale ( $\alpha=0.97$ ), distributed over two subscales—Externalizing ( $\alpha=0.97$ ), and Internalizing ( $\alpha=0.92$ ). All the items are scored on a 4-point Likert scale (from 0, for behaviors that never occur, to 3, for those that occur often), with a higher score on the Social Skills scale and subscales indicating higher social skills, whereas a higher score on the Problem Behavior scale and subscales reflects more problems. The analyses performed for this study are based on the data collected at baseline (questionnaires completed by preschool teachers before the IY-TCM training) and 3 months after the transition to primary school (questionnaires completed by the school teachers).

### Child Adaptation to School and School Achievement

A short questionnaire was developed in order to evaluate the children's adaptation to school from the teacher's perspective. It included five questions concerning: relationship with colleagues, relationship with the teacher, ability to manage one's emotions, ability to perform school tasks, and the way the child adapted to school in general. These items were rated using a five-point scale, from "Very poor" to "Very good". The internal consistency for this sample was 0.87. The sum of the school grades in Mathematics, Portuguese and Environment Studies at the end of the first school trimester, rated by teachers on a 4-point scale (1 = "Non-satisfactory", 2 = "Satisfactory", 3 = "Good", and 4 = "Very good"), was taken as indicator of the student's school achievement. This and the following questionnaire were completed only once by the primary school teacher at the end of the first trimester of the school year (post transition evaluation).

### Parental Involvement in School

The INVOLVE-Teacher (Malone et al., 2000; Webster-Stratton et al., 2008; Portuguese version by Gaspar et al., 2015) is a 20-item rating scale developed to evaluate the amount and quality of parents' involvement with their children's education, from the teacher's perspective. The items are distributed across three subscales and are scored on a 5-point Likert scale (from 1 = "Never" to 5 = "More than once a week"), where 5 always represents greater involvement. Two of the subscales evaluate parent-initiated involvement (all the  $\alpha$  values that follow were obtained for this study): Parental Involvement in Education, appraising whether parents were involved in school or classroom activities and supportive

of educational goals ( $\alpha=0.91$ ) and Parental Involvement with School/Teacher, measuring teachers' perceptions of how parents interact, participate, and communicate with the school ( $\alpha=0.90$ ). The third subscale, Teacher Bonding with Parent, evaluates teacher-initiated actions to involve parents, such as calling, writing notes or inviting to school. Two of the original items had correlations with the subscale below 0.20 and were therefore removed from the subsequent analysis ( $\alpha=0.85$  after deleting those items).

### Data Analysis

The data were examined cross-sectionally at post-transition, as well as longitudinally, controlling for scores at pre-intervention. The cross-sectional analyses were conducted using independent samples *t*-tests, where intervention condition defined the groups (i.e., IY-TCM or Control = no IY-TCM). We assessed the children who were included in the study and those not included based on age, economic need, and experimental condition. On the PKBS-2 we used percentile ranks from the national standardization sample for the purpose of comparison. Longitudinal data analysis was also conducted in a linear mixed model framework, where an interaction between time, intervention, and economic need was examined. Effect sizes for the *t*-tests are reported using Cohen's *d*, and for the linear mixed models using Hedge's *g* (Hedges, 2007). The effect sizes for Hedge's *g* and Cohen's *d* can be assessed using Cohen's criteria: 0.20 is small, 0.50 is medium, 0.80 is large, and 1.30 is very large (Cohen, 1988). All analyses were conducted in IBM SPSS version 26.

## Results

### Comparison Between Participants and Children Not Included in the Study

Children not included in the study ( $n=141$ ) did not differ significantly from the participants in terms of age,  $t(331)=1.15$ ,  $p>0.05$ , gender,  $\chi^2(1, N=333)=0.10$ ,  $p>0.05$ , being entitled to free-lunch while in preschool,  $\chi^2(1, N=333)=0.16$ ,  $p>0.05$ , or being in the experimental/control condition,  $\chi^2(1, N=333)=0.65$ ,  $p>0.05$ .

### Children's Behavior and Adaptation to Primary School

At the end of the first trimester in primary school, children in the IY-TCM group had higher ratings in social skills than children in the control group. The same effect was observed either for the total score ( $M=87.32$  vs.  $M=81.03$ , respectively) or for each of the three Social Skills subscales: Social Cooperation/Adjustment, Social Interaction/Empathy, and

**Table 2** Comparison between IY-TCM and control groups: children and parents' outcomes

	IY-TCM <i>M</i> (SD)	Control <i>M</i> (SD)	<i>t</i>	<i>d</i>
PKBS-2				
Social Skills—total	87.32 (11.50)	81.03 (14.11)	3.35**	.56
Social Cooperation/Adjustment	28.28 (4.37)	26.39 (5.37)	2.65**	.39
Social Interaction/Empathy	24.84 (4.45)	22.31 (5.62)	3.43**	.50
Social Independence/Assertiveness	34.20 (4.28)	32.34 (5.24)	2.67**	.39
Problem Behavior—total	30.14 (24.19)	32.82 (22.18)	− 0.79	.12
Externalizing	20.39 (17.25)	21.69 (17.97)	− 0.51	.07
Internalizing	9.76 (8.87)	11.09 (7.38)	− 1.13	.16
Adaptation to School	21.20 (3.33)	18.83 (3.57)	4.73**	.69
School Grades (1st term)	9.99 (1.85)	8.53 (2.44)	4.68**	.67
INVOLVE-T				
Parental Involvement in Education	24.70 (3.89)	22.96 (4.50)	2.84**	.41
Parental Involvement with School	15.29 (4.22)	16.17 (5.28)	− 1.28	.18
Teacher Bonding with Parent	10.08 (2.73)	11.77 (3.49)	− 3.75**	.54

PKBS-2 Preschool and Kindergarten Behavior Scale-Second Edition

\*\*  $p < .001$

Social Independence/Assertiveness (see Table 2 for details). Effect sizes ranged from 0.39 to 0.56. No differences were observed between the two groups with respect to the Problem Behavior total score nor in the subscales: Externalizing and Internalizing.

From pre-intervention (preschool baseline) to post-transition, all children in the study showed a decrease in social skills, but the children in the IY-TCM condition decreased significantly less in post-transition compared with the children in the control condition (time by intervention effect),  $t(332) = -2.31$ ,  $p = 0.02$ , Hedge's  $g = 0.34$ . When compared to the national standards in percentile ranks ( $P$ ), both groups were rated as average at pre-intervention ( $P = 57$  and  $P = 55$ , respectively, for the intervention and the control conditions), while after the transition the IY-TCM group was still rated as average ( $P = 52$ ), whereas the control group no longer was ( $P = 37$ ). No differences in change from pre-intervention to post-transition were observed between the two groups with respect to the Problem Behavior total score.

Children in the IY-TCM group were rated by their teachers as having adapted to primary school better than children in the control group ( $M = 21.20$  vs.  $M = 18.83$ , respectively;  $d = 0.69$ ) and they also had higher rates at the end of the school trimester ( $M = 9.99$  vs.  $M = 8.53$ , respectively;  $d = 0.67$ ).

### Parental Involvement

Parents in the IY-TCM condition were rated by teachers as being more involved in children's education than parents in the control group ( $M = 24.70$  vs.  $M = 22.96$ , respectively;  $d = 0.41$ ), whereas the opposite was true with regard to the

teacher's bonding with the parents, with teachers considering that they tend to elicit the involvement of parents more in the control ( $M = 11.77$ ) than in the IY-TCM group ( $M = 10.08$ ;  $d = 0.54$ ).

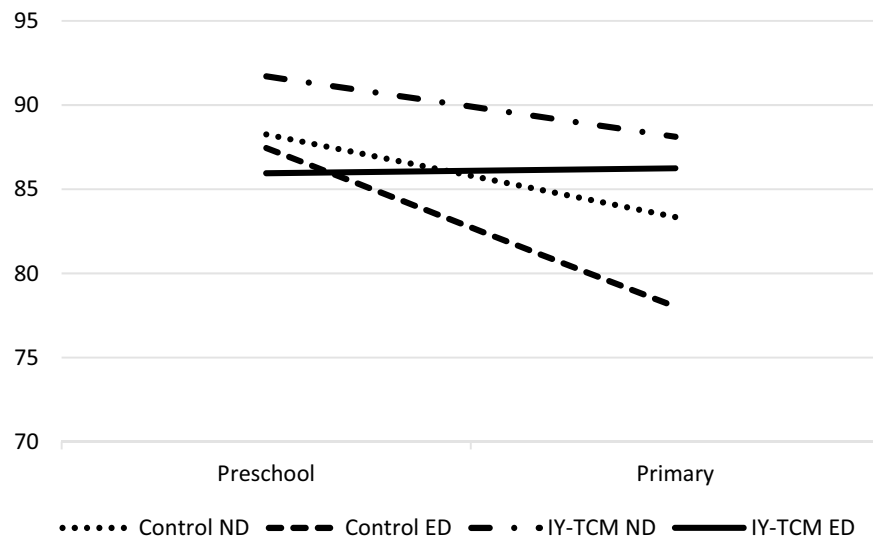
### Economic Status and Social Skills Across Time

Overall, children receiving free lunch had lower social skills in both the IY-TCM and control groups, and at both pre-intervention and post-transition. There was not a statistically significant interaction between time by intervention by economic status,  $t(191) = 1.74$ ,  $p = 0.08$ , Hedge's  $g = 0.29$ . However, children in economic need in the IY-TCM group showed slight improvement in social skills from pre-intervention ( $M = 85.95$ ) to post school transition ( $M = 86.24$ ), while all other sub-groups (i.e., non-economic need IY-TCM group and all control groups) had moderate decreases in social skills. As represented in Fig. 1, the two lines corresponding to children in the IY-TCM condition, with and without economic disadvantage, come closer, while the equivalent lines corresponding to the control group diverge.

### Discussion

The first aim of this study was to compare two groups of children, coming from classrooms with high rates of socio-economic disadvantage, after they made the transition to primary school; children in the two groups differed in that their preschool teacher had either attended (IY-TCM group) or did not attend (control group) the IY-TCM program during the children's last year of preschool. Overall, at the end

**Fig. 1** Children's social skills according to economic status and group (IY-TCM vs. control) from preschool to primary school



*Notes.* ND = Not in Economic Disadvantage; ED = in Economic Disadvantage

of the first trimester in primary school there was a significant and positive difference in social skills, adaptation to school, school achievement, and parental involvement in education for the IY-TCM group when compared to the control group (medium to large effect sizes).

More particularly, children in the IY-TCM group showed higher levels of social skills than children in the control group. In line with other studies, these more positive outcomes in social skills draw attention to the importance that preschool education may have in the development of such skills (Durlak & Weissberg, 2011; Durlak et al., 2011). Moreover, our results highlight the protective role that a quality preschool education—one which places a strong emphasis on developing socio-emotional, self-regulation and problem-solving skills—may have on children's adaptation to the new primary school environment and on school achievement at the end of the first term. Previous research included in the Taylor et al. (2017) meta-analysis of the follow-up effects of 82 interventions involving students from kindergarten to high-school had already demonstrated that school-based social and emotional learning interventions have not only short term benefits for children in terms of their socio-emotional skills, attitudes and indicators of well-being, but they may also have long-term positive effects in the students' developmental trajectories, such as more positive long-term academic outcomes, fewer placements in special education, and fewer arrests.

Results from the longitudinal analysis call the attention to the general decrease in children's social skills from preschool to primary school, which may denote that children's social abilities are challenged when faced with the novelty

of the primary school environment. Another possible explanation for the decrease may be that the same questionnaire (PKBS-2) was completed by two different teachers, who may have different perspectives: the preschool teachers, who had known the child for a longer period of time would arguably know the child better as compared with the primary school teacher, who would have higher expectations about what adequate behavior is. Whatever the explanation for this decrease may be, children from the IY-TCM group seem to be more protected, maintaining levels of social skills that are still average when compared to the national standards, while children from the control group fall significantly below.

In our study, parental involvement in school was analyzed as an outcome measure of a successful transition, following Rimm-Kaufman and Pianta's recommendation (2000). Parental engagement plays a crucial role in the quality of early education services, as a way of strengthening the linkages between the child's different contexts, and thus contributing to consistent learning and developmental outcomes for children (Dumcius et al., 2014; Webster-Stratton & Bywater, 2015). In fact, one of IY-TCM program's goals is to actively encourage parents' engagement, and our results show that parents in the IY-TCM group were actually more involved in their children's education (i.e., more involved in school or classroom activities and supportive of educational goals). However, an unexpected result has emerged with regard to the teacher bonding with parents (i.e., teacher-initiated actions to involve parents, such as calling, writing notes or inviting to school), which was higher in the control group. A possible explanation is that because primary school teachers perceive IY-TCM parents as more pro-actively involved in their children's education, they may feel that it is less



necessary to get in touch with them, to call them for meetings or other school events. Or, it may be that they feel parents' involvement as intrusive and somewhat threatening at a moment where they are themselves adapting and in the process of transition to a new group of students. Further research is warranted in order to clarify this issue.

The overall positive results achieved in this study may be related with the classroom management skills that the IY-TCM program instilled in the preschool teachers, increasing their ability to stimulate core self-regulation and social skills in children and to foster parental involvement in education. Pianta et al. (2012) have underlined how the quality of relationships between teachers and students influence students' engagement and ultimately their learning and development. Within the ecology of transition, these relationships play an important role in supporting the child through this demanding and challenging stage (McIntyre et al., 2014). In this context, the IY-TCM may act as a "glue" between different actors of the transition process—preschool teacher, child, and family—that can assist the child when adapting to the new school environment. In particular, the way the preschool teacher relates with the students is a powerful role model of future human relationships. Therefore, if preschool teachers convey a sense of security and an attitude of being in tune with the child's needs, children may transfer that to their new relationships in primary school and will feel safer and more confident at school, which may eventually result in better academic outcomes (Arndt et al., 2013; Pianta et al., 2012). Moreover, the increased development of self-regulation skills in preschool by IY-TCM children may also have facilitated their approach to school tasks in more effective ways, resulting in a better engagement in first grade (Cadima et al., 2015).

The second research question addressed the issue of whether the intervention contributed to mitigating differences between children with and without economic disadvantage. Although not statistically significant ( $p = 0.08$ , Hedge's  $g = 0.29$ ), the results are trending in the expected direction, suggesting that the implementation of the IY-TCM program in early childhood education could help to reduce socio-economic disparity. In fact, the sub group of children in economic disadvantage in the IY-TCM condition was the only one to show improved social skills after school transition, even though the improvement was slight. This change brought them closer to their peers in the IY-TCM group who were not economically disadvantaged.

Given how preschool education has become progressively democratized, its increasing role in helping to reduce the gap between children from advantaged and disadvantaged backgrounds thus breaking the intergenerational cycle of poverty, has been highlighted (European Commission, 2011). By its very nature, early years education is particularly attuned to each child's needs, and the

educational approaches are adjusted in order to provide stimulating learning experiences and opportunities for each child to develop their full potential (Balduzzi et al., 2019; Brooks & Murray, 2018). By doing so, it contributes to more equal opportunities and creates the conditions for every child to start primary school with confidence (Silva et al., 2016). The results of our study are promising in that they suggest that the IY-TCM program may contribute to buffering the drop in social skills in children in economic disadvantage when they transition to primary school. Therefore, the small sample size can be viewed as a limitation of the present study, and designing a study with a larger sample and more power to detect this effect could be warranted.

Some other limitations of the study need to be considered. First, if we hypothesize that the considerable number of parents who did not give their consent to participate in the study (18% of the total) were less involved in their children's education than the parents who gave their consent, their absence may have skewed the results in a positive direction. Second, due to the physical proximity among many of the preschools and primary schools in question, there was no guarantee that the primary school teachers had no knowledge of which group (IY-TCM or control) the children belonged to. Therefore, some of them might not be "blind" in their assessment of children, and this may have skewed the results. Third, all the evaluations were based on self-report measures (versus interviews, or direct observation), relying completely on the teachers' perspectives. Finally, the number of questionnaires completed by each teacher was variable, with a maximum of 12, which in some cases may have compromised a reliable completion given the large number of items.

Anchoring onto an ecological perspective about transition to school, this study highlights the major role that preschool education may have in facilitating a smooth transition. Thus, a "ready preschool" is one that is capable of fostering children's abilities in areas that will be valuable for them, as they move from the protected preschool to the more demanding primary school environment. In this context, self-regulation and social skills emerge as important targets to be developed during the preschool years. Besides, preschool teachers must also be ready to involve parents in the education process, creating a network that will support the child, also during the transition. In this regard, when well-supported and involving the different stakeholders in the process, transitions may be regarded as an opportunity for development and learning (e.g., children feel a sense of belonging to the school community and feel positive about themselves as learners; relationships between parents and the school are respectful, mutual, and responsive) (Dumcius et al., 2014).

The potential value of school-based social and emotional learning interventions (Taylor et al., 2017) indicates

that there is a benefit to investing in the implementation of programs like the IY-TCM during the preschool years. With this in mind, the value of initial and continuous training of early childhood educators in order to meet societal needs cannot be overemphasized (Dumcius et al., 2014; Durlak et al., 2011; OECD, 2017).

**Acknowledgements** The authors wish to thank all the teachers, children and parents who made this study possible. We thank Scott M. Culp for providing language assistance in the writing of this manuscript.

**Funding** This research was granted by the Public Health Initiatives Programme (PT06), financed by EEA Grants Financial Mechanism 2009–2014 (51SM04).

#### Declaration

**Conflict of interest** The authors have no conflict of interest to disclose.

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