(How) Does Information Provided by Children Affect the Transition from Primary to Secondary School?

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Accepted: 2 May 2019 / Published online: 26 May 2019
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Abstract

The transition from primary to secondary school comes with changes in both the social- and the school context. This study focuses on assessing the concerns, expectations and experiences of 371 Dutch children making the transition. Data have been collected during four years. Also the effect of information to the mentor at secondary school on the transition is assessed through a blinded experiment. Results show that some children are more vulnerable for a poor transition such as children at special education schools, anxious children, and to a lesser extent, girls. However the results do not show that children who informed their mentor made a better transition. The intervention only has a small effect on the social context.

Keywords Transition primary · Secondary school · Child information · Blinded experiment · Vulnerable children · Mentor at secondary school

1 Introduction

In the Netherlands, every year approximately 175.000 children make the transition from primary to secondary school. The majority of these children do this at the age of twelve. Children have mixed feelings about the transition because it is accompanied by – among others - changes in the academic level, achievement requirements and in the social environment (Sirsch 2003). Although most children look forward to having more freedom, new challenges and making new friends at secondary school (Sirsch 2003) they also realize that

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the transition may disrupt their life and cause organizational and social discontinuity (Anderson et al. 2000). For example, they are concerned about the larger school size, the greater presence of older children, new teachers and new classmates, and about the unknown rules of behavior and teacher expectations at secondary school (Anderson et al. 2000).

The changes in the school context not only include the larger secondary school building and the different school rules. At secondary school the children also have to deal with multiple teachers (Anderson et al. 2000; Fredriksen and Rhodes 2004; Hanewald 2013) who have different expectations of the children and set other requirements than the teacher at primary school. Therefore children experience a need for support during the transition period but they also experience that secondary school teachers expect them to be less dependent on their teacher and to perform academically more independent. Especially children having learning difficulties or children from disadvantaged economic backgrounds are found to be at risk for a poor transition. Affective teacher student relationships seem to be especially relevant to achieve a successful transition for these children (Roorda et al. 2011; Rice et al. 2011).

Teachers can help vulnerable children to cope with the transition process and even benefit from the transition when they focus on the way the children experience and interpret this (Jindal-Snape and Miller 2008). Children, vulnerable for a poor transition because of their home situation, who see their mentor as a secondary attachment figure, were more engaged in school according to van Ryzin (2010). During the transition to secondary school the attachment to the mentor played a protective role for those children. They were more successful at school in terms of academic achievement and adjustment (Van Ryzin 2010).

Children deal with this transition in different ways. For some of them the transition is exciting and challenging, while others feel anxious and threatened by it (Topping 2011). It is important for children to make a successful transition because their academic performance as well as their well-being and mental health can be affected by it both in the short and in the long term, in a positive as well as in a negative way (Barber and Olsen 2004; Waters et al. 2012; Zeedijk et al. 2003). An unsuccessful transition may result in children feeling marginalized, not welcome, nor respected or valued by others at school. They may experience a sense of rejection by the mainstream community and school may become a place where these children do not want to be. This may result in more frequent absenteeism, a decline in grades, and in having more conflicts. Disengagement may follow and ultimately even results in leaving school (Anderson et al. 2000).

After a successful transition the children are adjusted to the new social- and the school context. This implies that they have made new and more friendships and report a greater confidence in secondary school. These children are settled well at secondary school and are adjusted to the new routines. Whether children are motivated and interested in the curriculum and experience a sense of continuity are also indicators of a successful transition (Evangelou et al. 2008).

Despite all efforts, by schools and parents, to prepare children for secondary school, a smooth transition is not self-evident for all children. The transition period involves stress and anxiety even for children who adjust well at secondary school (Rice et al. 2011). Whether a transition is successful or is seen as a challenge or as a threat is, aside by a good preparation for the transition, likely to be influenced by personal and environmental characteristics. Some children therefore may be more vulnerable to school disengagement and adjustment problems because of the transition to secondary education (Rice et al. 2011).

There are only a few studies on the transition that have focused on the perspective of the children themselves. Although it is considered important to include children's responses in research and the evaluation of educational settings, so far conclusions appear to be based predominantly on reports about children, rather than on what children themselves say about their individual experiences (Lundqvist 2014). In contrast to most previous literature, in this paper we focus on assessing children's concerns, expectations and experiences about changes in the school- and in the social context caused by the transition. In particular, we look at the fun and fear the children both expect and experience in the secondary school context and in the social context. This paper presents the results of a study where information from children has been collected from a prospective as well as from a retrospective point of view. The information is collected by two self-reported questionnaires completed by four groups of children during four consecutive years. This information has been shared with the future mentor at secondary school through a blinded experiment. We collected information to investigate children's views about the transition and to investigate whether children, who have the opportunity to inform their future mentor about their expectations about the transition, make a better transition than children who did not have that opportunity. First we explain how our study relates to previous research and we explain the context of the study. Next we describe the methods that have been used and data that are collected. Finally the results of our study are presented and discussed.

2 Background

2.1 Literature Review on Individual Differences in the Quality of the Transition from Primary to Secondary School

Despite similarities, there are many differences between primary and secondary school. Consequently, children are faced with a discontinuity when going from primary to secondary school. The changes children are concerned about can relate to both aspects of the transition: the formal school context and the informal social context (dealing with peers) (Green 1997). Children realize that being successful in one context does not guarantee success in the other context (Pratt and George 2005). Related to personal characteristics, there are individual differences in the way children are concerned about the transition. For children with a lower academic ability and children with less self-esteem the transition is often less smooth (Topping 2011; West et al. 2010). Also, children who are anxious feel less prepared for secondary school and children who have been victimized have poorer peer transitions (West et al. 2010).

Gender and prior behavioral problems may also play a role in the transition process. Since peer relations are relatively more important for girls, they may find it more difficult to adjust to the disruption of friendship networks. However, girls express more positive attitudes than boys towards school and teachers which can smoothen their transition in the school context (Anderson et al. 2000; Van Rens et al. 2018b). Children with behavioral problems tend to have more conflicts and confrontations with peers and teachers which increases the likelihood of an unsuccessful transition. Children from lower SES families often lack sufficient parental support and interest in school events that enable them to make successful transitions. Furthermore, their parents participate

less in school activities, are less involved in the educational activities of their children and may therefore be less aware of any problems in the transition (Anderson et al. 2000).

This suggests that the quality of the transition is related to individual characteristics (Sirsch 2003). What one child may see as a great challenge could be experienced as a threat by another child. Therefore, it is essential to include the children as a partner in the transition process and actively take into account their view on the transition and to evaluate their involvement (Van Rens et al. 2018a).

2.2 The Role of Information for the Mentor

One of the challenges of the transition is to form new relationships, among others with the teachers, in the new school (Tobbel and O'Donnell 2013). Teachers can play an important role in guiding and supporting children through the transition. As mentioned, positive relationships with teachers and the perception of adequate support may affect children's learning and their academic achievement in a positive way and may also have a positive effect on their psychological adjustment (Ellerbrock et al. 2014; Fredriksen and Rhodes 2004; Hopwood et al. 2016).

Every child has the right to be heard in matters affecting his or her life, including well-being and experiences in the educational setting (United Nations 1989, article 12). Children's input can make a valuable contribution to understand, from their perspective, how they experience their daily lives, including their school lives, and what is important for them (Mason and Danby 2011). Teachers, and especially class mentors, have the opportunity -and are the designated persons- to interpret and use children's information to change and improve their pedagogical practice (Ferguson et al. 2011). In this way teachers can help children who signal that they need support (McGee et al. 2004).

While most schools emphasize the importance of administrative and organizational procedures, and teachers often are concerned with issues of attainment, children are found to be especially concerned with personal and social issues (Jindal-Snape and Miller 2008; Topping 2011). According to Anderson et al. (2000) evidence is found that the environmental context has a stronger effect on the success or failure of the transition than developmental characteristics do. That suggests that schools and educators can contribute to a successful transition (Anderson et al. 2000) especially if they know what children find important. However, it is unclear whether class mentors at the new secondary school are aware of what individual children in their class are concerned about. And who can tell them better about their experiences than the children themselves?

3 Context of the Study, Method and Data

The data for this study were collected in the Netherlands, at the end of grade six in primary school and at the beginning of grade seven in secondary school. Secondary education in the Netherlands is divided into four tracks: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO). About three to 4 % of the children at secondary school have special educational needs (SEN). They require extra support in school to help them to develop successfully, and often go to a school for special needs education (VSO).

In grade six the (head) teacher advises children and their parents which secondary school track is the most suitable. Aside from the teachers' own judgement this advice is based on children's cognitive competences and on non-cognitive factors that can contribute to a successful transition.

At secondary school each class has a mentor, usually one of the teachers of the children. The mentor is the key person in the contact between children, parents, classmates and teachers. Besides his teaching task, the mentor is, more than the other teachers, responsible and facilitated to play a social role to ensure a challenging pedagogical environment and a safe class climate. When problems arise, pupils, parents and teachers will first turn to the mentor, and in practice mentors are responsible for addressing the adjustment problems seventh graders might experience.

3.1 Data Collection

The data collection for this study was conducted in two phases between 2012 and 2016 and includes a pre- and a post transition data collection. In total 678 children participated in the pre transition data collection of which 371 children (54%) also participated in the post transition data collection. The majority of the children come from primary schools belonging to the partnership SWV PO3101 in Venlo, a regional city in the South-east of the Netherlands. Some of them come from primary schools outside the partnership of primary schools, in the same region. In the study participated 94 feeding primary schools of which 22% is located in a town. The other schools are village schools. Except regular schools, also three schools for special primary education for children who need extra support, but do not qualify for special needs education, (3%) and five primary schools/ locations of primary schools for special educational needs (5%) participated. The children made the transition to 21 receiving secondary schools among which 2 secondary schools for special needs education. The majority of the secondary schools are comprehensive schools, providing multiple types of secondary education. One school, as a 'single pitter', only offers VWO education. Of the secondary schools 19% is located in a town, the other schools are located in a village.

All children filled out a questionnaire twice, for which their parents' consent was obtained. The children, 173 boys and 198 girls with a mean age of 12.5 years, completed the prospective as well as the retrospective self-reporting questionnaire. They reported their feelings and expectations about their forthcoming transition to secondary school before they made the transition and their experiences after the transition. Table 7 in the Appendix shows the composition of the research group, the response rate and the number of children per year and in total.

During the pre-transition data collection, between May and August, the children completed a prospective self-reporting questionnaire. The children are approached via their primary school, except the children of the cohort of 2014 who are approached via their future secondary school.

The second, post transition questionnaire, was presented when all children were in grade seven, i.e. in the first year at secondary school. After their first term, in October, they completed the same questionnaire from a retrospective point of view, related to their experiences at secondary school. This makes it possible to analyze whether the expectations before the transition match with the experiences afterwards and whether the children in the intervention group report a better transition than the children in the control group.

The first phase questionnaires were completed at school, except the questionnaires completed in 2015 which were sent by email and completed at home. The other completed questionnaires are collected by the primary researcher through the school-teachers. Children who participated in the pre transition data collection were contacted directly, by regular mail or email, based on the contact information they provided during the first data collection.

3.2 A Blinded Experiment

A blinded experiment is used to investigate whether children who inform their future mentor about their expectations about the transition, make a better transition than children who do not have that opportunity. For the purpose of this experiment children who participated in the pre transition data collection are randomly assigned to a control group ($n = 189$; 51%) or an intervention group ($n = 182$; 49%). Mentors of the children assigned to the intervention group received in the first week of the new schoolyear a copy of the questionnaire that 'their' children completed before they started at secondary school. Mentors of children from the control group did not receive this information.

We strived for an equal distribution in terms of the observable characteristics. Through an independent T-test (Tables 7, 8 and 9 in the Appendix) the comparability of the control group and the intervention group was checked. We found no significant differences between the intervention- and the control group on the observable characteristics gender, age, year of research and warm transfer to secondary school. The comparability of the control group and the intervention group was also checked through an independent T-test (Table 8 in the Appendix) on the items familiar people at school: familiar children, siblings, children from previous school, friends and the future mentor. We found no significant differences, implying that, with respect to these items, the control group and intervention group are comparable.

The children know that they are participating in a blind experiment. They also realize that this implies that they will not know which group they are assigned to and that it is possible that their class at secondary school can contain both children from the intervention group and children from the control group.

3.3 Measures

Previous research has demonstrated that transition problems are mostly caused by problems in the environment. Anderson et al. (2000) found evidence that the environment has a strong effect on the success or failure of the transition. To measure the views of the children about secondary school we used large parts of the questionnaire 'The Impending Transition to Secondary School Perceived as Challenge and Threat (ITCT)' (Sirsch 2003). The translated and customized self-report questionnaire provides for the possibility to measure challenges and threats on 24 aspects in both the school- and in the social context with regard to the transition. Children are asked to report about what they are looking forward to at their future school and with respect to their future peers. They are also asked to report what worries them about the future school context and about their future peers. Children are asked to rate their level of

concern for each item on a 4-point Likert scale. The maximum score per item is 4 (highly important), the minimum score is 1 (highly unimportant). The same questions are used twice, both before and after the transition. Therefore the items are framed as expectations beforehand and as experiences afterwards.

Cluster analysis is performed to reduce the 24 items of the questionnaire to six subscales that can be divided into three themes (peers, schoolwork and the school context) and into two scales (fun and fear) for each theme. The two subscales: 'fun with peers', and 'fear for peers' are related to the social context. The four subscales: 'fun in schoolwork', 'fun in the school context', 'fear for schoolwork', 'fear for the school context' are related to the school context.

Table 9 in the Appendix shows the average scores (i.e. the average of all included items per scale) of the 6 subscales representing the challenges and threats that children meet before and after they have made the transition. The maximum score is 4, the minimum score is 1. T-tests show that in the pre transition scales there are no statistically significant differences between the average scores on the subscales between the intervention group and the control group. However, the post transition answers show a significant difference, at the 10% level ($p = 0.076$), between the intervention group and the control group on the item fear for peers. The children in the intervention group experience after the transition less fear for peers than the children in the control group.

Before the transition, the highest average scores are on the subscales representing fun, so children are especially looking forward to their new peers, but also to the school context and the schoolwork. This also shows that children are not very concerned about the transition. After the transition the average scores on the subscales representing fun have increased, except for one subscale - fun in schoolwork in the intervention group - where the scores remained the same, and one subscale - fun in the school context in the intervention group - where the average score decreased by one point. The subscales representing fear show lower scores after the transition, except for the subscale fear for schoolwork in the control group where the scores remained the same.

To determine the reliability of each subscale Cronbach's alphas are calculated. The pre-transition Cronbach's alphas on the 4 subscales 'fun with peers' ($\alpha: 0.855$), 'fear for schoolwork' ($\alpha: 0.799$), 'fear for the school context' ($\alpha: 0.866$) and 'fear for peers' ($\alpha: 0.876$) all show a high reliability. However the subscales 'fun in the school context' ($\alpha: 0.656$) and 'fun in schoolwork' ($\alpha: 0.647$) have a somewhat lower reliability.

For each subscale we estimated three multiple regression models, shown in Tables 1, 2, and 3. The dependent variables are the pre-transition scores on the six subscales. The explanatory variables, used in the pre transition regressions, are intervention- control group, gender, age, secondary education and familiar people present at secondary school. The results of the pre transition regression analyses show how the expectations of children before they have made the transition to secondary school are related to background characteristics.

The post-transition Cronbach's alphas on the 5 subscales 'fun in the school context' ($\alpha: 0.715$), 'fun with peers' ($\alpha: 0.883$), 'fear for schoolwork' ($\alpha: 0.808$), 'fear for the school context' ($\alpha: 0.797$) and 'fear for peers' ($\alpha: 0.877$) show that all have a high reliability. However the subscale 'fun in schoolwork' ($\alpha: 0.636$) has a somewhat lower reliability.

The results of the post transition regression analyses show the associations between background characteristics and the experiences of children after they have made the transition. For each post transition subscale we conducted four multiple regression models (Tables 4, 5, and 6). The regressions all have the same structure.

Model 1 shows the results of a simple regression representing the relation between the subscale and the intervention ‘providing student information to the mentor at secondary school’. In the pre transition regressions the variables gender, age and school type, are added in model 2. Five variables about the presence of familiar people at secondary school are added in model 3. In the post transition regressions we used the same variables in a different order because in model 2 we added the pre transition measure of the outcome. Below the results are consecutively described. The subscales ‘fear’ and ‘fun’ are described per theme and per model.

4 Results

4.1 Expectations of Children before the Transition

In Tables 1, 2 and 3 we present the results of the linear regression analysis of the expectations that children have about fear and fun in the social context and in the school context before they make the transition to secondary school. Each table presents the results of the positive (fun) and the negative (fear) subscale for the themes fear for- and fun with peers (the social context), fear for- and fun in schoolwork and fear for- and fun in the school context.

4.2 The Social Context: Expectations about Fear and Fun with Peers

Table 1 shows the results of the regression analyses about the expectations of the children before the transition with respect to fear for, and fun with their future peers at secondary school. The results of model 1 show no significant differences between the expectations of the control group and the intervention group about fear for or fun with peers. This was to be expected, when the comparability of the control group and the intervention group was checked, we found no statistically significant differences on observable characteristics what implies the composition of the control group and intervention group is comparable.

The models 2 and 3 show statistical significant differences between the expectations of girls and boys. Girls expect before the transition to be significant less anxious about their future peers at secondary school (model 2 $p = 0.022$; model 3 $p = 0.064$) than boys. Model 2 also shows that, with respect to fear for peers, the 14 years old children differ statistically significant (model 2 $p = 0.034$) from the reference group (the 12 years old). The 14 years old are significant more anxious about their future peers at secondary school. With respect to the school type the models 2 and 3 show that, compared with the VMBO-PrO pupils of the reference group, the VMBO-HAVO and HAVO pupils expect statistically significant more fun with their peers at secondary school (model 2 $p = 0.042$; model 3 $p = 0.029$). In model 3 surprisingly we find the children, who know before the transition that friends from primary school will go to the same secondary school, expect to experience statistically significant more fear about their new peers (model 3 $p = 0.007$).

Table 1 The social context: fear for and fun with peers –regression analyses pre transition-

Peers	Model 1		Model 2		Model 3	
	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)
Intervention-control group	−0.062 (0.292)	0.077 (0.208)	−0.053 (0.374)	0.073 (0.240)	−0.064 (0.279)	0.081 (0.195)
Girl- boy			−0.138 (0.022*)	0.028 (0.652)	−0.112 (0.064 ⁰)	0.025 (0.694)
Age						
11			−0.066 (0.516)	0.066 (0.538)	−0.061 (0.546)	0.070 (0.518)
12	Reference category					
13			−0.077 (0.403)	0.060 (0.526)	−0.097 (0.293)	0.044 (0.650)
14			1.182 (0.034*)	0.569 (0.326)	0.930 (0.100)	0.817 (0.169)
School type	Reference category					
PrO- VMBO						
VMBO-HAVO; HAVO			−0.118 (0.248)	0.219 (0.042*)	−0.103 (0.314)	0.238 (0.029*)
HAVO-VWO; VWO			−0.063 (0.345)	0.045 (0.520)	−0.068 (0.303)	0.035 (0.619)
VSO			−0.004 (0.984)	0.136 (0.494)	−0.051 (0.815)	0.143 (0.511)
Present at school						
Familiar children					−0.033 (0.751)	0.056 (0.605)
Siblings					−0.013 (0.851)	0.075 (0.315)
Children from previous school					−0.0106 (0.288)	−0.097 (0.356)
Friends					0.247 (0.007*)	0.113 (0.243)
Mentor familiar					−0.011 (0.861)	0.100 (0.150)
Constant	1.434	3.077	1.556	3.002	1.889	2.855
Observations	<i>N</i> = 349	<i>N</i> = 351	<i>N</i> = 345	<i>N</i> = 346	<i>N</i> = 342	<i>N</i> = 344
R ²	0.003	0.005	0.041	0.022	0.085	0.037
R ² adjusted	0.000	0.002	0.018	−0.001	0.049	0.000

⁰ $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

4.3 The School Context: Expectations about Fear and Fun in Schoolwork

Table 2 shows the results of the regression analyses about the expectations of the children about schoolwork at secondary school before they have made the transition. The variables

Table 2 The school context: fear for and fun in schoolwork –regression analyses pre transition-

Schoolwork	Model 1		Model 2		Model 3	
	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)
Intervention-control group	0.022 (0.720)	0.037 (0.542)	0.014 (0.824)	0.021 (0.731)	0.012 (0.848)	0.018 (0.781)
Girl- boy			−0.018 (0.777)	0.017 (0.784)	−0.012 (0.853)	0.021 (0.748)
Age						
11			−0.024 (0.822)	0.004 (0.971)	−0.030 (0.785)	0.010 (0.927)
12	Reference category					
13			0.009 (0.926)	0.060 (0.531)	0.000 (0.997)	0.055 (0.572)
14			0.429 (0.465)	−0.180 (0.756)	0.492 (0.417)	−0.103 (0.864)
School type	Reference category					
PrO- VMBO						
VMBO-HAVO; HAVO			0.046 (0.670)	0.135 (0.203)	0.054 (0.625)	0.141 (0.195)
HAVO-VWO; VWO			−0.074 (0.294)	−0.017 (0.806)	−0.092 (0.198)	−0.012 (0.860)
VSO			0.031 (0.883)	−0.040 (0.842)	0.126 (0.592)	−0.024 (0.914)
Present at school						
Familiar children					−0.057 (0.620)	0.083 (0.454)
Siblings					0.024 (0.752)	−0.026 (0.731)
Children from previous school					−0.057 (0.593)	−0.066 (0.535)
Friends					0.037 (0.707)	0.042 (0.666)
Mentor familiar					0.119 (0.093 ^b)	−0.053 (0.445)
Constant	1.797	2.839	1.839	2.830	1.827	2.851
Observations	<i>N</i> = 351	<i>N</i> = 350	<i>N</i> = 346	<i>N</i> = 345	<i>N</i> = 343	<i>N</i> = 343
R ²	0.000	0.001	0.008	0.009	0.020	0.013
R ² adjusted	−0.002	−0.002	−0.015	−0.015	−0.019	−0.026

^a $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

control- intervention group, gender, age and school type, added in model 1 and 2, do not affect the expectations about fear for or fun in schoolwork statistically significant. In model 4 the variables familiar children, siblings, children from previous school, friends and familiar mentor are added. Only the presence of a familiar mentor has a significant effect at the 10% level on fear for schoolwork (model 4 $p = 0.093$). The children expect that knowing the future mentor before the transition will lead to more fear for schoolwork.

Table 3 The school context: fear for and fun in the school context –regression analyses pre transition-

School context	Model 1		Model 2		Model 3	
	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)	coefficient (<i>P</i> - value)
Intervention-control group	0.031 (0.688)	2.750 (0.099 ⁰)	0.021 (0.781)	0.117 (0.103)	−0.004 (0.959)	0.122 (0.096 ⁰)
Girl- boy			0.079 (0.311)	0.104 (0.153)	0.105 (0.180)	0.109 (0.144)
Age			−0.043 (0.746)	0.000 (0.999)	−0.059 (0.657)	−0.002 (0.987)
11						
12		Reference category				
13			0.048 (0.684)	0.063 (0.566)	0.007 (0.956)	0.048 (0.667)
14			0.201 (0.780)	0.628 (0.348)	0.339 (0.643)	0.761 (0.272)
School type		Reference category				
PrO- VMBO						
VMBO-HAVO; HAVO			−0.106 (0.429)	0.217 (0.081 ⁰)	−0.048 (0.721)	0.237 (0.062 ⁰)
HAVO-VWO; VWO			−0.291 (0.001***)	0.144 (0.075 ⁰)	−0.313 (0.000***)	0.135 (0.097 ⁰)
VSO			−0.201 (0.417)	0.106 (0.646)	0.045 (0.866)	0.108 (0.671)
Present at school						
Familiar children					0.142 (0.295)	0.035 (0.784)
Siblings					−0.061 (0.508)	0.021 (0.808)
Children from previous school					−0.137 (0.792)	−0.090 (0.465)
Friends					−0.137 (0.245)	0.029 (0.797)
Mentor familiar					0.234 (0.006*)	0.090 (0.265)
Constant	1.620	2.750	1.719	2.601	1.590	2.554
Observations	<i>N</i> = 353	<i>N</i> = 350	<i>N</i> = 348	<i>N</i> = 345	<i>N</i> = 345	<i>N</i> = 343
R ²	0.000	0.008	0.044	0.031	0.078	0.038
R ² adjusted	−0.002	0.005	0.021	0.008	0.042	0.000

⁰ $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

4.4 The School Context: Expectations about Fear and Fun in the School Context

Table 3 shows the results of the regression analyses about fear for and fun in the school context, measured before the transition to secondary school. In model 1 there is a statistical difference, at the 10% level, between the expectations of the control- and the

Table 4 The social context: fear for and fun with peers; regression analyses, 4 models –post transition-

Peers	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)
Intervention- / control – group	–0.101 (0.077 ⁰)	–0.054 (0.416)	–0.026 (0.564)	–0.101 (0.096 ⁰)	–0.023 (0.609)	–0.104 (0.089 ⁰)	–0.021 (0.642)	–0.112 (0.072 ⁰)
Fear for peers pre transition			0.533 (0.000***)		0.527 (0.000***)		0.528 (0.000***)	
Fun with peers pre transition				0.450 (0.000***)				0.458 (0.000***)
Girl- boy					0.011 (0.810)	0.048 (0.434)	0.016 (0.736)	0.050 (0.432)
Age								
11					–0.051 (0.520)	–0.045 (0.665)	–0.066 (0.406)	–0.048 (0.650)
12	reference category							
13					0.095 (0.184)	–0.049 (0.608)	0.080 (0.273)	–0.068 (0.489)
14					0.431 (0.300)	–1.162 (0.035*)	0.454 (0.287)	–1.171 (0.041*)
Secondary education	reference category							
VMBO; PrO								
VMBO-HAVO; HAVO					–0.040 (0.616)	–0.125 (0.245)	–0.027 (0.738)	–0.121 (0.272)
HAVO-VWO; VWO					0.009 (0.865)	–0.073 (0.288)	–0.002 (0.969)	–0.075 (0.276)
VSO					0.216 (0.176)	–0.289 (0.127)	0.284 (0.086 ⁰)	–0.190 (0.364)

Table 4 (continued)

	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
Present at school								
Familiar children								
Siblings							-0.027 (0.736)	-0.008 (0.942)
Children from previous school							-0.018 (0.738)	0.023 (0.761)
Friends							0.037 (0.629)	0.015 (0.884)
Mentor familiar							-0.024 (0.737)	-0.029 (0.766)
Constant	1.400 <i>N</i> = 348	3.223 <i>N</i> = 344	0.602 <i>N</i> = 330	1.848 <i>N</i> = 328	0.588 <i>N</i> = 326	1.870 <i>N</i> = 323	0.521 <i>N</i> = 324	1.856 <i>N</i> = 321
Observations	0.009	0.002	0.348	0.184	0.360	0.202	0.372	0.205
R ² adjusted	0.006	-0.001	0.344	0.179	0.341	0.179	0.343	0.168

⁰ $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

intervention group, on the item fun in the school context (model 1 $p = 0,099$). Before the transition the children in the intervention group expect to experience more fun in the school context at secondary school than the children in the control group. Gender and age, added in model 2, do not significant affect the expectations of the children about the school context. For the children in the school type VMBO-HAVO; HAVO is found a significant effect on the 10% level on fun with peers (model 2 $p = 0.081$; model 3 $p = 0.062$). Compared to the reference group these children expect to experience more fun in the school context at secondary school. The children in the school type HAVO-VWO; VWO also expect, compared to the reference group, to experience significantly more fun in the school context at the 10% level (model 2 $p = 0.075$; model 3 $p = 0.097$). They also expect to experience significant less fear in the school context (model 2 $p = 0.001$; model 3 $p = 0.000$). Model 3 shows that the children expect that knowing the future mentor before the transition will affect fear in the school context significantly at the 10% level in a positive way and therefore will cause more fear (model 3 $p = 0.093$).

4.5 Experiences of Children after the Transition

Tables 4, 5 and 6 present the results of the linear regression analyses for the themes fear and fun with peers (the social context), fear and fun in schoolwork and fear and fun in the school context measured after the transition to secondary school. Each table presents the results of both the positive and the negative subscale.

4.6 The Social Context: Experiences about Fear for Peers and Fun with Peers

Table 4 presents the results of linear regression analyses about fear for peers and fun with peers. The results for model 1 show a negative relationship between the intervention and fear for peers after the transition to secondary school, so fear is lower for the children in the intervention group. This result in model 1 is statistical significant at the 10% level ($p = 0.077$). The post transition results for fun with peers in model 1 are not significant, but the models 2, 3 and 4 show significant results for the intervention at a 10% level (model 2: $p = 0,096$; model 3: $p = 0.089$; model 4: $p = 0.072$). Surprisingly after the transition there is a negative relationship, between the intervention and fun with peers: children in the intervention group report less fun with peers.

In the models 2 to 4 the independent variables fun with- or fear for peers before the transition, gender, age, school type, and familiar people at secondary school, are added. The results of model 2 show a positive relationship between fear for peers and fun with peers before the transition and fear for peers or fun with peers afterwards. Children who are afraid of their peers before the transition afterwards experience more fear and children who are looking forward to have fun with their peers afterwards experience more fun. Fear (or fun) before the transition seems to be a significant reliable predictor for (more) fear (or fun) after the transition ($p = 0.000$). On average, a one point higher score on the fun or fear variable prior to the transition translates into a half a point higher score on the post-transition variable.

With regard to gender, age or school type, model 3 shows that these variables do not have a statistically significant influence on fear for peers or fun with peers except for the 14 years old children. They experience after the transition significant less fun (model 3 $p = 0.035$) in comparison with their 12 years old peers in the reference group. These findings regarding 14-year olds remain in model 4, where we add the presence of

Table 5 The school context: fun with and fear for schoolwork: regression analyses, 4 models -post transition-

Schoolwork	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)
Intervention-control group	-0.093 (0.160)	-0.020 (0.756)	-0.084 (0.144)	-0.038 (0.520)	-0.084 (0.148)	-0.055 (0.352)	-0.086 (0.146)	-0.042 (0.477)
Fear schoolwork (pre transition)			0.557 (0.000***)		0.555 (0.000***)		0.557 (0.000***)	
Fun schoolwork (pre transition)				0.491 (0.000***)		0.476 (0.000***)		0.487 (0.000***)
Girl- boy					0.131 (0.027*)	0.020 (0.732)	0.135 (0.026*)	0.027 (0.654)
Age								
11					-0.112 (0.273)	0.078 (0.438)	-0.119 (0.253)	0.062 (0.538)
12								
13					0.016 (0.860)	0.121 (0.194)	0.013 (0.891)	0.122 (0.195)
14					-0.366 (0.488)	-0.150 (0.779)	-0.488 (0.374)	0.003 (0.996)
Secondary education								
VMBO; PrO								
VMBO-HAVO; HAVO					-0.037 (0.717)	0.102 (0.322)	-0.046 (0.658)	0.130 (0.211)
HAVO-VWO; VWO					-0.015 (0.821)	-0.023 (0.733)	-0.011 (0.867)	-0.034 (0.608)
VSO					-0.086 (0.676)	-0.107 (0.560)	-0.122 (0.567)	-0.050 (0.805)

Table 5 (continued)

	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
Schoolwork								
Present at school								
Familiar children								
Siblings								
Children from previous school								
Friends								
Mentor familiar								
Constant	1.798	2.901	0.779	1.501	0.737	1.526	0.786	1.427
Observations	<i>N</i> = 348	<i>N</i> = 349	<i>N</i> = 332	<i>N</i> = 331	<i>N</i> = 327	<i>N</i> = 326	<i>N</i> = 325	<i>N</i> = 324
R ²	0.006	0.000	0.284	0.214	0.295	0.229	0.296	0.254
R ² adjusted	0.003	−0.003	0.279	0.210	0.275	0.207	0.265	0.220

⁰ $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

Table 6 The school context: fun in and fear in the school context; regression analyses, 4 models - post transition-

School context	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
Independent variables	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)	coefficient (<i>P</i> -value)
Intervention-control group	-0.024 (0.665)	0.059 (0.440)	-0.025 (0.645)	-0.006 (0.925)	-0.017 (0.757)	-0.015 (0.828)	-0.020 (0.718)	-0.005 (0.947)
Fear school context (pre transition)			0.242 (0.000***)		0.230 (0.000***)		0.224 (0.000***)	
Fun school context (pre transition)				0.525 (0.000***)				0.522 (0.000***)
Girl- boy					-0.060 (0.273)	-0.033 (0.628)	-0.050 (0.371)	-0.040 (0.562)
Age								
11					0.067 (0.481)	0.086 (0.458)	0.067 (0.491)	0.069 (0.554)
12	reference category							
13					0.089 (0.286)	0.123 (0.243)	0.085 (0.325)	0.121 (0.259)
14					0.579 (0.239)	-0.395 (0.519)	0.511 (0.317)	-0.200 (0.749)
Secondary education								
VMBO; PrO	reference category							
VMBO-HAVO; HAVO					-0.051 (0.588)	0.119 (0.316)	-0.055 (0.570)	0.123 (0.306)
HAVO-VWO; VWO					-0.099 (0.105)	0.019 (0.806)	-0.106 (0.089)	-0.002 (0.983)

Table 6 (continued)

School context	Model 1		Model 2		Model 3		Model 4	
	fear	fun	fear	fun	fear	fun	fear	fun
VSO					-0.316 (0.077 ⁰)	-0.226 (0.309)	-0.332 (0.076 ⁰)	0.022 (0.928)
Present at school								
Familiar children							-0.038 (0.691)	-0.080 (0.501)
Siblings							-0.011 (0.872)	-0.006 (0.945)
Children from previous school							-0.021 (0.821)	-0.068 (0.549)
Friends							-0.034 (0.682)	0.180 (0.084 ⁰)
Mentor familiar							0.002 (0.978)	0.160 (0.035 [*])
Constant	1.339	2.801	0.940	1.356	1.022	1.336	1.112	1.235
Observations	<i>N</i> = 349	<i>N</i> = 344	<i>N</i> = 335	<i>N</i> = 328	<i>N</i> = 330	<i>N</i> = 323	<i>N</i> = 328	<i>N</i> = 321
R ²	0.001	0.002	0.116	0.255	0.145	0.270	0.145	0.292
R ² adjusted	-0.002	-0.001	0.111	0.250	0.121	0.249	0.107	0.259

⁰ $p \leq 0.10$; ^{*} $p \leq 0.05$; ^{**} $p \leq 0.01$; ^{***} $p \leq 0.001$;

The tracks at secondary education are: practical education (PrO), preparation for intermediate vocational education (VMBO), upper-secondary education (HAVO) and preparation for academic education (VWO)

familiar people at school. They still report significantly less fun (model 4 $p = 0.041$) than their peers. After we control for the presence of familiar people there is a difference between the children at a school for special educational needs (VSO), and typically developing children. The model shows a positive relationship between fear for peers and being at a SEN school. Fear for peers is significantly higher (at the 10% level) for special education needs children (model 4: $p = 0.086$).

In model 4, four variables concerning the presence of familiar people at secondary school are added. None of these variables are statistically significant for fun with peers, but whether the mentor is familiar significantly influences fear for peers ($p = 0.017$). Surprisingly, we find that children who already know their mentor have more fear for their peers after the transition.

4.7 The School Context: Fear for Schoolwork and Fun in Schoolwork

Table 5 presents the results of linear regression analysis on fear for schoolwork and fun in schoolwork. The results of model 1 are not significant. In none of the regressions do we find a statistically significant effect of the intervention on fear or fun with schoolwork.

The independent variables fear for schoolwork pre transition and fun in schoolwork pre transition, added in model 2, have a positive relationship between fear for and fun with schoolwork experiences the children report afterwards. This means that children who are worried about schoolwork before they make the transition to secondary school are afterwards also more frightened, and children looking forward to schoolwork afterwards also experience more fun in schoolwork. Fear for schoolwork or fun in schoolwork before the transition, seems to be a significant reliable predictor for (more) fear or fun after the transition (Table 2, model 2, $p = 0.000$). Like with fun and fear with peers described above, we find that a one point increase in fun or fear with schoolwork before the transition increase the post- transition variables by approximately 0.5 of a point.

The independent variables gender, age and school type, added in model 3, yield de following results. Compared to boys, girls after the transition score statistically significantly higher on fear of schoolwork (model 3: $p = 0.027$; model 4: $p = 0.026$). Age and school type do not have a significant effect on fear for schoolwork or on fun. Model 4 finally shows the influence of the presence of familiar people. Apparently, there are only a few significant relations between schoolwork and the presence of familiar children, siblings or friends or by a familiar mentor at secondary school. The only significant result concerns children who know the mentor before the transition. They experience statistically significant more fun in schoolwork after the transition (model 4 $p = 0.045$).

4.8 The School Context: Fear for the School Context and Fun in the School Context

Table 6 shows the results of linear regression analyses about fear for the school context and fun in the school context. The results of model 1 are not statistically significant, but the negative coefficients show that children in the intervention group experience less fear for the school context and the positive coefficients show that they also experience more fun in the school context than the children in the control group.

In model 2 the independent variables fear for the school context and fun in de school context pre transition are added. The findings show a positive relationship between fear

and fun in the school context before the transition and fear and fun in the school context afterwards. This means that children who already are anxious about the school context before the transition also tend to be anxious afterwards and children who are looking forward to the school context afterwards experience fun as well. The added variables are statistically significant reliable predictors for more fear or fun in the school context after the transition (model 2, $p = 0.000$). Interestingly a one point higher score on fear for the school context increases the post-transition value of this variable by only 0.2 point, much less than the coefficients of the other pre-transition variables which are all around 0.5.

The independent variables gender, age and school type, added from model 3 on, show no significant effect except for the children with special educational needs (VSO). These children report, relative to the reference group, after the transition less fear in the school context. This relation is significant at the 10% level (model 3: $p = 0.077$; model 4: $p = 0.076$). With regard to gender there are no significant differences between boys and girls. Looking at age the results in model 3 show no significant differences relative to the reference group.

Model 4 shows the influence of the presence of familiar people in the school context, by adding the independent variables familiar children, siblings, children from previous school and familiar with the mentor. The positive significant coefficient shows that children who are already familiar with the mentor report statistically significant more fun in the school context (model 4: $p = 0.035$). Also children who have a friend at secondary school report after the transition, at the 10% level, significant more fun (model 4: $p = 0.084$).

4.9 Power Analysis

To get insight in the reliability of the effect size a power analyses is performed. For this we calculated the standardized effect size using Cohen's d using the post transition results of the two tailed T-test (Table 9 in the Appendix) on the post transition subscales. The results of the Cohen's d of the subscales show a small effect ($d \leq 0.2$). Based on the results of the post transition T-tests (Table 9 in the appendix) on the six subscales about fun and fear with peers, in the school context and for schoolwork, the β power (the probability of rejecting the null hypothesis when it should not be rejected) is calculated. Using an α of 0.05 the results are: fun with peers: 0.12; fear for peers: 0.05; fun school context: 0.12; fear school context: 0.07; fun schoolwork: 0.06; fear schoolwork: 0.33. Because these values all are far less than 0.8 the achieved power is insufficient, and the probability is low that we would be able to detect any effects that might exist.

5 Discussion and Conclusions

The transition from primary to secondary school involves changes in both the school context and the social environment. Children have to deal with and get used to the changed circumstances and educators can do a great deal to facilitate a successful transition. The results of previous research show that unfortunately few efforts are made to do so (Anderson et al. 2000).

We are interested in whether educators will make efforts to support children who are vulnerable for a poor transition if they are better aware of what the children think they

need. However before they can do so, educators have to know what (according to the children) threatens a successful transition. And who can provide this information better than the children themselves?

In this study we investigated expectations before- and experiences after the transition from primary to secondary school provided by the children via a self-reporting pre and post transition questionnaire. The children's information is not only used to get insight in children's experiences, but also to inform the future mentor at secondary school, assuming that children who can inform the mentor (via a blinded experiment) make a better transition than children who cannot, because it is assumed that mentors will use this information to create a smooth transition.

With regard to the results of the intervention we found that mentors, who receive information, provided by 'their' children, apparently barely used the information they judge as useful to create a safe, supportive pedagogical climate. The intervention only had a small effect on the social context at the 10% significance level ($p=0.077$). Children in the intervention group experienced less fear for peers (Table 4, model 1). Surprisingly we also found the opposite. The children in the intervention group experienced after the transition at the 10% significant level less fun with their peers in the social context (Table 4, model 2: $p=0.096$; model 3 $p=0.089$; model 4 $p=0.072$). The intervention neither had significant effect on fear or fun in schoolwork nor on fear or fun in the school context. In summary we conclude in most cases the intervention caused no significant effect. Moreover the post hoc control for statistical power showed because of the low power, there is a reason to believe the chance we correctly reject our hypothesis may be false. Overall the results of the intervention hardly seem to affect the course of the transition process.

The image the children have of the mentor, before they make the transition to secondary school, seems to be in contrast to our assumption that knowing the mentor in advance will help the children to feel comfortable at school. Initially the children do not seem to associate the mentor with fun or fear in the social context. We found that the children, before they make the transition, associated knowing the mentor with more fear of the school context (Table 2, model 3: $p=0.093$) and with more fear for schoolwork (Table 3, model 3: $p=0.006$) at secondary school. After the transition they report the opposite for the school context: knowing the mentor before the transition actually has led to more fun in schoolwork (Table 5, model 4: $p=0.045$) and in the school context (Table 6, model 4: $p=0.035$) and, surprisingly, to more fear in the social context (Table 4, model 4: $p=0.017$).

Independent of the intervention, based on the information provided by the children, we found three groups to be vulnerable for a poor transition. The first group, girls, stand out because after the transition they report significantly more fear, especially for schoolwork ($p=0.027$ Table 5 model 3; $p=0.026$; Table 5 model 4) than boys. Anderson et al. (2000) found in previous research the negative impact of the transition on self-esteem tends to be greater for girls. The second vulnerable group are the children with SEN. In comparison to typically developing children, they show a mixed image. These children are, more than their peers, worried about the social context, especially about peers. After the transition fear for the school context is lower for children with SEN which is significant at the 10% level ($p=0.077$, Table 6 model 3; $p=0.076$, Table 6 model 4) but fear for peers is significantly higher at the 10% level ($p=0.086$, Table 4 model 4). The literature confirms that children with special

educational needs are more vulnerable for a poor transition than others (Anderson et al. 2000; Chedzoy and Burden 2005). Our findings seem to confirm this, which implies the intervention can contribute to a smooth transition for children with SEN.

A third group that stands out is formed by the children who are already anxious (or happy) before the transition. In the social context as well as in the school context we found fear (and fun) to be significant reliable predictors ($p = 0.000$). Although the differences between the pre transition scores and the post transition scores for respectively fear or fun have become smaller, after the transition these children stay anxious or happy. This finding illustrates the need to create opportunities for especially vulnerable and anxious children to share their opinion with their teachers and the importance of protective support by teachers not only focused on attainment but also on the social context.

Previous research shows that social relationships with peers and being familiar with the future teachers can provide protection against a poor transition. Social relationships, in a sense of being known by teachers, may contribute to a sense of community at school (Tobell 2003). This implies teachers can create a buffer against fear and stress. Surprisingly the results of our study seem to confirm these results only for the school context and schoolwork but also show the opposite especially for the social context. As described, the children who know their mentor before they make the transition expect more fear in the school context and for schoolwork. Afterwards they report more fun in their schoolwork and in the school context but they also are significantly more anxious about relationship with peers than before the transition. In secondary school, pedagogical styles differ in comparison with primary school, teaching is more didactic and attainment is seen as more important. Maybe it frightens children who already are anxious, to discover that teachers at secondary school are less likely to empower them to cope with stress and are more interested in the academic performance than in the emotional climate at school (Chedzoy and Burden 2005; Chung et al. 1998; Zeedijk et al. 2003).

In the literature a positive transition is found to be promoted by the friendliness of older children at secondary school, by having older siblings at secondary school and, by making the transition to the same secondary school with primary school friends (Evangelou et al. 2008). The results of our study confirm that the social context can be helpful to compensate or to reduce fear and to increase fun in the social- as well as in the school context. However, that does not apply for the presence of all familiar children. It seems contradictory that, before the transition, the children think that having friends at secondary school causes fear for peers in the social context at secondary school. After the transition, according to the children, the presence of friends has no longer an effect on the social context but has a positive effect on fun in the school context.

Our findings demonstrate the need not only to be aware of the impact of the transition on children, experienced from the children's perspective, but also the need for teachers to take the children's perspective as a condition to help them. In this way schools and teachers can benefit from information provided by children in combination with the information of adults, in order to improve the transition. Children at special schools, anxious children, and to a lesser extent girls, are found to be more vulnerable for a poor transition than others. The first two groups because they experience less fun in the social or/and in the school context, the last group because of their significantly increased fear for schoolwork. These children may benefit the most from the intervention.

This study has some limitations. The study is restricted to the experiences of children in the Netherlands who generally make the transition from primary to secondary

education at the age of twelve. This may limit the generalizability of the findings to other populations. The mentors have a non-committed role and decide for themselves whether and how the information, provided by the children, is used. This also applies to all information that mentors receive about their class. This can lead to differences in approach. The study is also limited due to the regional bound location of the schools and the insufficient power. A larger scale study is required for further explore the results.

Authors' Contributions MvR conceived of the study, participated in its design and coordination, performed the measurement, performed the statistical analysis and interpretation of the data and drafted the manuscript;

WG helped to conceive of the study, participated in its design and coordination, helped to perform the statistical analysis and interpretation of the data and to draft the manuscript.

CH participated in the design and interpretation of the data, helped to perform the statistical analysis and interpretation of the data and to draft the manuscript.

All authors read and approved the final manuscript.

Appendix

Table 7 Composition research group: number of participants and percent response pre- and post-transition

Surveyed	N pre transition	N post transition	% response
2012	64	53	83%
2014	224	162	72%
2015	246	98	40%
2016	153	58	38%
Total	687	371	54%

Table 8 T-test observable characteristics intervention group- control group

Characteristics	Intervention group			Control group			Difference	p value
	N	Mean	SD	N	Mean	SD		
Gender	182	0.53	0.500	187	0.53	0.500	367	0.367
Age	182	12,4	0.519	182	12,5	0.490	362	0.756
'Warm' transfer /No 'warm' transfer	182	0.03	0.179	187	0.03	0.177	067	0.962
Year of research	182	2014.30	1.176	187	2014.27	1.180	0.810	0.029
Familiar children	181	0.89	0.314	182	0.88	0.320	0.005	0.883
Siblings	181	0.23	0.423	183	0.24	0.426	-0.004	0.925
Children from previous school	181	0.86	0.352	180	0.87	0.341	-0.010	0.777
Friends	181	0.80	0.404	181	0.84	0.368	-0.044	0.277
Mentor familiar	180	0.68	0.469	181	0.65	0.478	0.026	0.606

$^0 p \leq 0.1$; $^* p \leq 0.05$; $^{**} p \leq 0.01$; $^{***} p \leq 0.001$

Table 9 Mean scores control group and intervention group: T-test on subscales about the social and in the school context, pre- and post-transition

Subscale:	Intervention group				Control group				<div>Difference</div>				<div><i>p</i> value</div>	
	Mean		SD		Mean		SD							
	Pre transition	Post transition	Pre transition	Post transition	Pre transition	Post transition	Pre transition	Post transition	Pre transition	Post transition	Pre transition	Post transition		
Fun with peers	3.15	3.17	0.56	0.60	3.08	3.22	0.59	0.62	-0.08	0.05	0.208	0.416		
Fear for peers	1.37	1.30	0.51	0.45	1.43	1.40	0.60	0.60	0.06	0.10	0.298	0.076 ⁰		
Fun school context	2.87	2.86	0.66	0.68	2.75	2.80	0.66	0.73	-0.12	-0.06	0.099 ⁰	0.440		
Fear school context	1.65	1.32	0.71	0.49	1.62	1.34	0.74	0.54	-0.03	0.02	0.688	0.665		
Fun schoolwork	2.88	2.88	0.58	0.59	2.84	2.90	0.56	0.62	-0.04	0.02	0.542	0.756		
Fear schoolwork	1.82	1.70	0.58	0.56	1.80	1.80	0.57	0.67	-0.02	0.09	0.720	0.160		

⁰ $p \leq 0.1$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$;

Note: The 6 subscales may be composed of a different number of items which makes their mean scores not comparable. Therefore each subscale is converted to a new variable at which the mean is derived by the number of items the subscale consists. After that, with the new calculated subscales, a t-test yielded the above score

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