Developmental profiles of task-avoidant behaviour and reading skills in Grades 1 and 2 ☆

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ABSTRACT

A latent profile analysis approach was used to examine the developmental profiles of task-avoidant behaviour and reading skills in Grades 1 and 2, as well as their antecedents in kindergarten. The participants in this study were 448 children. Four different developmental profiles of task-avoidant behaviour and reading skills were identified. Our results showed that task-avoidant behaviour and reading problems do not coincide for all children. Parents' educational level differentiated between the profile groups. Comparisons of kindergarten skills between the groups showed that social competence skills in kindergarten helped to differentiate between the profile groups with varying levels of task-avoidance, whereas pre-reading skills predicted reading fluency. The heterogeneity of developmental profiles of task-avoidant behaviour and reading skills should be taken into account in future studies examining the relationship between these variables.

1. Introduction

Learning to read is one of the most important academic goals during the first school years. Previous research has shown that in addition to emergent literacy skills, such as phonemic awareness, letter knowledge, and rapid automatised naming (Gallagher, Frith, & Snowling, 2000; Puolakanaho et al., 2008; Vellutino, Fletcher, Snowling, & Scanlon, 2004), various non-cognitive factors predict reading development as well. For example, effortful engagement and task-focused behaviour have been consistently linked to better reading skill development (Hirvonen, Georgiou, Lerkkanen, Aunola, & Nurmi, 2010; Hughes, Luo, Kwok, & Loyd, 2008; Stephenson, Parrila, Georgiou, & Kirby, 2008), whereas task-avoidance has been connected to poor reading skills (Fyrsten, Nurmi, & Lyytinen, 2006; Onatsu-Arvilommi, Nurmi, & Aunola, 2002; Schaefer & McDermott, 1999). Studies examining the relationships between achievement-related beliefs and behaviours and academic skill development (typically literacy or mathematics) have almost exclusively taken a variable-oriented approach which does not allow the investigation of whether different individuals show different developmental profiles with respect to their task-avoidant behaviour and reading skills. In the present study, we employed a person-oriented approach (Bergman, Magnusson, & El-Khouri, 2003) to identify such profiles. As we were interested in finding out why reading problems and task-avoidant behaviour coincide in some—but not all—children, we also investigated family factors, children's social competence, and various cognitive variables as antecedents of different reading and task-avoidance profiles that children show in Grades 1 and 2.

2. Task-avoidant behaviour and reading skills

Although various types of achievement-related beliefs and behaviours have been described in the literature, there are two major patterns that children display. On the one hand, some children use task-focused patterns, such as mastery-orientation (Dweck, Chiu, & Hong, 1995) and task-orientation (Lepola, Salonen, Vauras, & Poskiparta, 2004), which are characterised by positive affects, success expectations, high levels of effort, and persistence. On the other hand, some children use task-avoidant patterns, such as learned helplessness (Dweck et al., 1995), self-handicapping (Rhodewalt & Vohs, 2005), and ego-oriented coping (Lepola et al., 2004), which are characterised by failure expectations, and low levels of effort and persistence in academic tasks. The present study focuses on children's task-avoidant behaviour operationalised as teacher ratings of students' task avoidance

displayed in response to academic challenges or difficulties (Aunola, Nurmi, Niemi, Lerkkanen, & Rasku-Puttonen, 2002; Onatsu-Arvilommi & Nurmi, 2000).

In general, children who seek challenges and persist in the face of obstacles tend to do well at school. In contrast, children who evade demanding tasks and resort to task-avoidant behavior tend to do poorly at school (for reviews see Pintrich, 2003; Valentine, DuBois, & Cooper, 2004). Studies on task-avoidant behaviour and reading development have shown that children's task-avoidant vs. task-focused behaviours and their reading development form cumulative cycles during the first year of school. That is, children who display low skill levels are more likely to demonstrate high levels of task avoidance in a classroom context later on, which then further inhibits their skill development (Aunola et al., 2002; Hirvonen et al., 2010; Onatsu-Arvilommi & Nurmi, 2000). For example, Lundberg and Sterner (2006) found that task orientation predicted a subsequent increase in reading skills from third to fourth grade. In another recent study, Georgiou et al. (2009) showed that task-avoidant vs. task-focused behaviour accounted for a significant amount of variance in reading comprehension after controlling for the effects of general cognitive ability and phonological awareness and the autoregressive effects of previous reading comprehension skills. Similar results on the relationship between children's task-focused vs. task-avoidant behaviour patterns and their acquisition of reading skills have been found in other studies with Finnish-speaking children (Lepola, Poskiparta, Laakkonen, & Niemi, 2005; Salonen, Lepola, & Niemi, 1998) and also with children learning to read in other orthographies (Dally, 2006; Gijsel, Bosman, & Verhoeven, 2006; Hagtvet, 2000; Stephenson et al., 2008).

However, previous research in the field has one important limitation. It has almost exclusively concentrated on investigating the associations between task-avoidant behaviour and reading skills by taking a *variable-oriented* approach. There are a few studies that have examined the developmental trajectories of children's reading (see Lepola, Salonen, & Vauras, 2000; Niemi et al., 2011) and the extent to which the previous level of task-focused vs. task-avoidant behaviours predict these trajectories. However, none of the previous studies have made an effort to identify different developmental trajectories by *person-oriented* analyses incorporating both reading performance and the amount of task-avoidance behaviour as variables. This was the aim of the present study.

A person-oriented analysis approach has been successfully applied to investigations of mechanisms of psychological development (Hätinen et al., 2009; Johnson, Hicks, McGue, & Iacono, 2007; Pastor, Barron, Davis, & Miller, 2007). By using a person-oriented framework to analyse developmental data, the researchers are able to (1) identify different groups of individuals who follow different developmental profiles, (2) to investigate whether the associations between the key variables vary between different profile groups, and (3) to investigate the antecedents predicting group membership in the various profiles. The major advantage of the person-oriented approach (Bergman & Magnusson, 1991) in comparison to the variable-oriented framework is that it allows the identification of subgroups of individuals concealed in group means and correlations between variables, and it reveals patterns of measures and their associations which are divergent for different groups of individuals. Children's reading skills develop fast during the first school years and cross-lagged investigations have demonstrated reciprocal effects between reading skills and task-avoidant behaviour during early elementary grades (Aunola et al., 2002; Hirvonen et al., 2010; Onatsu-Arvilommi & Nurmi, 2000). The identification of subgroups of children with different profiles of task-avoidant behaviour and reading skills development during their first two years of school and the examination of explanations for these differences may provide a deeper understanding of the mechanisms by which task avoidance and reading skill are associated.

3. Predictors of the developmental profiles of task-avoidant behaviour and reading skills

Supposing that children show different developmental profiles in their task-avoidant behaviour and reading skills, understanding the factors which are underlying these differences is of both theoretical and practical relevance. Several factors may contribute to differences in developmental profiles of task avoidance and reading performance. In this study, we examine family factors, children's social competence and differences in pre-reading skills.

Numerous studies have shown that family background, including low parental education and socioeconomic status (SES), can be linked to poorer school readiness in the domains of early emotional, behavioural and academic competence (Brooks-Gunn & Duncan, 1997; Curenton & Justice, 2008; Janus & Duku, 2007; McLoyd, 1998; Myrberg & Rosén, 2008, 2009; Pungello, Kupersmidt, Burchinal, & Patterson, 1996). Parents with a lower educational level have been shown to hold lower expectations concerning their children's success and educational attainment, to express less warmth towards their children, and to be less involved in their children's educational process (Davis-Kean, 2005), as well as providing less encouragement to their children (Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2005). Lower levels of parental expectations, involvement and encouragement may, in turn, decrease children's engagement in school-related activities and increase their task-avoidant behaviour in academic tasks. Nurmi, Hirvonen, and Aunola (2008) recently showed that students' interest in academic school subjects was lower among students who originated from homes with a lower SES and were reared by a single parent. Parents' educational level has consistently predicted children's pre-literacy and reading skill development (Curenton & Justice, 2008; Myrberg & Rosén, 2008, 2009). Therefore, family background variables, including the parents' educational level, family structure, and the number of children in the family were examined in the present study as predictors of the developmental profiles of task avoidance and reading skills.

Children's social skills may also be reflected in their subsequent school achievement and the behaviour they show in the classroom. Children with high social and emotional competence have been shown to be successful in selecting and using behavioural strategies that are effective in achieving interactional goals in the classroom (Cummings, Kaminski, & Merrell, 2008; Gettinger, 2003; Odom, McConnell, & Brown, 2008); they tend to follow instructions, communicate effectively with others (Ladd, 1990; Peth-Pierce, 2001), and attend to tasks at hand (Curby, Rudasill, Rimm-Kaufman, & Konold, 2008). Poorer social competence, in turn, might be expected to result in less effective school adjustment and eventually also in task-avoidant behaviour in and around achievement tasksJunttila, Vauras, and Laakkonen (2007), for example, have shown that lower social competence appears to result in a less adaptive motivational orientation and lower academic skills. In the present study, social competence was assessed via kindergarten teachers' ratings of children's cooperation, empathy, impulsivity and disruptiveness, using a rating scale (MASCS; Junttila, Voeten, Kaukiainen, & Vauras, 2006) based on the dimensions of social competence as introduced by Kenneth Merrell (Merrell, 2002).

Of the early literacy skills, phonological awareness and letter knowledge have consistently been identified as the best proximal predictors of future word recognition skills (Gallagher et al., 2000; Lonigan, Burgess, & Anthony, 2000; Pennington & Lefly, 2001; Vellutino et al., 2004). In addition, especially in languages with transparent orthographies, naming speed (as assessed by rapid automatised serial naming in RAN tasks) has proved to be a strong predictor of reading fluency (e.g., Holopainen, Ahonen, & Lyytinen, 2001; Puolakanaho et al., 2008; Wimmer & Mayringer, 2002; Wimmer, Mayringer, & Landerl, 1998, 2000). In the present study, we will use phonological awareness, letter knowledge, and RAN as cognitive antecedents of subsequent developmental profiles of both