PUBLICATIONS OF
THE UNIVERSITY OF EASTERN FINLAND

Dissertations in Education, Humanities, and Theology

MARLEENE RYTIOJA

The Role of Behavioral and Emotional Strengths and Peer Relationships in Children's School Adjustment

The Role of Behavioral and Emotional Strengths and Peer Relationships in Children's School Adjustment

Marleene Rytioja

The Role of Behavioral and Emotional Strengths and Peer Relationships in Children's School Adjustment

Publications of the University of Eastern Finland
Dissertations in Education, Humanities, and Theology
No 217

University of Eastern Finland
Joensuu
2024

Punamusta Oy
Joensuu, 2024
Editor: Noora Heiskanen

ISBN: 978-952-61-5260-8 (Print)
ISBN: 978-952-61-5261-5 (PDF)
ISSNL: 1798-5625
ISSN: 1798-5625
ISSN: 1798-5633 (PDF)

Rytioja, Marleene
The Role of Behavioral and Emotional Strengths and Peer Relationships in Children's School Adjustment
Joensuu, University of Eastern Finland, 2024
Publications of the University of Eastern Finland
Dissertations in Education, Humanities, and Theology; 217
ISBN: 978-952-61-5260-8 (Print)
ISSNL: 1798-5625
ISSN: 1798-5625
ISBN: 978-952-61-5261-5 (PDF)
ISSN: 1798-5633 (PDF)

ABSTRACT

Children's behaviors, emotions, and social relationships (e.g., peers, teachers, and family members) are related to their school adjustment. Behavioral and emotional difficulties in combination with relationship problems have negative consequences on children's adaptation to school. This study was conducted to extend the understanding of the interaction between behaviors and social relationships, specifically peer relationships, by examining how children's self-assessed behavioral and emotional strengths and behavioral difficulties are connected to school adjustment. School adjustment was studied based on three aspects: academic achievement, teachers' assessments of behavior, and bullying-related behaviors (bullying, victimization, and bully victimization). To determine the associations between children's behavioral and emotional strengths and difficulties, peer relationships, and school adjustment, three studies were performed, with the empirical assessments focusing on Finnish primary school children in grades 3 and 4 (N = 739). The results indicated that, first, children with more behavioral and emotional strengths were better adjusted to school than students with few behavioral and emotional strengths. However, children could have behavioral strengths and difficulties simultaneously, indicating that these are not separate phenomena. Second, good peer relationships were associated with favorable school adjustment

in middle childhood. Peer relationships had stronger impacts on behavioral adjustment than on academic adjustment in this age group. Third, children with good peer relationships had more behavioral and emotional strengths and were also better adjusted to school than children who lacked peer relationships, whereas behavioral and emotional difficulties and peer relationship problems were associated with adjustment difficulties. Notably, children with behavioral difficulties were well adjusted if they had good relationships with their peers, indicating that peer relationships are especially important for children with behavioral and emotional difficulties. Overall, the study findings showed that in addition to behavioral and emotional difficulties, children's self-assessed behavioral and emotional strengths are important factors affecting peer relationships and school adjustment. Behavioral and emotional strengths and good peer relationships are associated with good school adjustment in as young as primary school-aged children. These findings highlight the importance of using strength-based assessment practices, intervention strategies, and behavioral management in educational settings, healthcare, and social services. The peer relationships of children with behavioral and emotional difficulties especially should be improved to prevent adjustment problems.

Keywords: behavioral and emotional strengths, behavioral and emotional difficulties, peer relationships, school adjustment, primary school children

Rytioja, Marleene
Käyttäytymisen ja tunne-elämän vahvuuksien ja vertaissuhteiden rooli lasten kouluun sopeutumisessa
Joensuu: Itä-Suomen yliopisto, 2024
Publications of the University of Eastern Finland
Dissertations in Education, Humanities, and Theology; 217
ISBN: 978-952-61-5260-8 (nid.)
ISSNL: 1798-5625
ISSN: 1798-5625
ISBN: 978-952-61-5261-5 (PDF)
ISSN: 1798-5633 (PDF)

TIIVISTELMÄ

Lasten käyttäytyminen ja tunne-elämä piirteet ovat yhdessä sosiaalisten suhteiden kanssa (mm. vertaiset, opettajat ja perheenjäsenet) yhteydessä kouluun sopeutumiseen. Erityisesti käyttäytymisen ja tunne-elämän vaikeudet yhdistettynä sosiaalisissa suhteissa ilmeneviin ongelmiin aiheuttavat haasteita lasten kouluun sopeutumiseen. Tämän tutkimuksen tarkoituksena oli lisätä tietämystä siitä, miten käyttäytymisessä ilmenevien vaikeuksien lisäksi etenkin lasten itse arvioimat käyttäytymisen ja tunne-elämän vahvuudet ja sosiaaliset suhteet ovat yhteydessä kouluun sopeutumiseen. Tässä tutkimuksessa sosiaalisten suhteiden näkökulma oli lasten vertaissuhteissa. Kouluun sopeutumista tutkittiin kolmesta eri näkökulmasta: koulumenestys, käyttäytymisarvosana, sekä kiusaaminen (kiusaajana toimiminen, kiusatuksi joutuminen, kiusaajan ja kiusatun yhdistelmärooli). Tutkimus koostuu kolmesta osatutkimuksesta ja tutkimusaineistona ovat olleet 739 itäsuomalaisen lapsen vastaukset. Aineisto on kerätty lasten ollessa kolmannella ja neljännellä luokalla. Tutkimuksen tulokset osoittivat, että käyttäytymisen ja tunne-elämän vahvuuksia omaavat lapset olivat paremmin sopeutuneita kouluun. Käyttäytymisen ja tunne-elämän vahvuudet ja vaikeudet eivät kuitenkaan näytä olevan toisistaan erillisiä ilmiöitä, sillä samalla lapsella saattoi olla sekä vahvuuksia että vaikeuksia. Hyvät vertaissuhteet olivat yhteydessä

parempaan kouluun sopeutumiseen jo alakouluikäisillä lapsilla. Vertaissuhteiden merkitys oli vahvempi koulussa käyttäytymisen kuin koulumenestyksen osalta tämän ikäisillä lapsilla. Hyvät vertaissuhteet omaavilla lapsilla ilmeni enemmän käyttäytymisen ja tunne-elämän vahvuuksia ja he olivat paremmin sopeutuneita kouluun, kun vastaavasti käyttäytymisen ja tunne-elämän vaikeudet olivat yhteydessä ongelmiin sekä vertaissuhteissa että kouluun sopeutumisessa. Käyttäytymisen ja tunne-elämän vaikeuksia omaavat lapset olivat kuitenkin paremmin sopeutuneita kouluun, mikäli heillä oli hyvät vertaissuhteet. Täten vertaissuhteet ovat tärkeitä etenkin niille lapsille, joilla ilmenee käyttäytymisen ja tunne-elämän vaikeuksia. Tämä tutkimus osoitti, että käyttäytymisen ja tunne-elämän vaikeuksien lisäksi käyttäytymisen ja tunne-elämän vahvuudet ovat merkittäviä sekä vertaissuhteissa että kouluun sopeutumisessa. Käyttäytymisen ja tunne-elämän vahvuudet ja hyvät vertaissuhteet ovat yhteydessä parempaan kouluun sopeutumiseen jo alakouluiässä. Tulokset korostavat käyttäytymisen ja tunne-elämän vahvuuksiin perustuvien arviointimenetelmien, interventiostrategioiden ja käyttäytymisen hallinnan hyödyntämistä kasvatuksessa ja opetuksessa, terveydenhuollossa ja sosiaalipalveluissa. Erityisesti käyttäytymisen ja tunne-elämän vaikeuksia omaavien lasten vertaissuhteisiin tulisi kiinnittää huomiota myöhempien sopeutumisongelmien ehkäisemiseksi.

Avainsanat: käyttäytymisen ja tunne-elämän vahvuudet, käyttäytymisen ja tunne-elämän vaikeudet, vertaissuhteet, kouluun sopeutuminen, alakouluikäiset lapset

ACKNOWLEDGEMENTS

My first idea of doing the dissertation came to my mind when I was 14 years old. I was watching my cousin's dissertation and this festive occasion made me hope that one day it will be my turn. Years passed and now 23 years later it is finally my turn. The process of doing my dissertation has been a long way and a lot has happened along this way in my life. There are many people that I want to thank for making my dream come true.

First of all, I want to thank my great supervisors. Dosent Kristiina Lappalainen I am very grateful for your mental support and constructive comments that helped me to complete this dissertation. Professor Hannu Savolainen I want to thank you for guiding me through complex analysis and for your expert comments that made my work even better. Both of you, I would like to thank you for your patience, and faith in me. Above all, you have given me the understanding that doing research is far from boring, but involves a lot of joy and humor. It has been pleasure for me to work with you during these years.

I want to address my thanks to Professor Markku Jahnukainen and Professor Niina Junttila for the preliminary review of my dissertation. I respectfully thank both of you for providing excellent and thoughtful comments which helped me finalize my work. Your comments made me realize how important this topic is in educational research. I greatly appreciate that Professor Jahnukainen has agreed to serve as my opponent.

This research was funded by Finnish Cultural Foundation and Otto A. Malm Foundation. I appreciate this financial support which enabled me to focus full-time on my research. I am also grateful to the University of Eastern Finland, whose grant allowed me to start this project.

I also wish to thank my old teacher colleagues. I am grateful for the encouragement and interest I have received in my research, which have helped my work to be completed. I also wish to thank other PhD students and colleagues at the University of Eastern Finland. I am grateful for the joint webinars and discussions, which have helped me to move forward with my research.

I owe many thanks to my wonderful friends. You have made me realize that there is more to life than doing research. However, it has been a pleasure to discuss my research with you. Your interest and encouragement have helped me to cope through this project. I have so many great friends that it would be impossible to mention all of you by name. I also want to thank my neighbors and people in my son's hobbies. It has been gratifying to notice how much interest the writing of the dissertation arouses.

I am really grateful to my mother Sinikka. You have made me understand the importance of education in my life and encouraged me to pursue my own dreams. My words are not enough to describe how grateful I am to you. Thanks also go to my aunt Vuokko. I am grateful for the discussions we had about the school world. They have given perspective and meaning to my work. It is sad that my father Harry is no longer experiencing this moment with me. During his lifetime, my father taught me the right attitude towards life. Many things, including research, should be treated with humor.

I would like to thank my lovely family. My spouse Olli, I thank you for your love and support. You have been by my side throughout my studies from high school until today. I really appreciate your patience. During these years, we have not only shared the mortgage, household works and parenthood, but our whole life with its joys and sorrows. The biggest thanks go to my son Toivo. Your birth in the middle of my dissertation work gave my life a completely new meaning. And my cat Hercules, thanks for being such a great boss.

Finally, I would like to give special thanks to all my former teachers. Without the knowledge and enthusiasm I received from you, this research would never have been possible.

Helsinki, 18.8.2024
Marleene Rytioja

I dedicate my research to my son Toivo.

LIST OF ORIGINAL PUBLICATIONS

This dissertation is based on the following publications.

STUDY I

Rytioja, M., Lappalainen, K., & Savolainen, H. (2019). Behavioural and emotional strengths of sociometrically popular, rejected, controversial, neglected, and average children. *European Journal of Special Needs Education, 34*(5), 557–571. https://doi.org/10.1080/08856257.2018.1560607

STUDY II

Rytioja, M., Lappalainen, K., & Savolainen, H. (2024). Peer groups, academic achievement, and the behaviour of elementary school-aged children: A strength-based perspective. *Infant and Child Development*. https://doi.org/10.1002/icd.2489

STUDY III

Rytioja, M., Lappalainen, K. & Savolainen, H. Longitudinal effects of profiles of behavioural difficulties and strengths and peer group membership on children's school adjustment [manuscript under review].

The author of this dissertation is the first author of all three articles. She was responsible for drafting the study framework, conducting the literature review and analyses, and writing the three manuscripts. She also participated in designing the study.

TABLE OF CONTENTS

LIST OF FIGURES

1 INTRODUCTION

Children's behavioral and emotional difficulties present huge challenges to schools and children around the world have difficulties with their behaviors and emotions (Landrum, 2017). Therefore, researchers in special education and in many other sciences (e.g., psychology, medicine, and educational sociology) have considered ways and interventions to prevent and treat children's behavioral and emotional difficulties. It is important to intervene when behavioral and emotional difficulties arise because they have consequences for children's overall adjustment. Studies have demonstrated that children and adolescents with behavioral and emotional difficulties have problems in school (e.g., Ansary et al., 2017; Carr et al., 2022; Kauffman & Landrum, 2018) and later in adulthood (Scott, 2015). The traditional view of children's and adolescents' behaviors and emotions was highly deficit-based, emphasizing problems, deficiencies, and diagnoses (Epstein, 1999; Hale et al., 2010; Laija-Rodriguez et al., 2013; Merrell et al., 2011; Sointu et al., 2017). However, the 1990s saw the evolution of strength-based, supportive assessments and intervention tools (Epstein, 1999), and many different strength-based assessment (SBA) instruments (e.g., the Behavioral and Emotional Rating Scale-2; Epstein, 2004) and intervention practices (e.g., positive behavior support; Sugai et al., 2000) are now used in schools to support children's behavioral and emotional development.

Factors related to children's behavior and emotions can be divided into individual (e.g., physical factors, personality, thinking patterns) and environmental (learned behavior, interaction, school, home, community, social systems) causes (Hue, 2020). The importance of peers has been detected in behavioral theories (Landrum, 2017), but the perspective of peer relations on children's behavior and emotions has been neglected especially in special educational research despite of the fact that peers are an important social environment for children. The importance of considering children's peer relationships more in behavior and emotions is obvious because children spend most of the school day interacting with their peers. In addition, children's behaviors and emotions are related to their peer relationships (e.g.,

Fortuin et al., 2015; Newcomb et al., 1993; Norwalk et al., 2021). However, most studies in this area are concerned with describing how the behavioral problems and deficits of children and adolescents are related to their peer relationships (e.g., Ang et al., 2015; Borowski et al., 2017; Sijtsema, 2016). Considering also children's behavioral and emotional strengths can provide a holistic view of their peer relationships.

It is widely known that peer relationships are important during adolescence (Hafen et al., 2012). Most peer relationship studies have been performed with adolescent samples. However, children's social skills develop earlier in their middle childhood years (Sørlie et al., 2021), and peers become increasingly important during this period (Carr et al., 2017). Thus, it is important to be aware of younger children's peer relationships. Exploring peer relationships before adolescence can ensure the early address of potential problems and prevent complicated difficulties from arising in peer relationships and adjustment. Knowledge of peer relationships in middle childhood can also help in understanding the underlying mechanics of peer relationships later in life. By identifying the skills and abilities connected to good peer relationships during childhood, supportive interventions can be developed, and peer group membership for all children can be promoted.

Earlier research has detected that peer relationships are important for children's adjustment at school because they serve as academic socialization agents and provide a sense of belonging, relatedness, and social support (Ryan & Shin, 2018). It is also widely known that children with behavioral and emotional difficulties have problems adjusting to school (Kauffman & Landrum, 2018) whereas behavioral and emotional strengths predict better academic adjustment (Sointu et al., 2017). However, less is known about the interaction effects between behavior, emotions, and peer relationships on children's school adjustment, especially with regard to behavioral and emotional strengths. Although it is well known that children with fewer behavioral and emotional difficulties are better adjusted, examinations of children's strengths, skills, and assets have been quite narrow, focusing mostly on prosocial behavior, resilience, and strengths. However, children's behavioral strengths and skills comprise several distinct aspects, such as interpersonal strengths, school functioning skills, and affective strengths

(Epstein, 2004), and limited research has considered a broad view of children's behavioral and emotional strengths, including children's behaviors in school and home environments (Sointu et al., 2024). Further, little is known about how children's behavioral and emotional strengths are related to their peer relationships. By considering children's behavioral and emotional strengths, more effective holistic intervention strategies to tackle problematic behaviors can be developed.

The main purpose of this study was to investigate how children's behaviors and emotions and peer relationships are connected to their school adjustment. In addition to behavioral and emotional difficulties, children's behavioral and emotional strengths and the academic and behavioral dimensions of school adjustment were examined. To fully understand the role of peer relationships in school adjustment, both individual and group levels of peer relationships were considered. In the following subsections, previous studies on behavioral and emotional strengths and difficulties and peer relationships are introduced. In the second section of the dissertation, the detailed aims of this study are presented. The third section outlines the participants and measures used in this study. Finally, the results of the three empirical studies constituting this dissertation, their practical implications, and future research issues are discussed.

2 THEORETICAL BACKGROUND

2.1 Behavioral and Emotional Difficulties

Children's behavioral and emotional difficulties can be divided into two categories: externalizing and internalizing. Externalizing difficulties are problem behaviors that are directed outward, such as aggression, striking out against others, impulsive and disobedient behaviors, and delinquency, whereas internalizing difficulties are behavioral problems directed inward, such as shyness, anxiety, and depression (Kauffman & Landrum, 2018). Externalizing and internalizing difficulties typically co-occur (Landrum, 2017). Previous studies have shown bidirectional associations between externalizing and internalizing difficulties, indicating that externalizing difficulties predict internalizing ones, and vice versa (Kauffman & Landrum, 2018; Keskin et al., 2023; Liu et al., 2023; Oh et al., 2020). The coexistence of externalizing and internalizing difficulties is a significant risk factor affecting children's overall development (Kauffman & Landrum, 2018). Behavioral and emotional difficulties affect many children and adolescents, with the worldwide prevalence ranging from 3.4% to 13.4% depending on the type of difficulty (Polanczyk et al., 2015). In a large Finnish birth cohort study involving parent interviews, the prevalence of behavioral and emotional difficulties was found to be 4.7% (Almqvist et al., 1999). Behavioral and emotional difficulties are more common in boys than in girls (Kauffman & Landrum, 2018). However, some studies have indicated that boys have more externalizing difficulties, while girls are more prone to internalizing difficulties (Boyd et al., 2015; Leadbeater et al., 1999; Martel, 2013).

Externalizing and internalizing difficulties are associated with many behavioral and emotional features in childhood, with negative developmental consequences. Externalizing difficulties are associated with low self-regulation skills, high impulsivity, and negative emotionality, whereas internalizing difficulties are connected to low impulsivity, sadness, and high anger (Eisenberg et al., 2009). During childhood, externalizing and internalizing

difficulties pose problems in academic achievement and classroom adjustment (Ansary et al., 2017), everyday functioning (Dol et al., 2022), peer relationships (Hymel et al., 1990), and familial relationships (Buist et al., 2017). Children with externalizing and internalizing difficulties are more prone to psychosocial problems in adulthood, including mental health and substance abuse problems, somatic illnesses, antisocial behavior, criminality, low level of education, unemployment, problems in social relationships and parenthood, and early death (Scott, 2015).

It is not unexpected that school can contribute to children's behavioral and emotional difficulties, as children spend large amounts of time each day in a school environment. Classroom conditions and teachers' reactions (Kauffman & Landrum, 2018), conflictual student–teacher relationships (Poulou, 2014; 2017), the classroom context (a lack of motivating tasks and autonomy support) (Poulou, 2014), and academic difficulties (Ansary et al., 2017) can cause behavioral difficulties at school. Although school and its personnel impact children's behavior, a single factor alone doesn't cause behavioral and emotional difficulties. Biological, cultural, family, and school factors have interrelated effects on children's behavioral and emotional development (Kauffman & Landrum, 2018).

School can also serve as a protective factor against behavioral and emotional difficulties. Research has shown that good relationships with teachers (Dever et al., 2022; Poulou, 2017; Sointu et al., 2017), teachers' warm, supportive, and caring practices (Hamre et al., 2014; Merritt et al., 2012; Yeung & Leadbeter, 2010), and classroom management skills (Gilmour et al., 2022; Korpershoek et al., 2016; Poulou et al., 2022) reduce the risk of behavioral and emotional difficulties among children. When caring relationships, active engagement, inclusion, collaboration, positive beliefs and expectations, and recognition are fostered in classrooms, children exhibit improved socioemotional competence (Cefai, 2007). Similar to the causes of behavioral and emotional difficulties, protective and preventive factors are interrelated. It has been postulated that an easygoing temperament is a protective factor because it may elicit positive responses from a child's caretakers (Kauffman & Landrum, 2018) and that students' behaviors affect teachers' classroom management skills (Gilmour et al., 2022). When implementing interventions, children's

behavioral and emotional difficulties and biological, cultural, and family- and school-related factors should be considered (Kauffman & Landrum, 2018).

2.2 Behavioral and Emotional Strengths

2.2.1 Approaches to Behavioral and Emotional Strengths

Children's behavior and emotions have been traditionally viewed from a deficit-based viewpoint, which emphasizes difficulties, problems, and pathologies (Epstein, 1999; Hale et al., 2010; Laija-Rodriguez et al., 2013; Merrell et al., 2011; Sointu et al., 2017). In the 1990s, the deficit-based approach was questioned, and the need for a strength-oriented perspective and assessment tools for children's behaviors was highlighted (Epstein, 1999). The strength-based perspective can be defined as a consideration of behavioral skills, competencies, and characteristics that children need to promote their personal accomplishments, maintain social relationships, deal with stressful incidents, and enhance overall development (Epstein, 2004). Considering children's behavioral and emotional strengths can lead to many benefits. Parents, service providers, and educators can gain a holistic view of children's skills and functioning to prepare individualized treatment and education plans (Lambert et al., 2015; Trout et al., 2003). Children who undergo strength-based assessments have better functioning outcomes than those assessed only with deficit-based tools; their parents are more satisfied with services, and they have low rates of missed appointments (Cox, 2006). In youth mental health services, strength-based approaches are associated with high levels of behavioral and emotional strength, less mental health symptoms, and diminished caregiver stress (Painter, 2012)

Children's behavioral and emotional strengths can be viewed through different approaches, such as positive psychology (Seligman & Csikszentmihalyi, 2000), positive youth development (PYD) (Lerner et al., 2005), and resilience theory (Cutuli et al., 2021; Luthar et al., 2000). Positive psychology refers to the positive subjective experiences, individual traits, and institutions that improve an individual's quality of life and prevent pathologies in stressful situations (Seligman & Csikszentmihalyi, 2000). Positive youth development

is a strength-based conception of adolescence where the plasticity of human development is consistent with developmental assets. The PYD perspective involves five conceptual Cs (competence, confidence, connection, character, and caring) which are enhanced in youths' lives if young people have positive relationships with adults, are involved in skill-building activities, and have opportunities to participate in community-based activities. The PYD is utilized in youth community programs and social policies aimed at young people. (Lerner et al., 2005) Resilience, the core concept of resilience theory, can be operationalized as a construct that individuals need to maintain for positive adaptation despite significantly adverse life experiences (Luthar et al., 2000). Resilience theory considers protective factors to be promoting an individual's adaptation to risk factors (e.g., premature birth, divorce, and maltreatment) that may damage human development. Protective factors include child-related factors (e.g., problem-solving skills), family- and relationship-based factors (e.g., positive attachment relationships), and community factors (e.g., effective schools). Resilience can be enhanced by reducing developmental risk factors, building on one's strengths, and mobilizing protective systems. (Cutuli et al., 2021)

In this study, children's behavioral and emotional strengths were investigated using strength-based assessments. Assessments of behavior and emotions in schools have traditionally been deficit-based, raising the need for comprehensive, holistic assessment practices. Strength-based assessments can be used to understand children's strengths and develop intervention strategies to increase students' positive development and well-being (Epstein, 1999; Hale et al., 2010; Laija-Rodriguez, 2013). Behavioral and emotional strengths can be assessed through inventories, checklists, interview schedules, rating scales, and story-board methods (Bozic et al., 2018). Strength-based assessments are based on four basic principles: 1) all children and adolescents have strengths; 2) children's motivation and performance can be enhanced if teachers, parents, and other adults pay attention to children's strengths; 3) failure to demonstrate a skill or strength does not mean a deficit but an opportunity to learn the skill; and 4) education, mental health, and social service plans should be based on strengths. Strength-based service plans are more likely to involve children and families in treatment (Epstein,

2004). Strength-based assessments are a part of supporting children's social and emotional development. Assessments of children's behavioral and emotional strengths focus on affective, interpersonal, behavioral, and cognitive adjustment and can serve as tools for intervention planning, understanding problems, and facilitating children's well-being. Knowledge of children's behavioral strengths and problems can be used to develop solution-oriented strategies that meet the needs of children and families (Merrell et al., 2011). Studies have demonstrated differences among students in terms of behavioral and emotional strengths. Students with disabilities tend to have fewer strengths than students without disabilities (Lambert et al., 2021). Adolescents have fewer strengths than younger children (Ikävalko et al., 2023), and boys have been assessed to have lower strengths than girls (Lappalainen et al., 2009).

2.2.2 Behavioral and Emotional Strengths in the School Environment

Over the last decades, an increasing amount of research has considered children's behavioral and emotional strengths in school environments, and different strength-based intervention strategies and assessment tools have been developed and improved (e.g., Elias, 1997; Masten et al., 2011; Sugai et al., 2000; Vera & Shin, 2006). Strength-based coaching has been developed to enhance children's engagement and hope. In these coaching sessions, participants' character strengths, personally meaningful goals, and novel ways to use their strengths are highlighted. Strength-based coaching programs can potentially prevent mental health problems and promote children's well-being (Masten et al., 2011). In environment-focused interventions, strengths in the children's environments, such as in their families and schools, are considered and promoted to enhance their resilience. There exist many protective and supportive factors in families, schools (e.g., after-school programs, caring and supportive teachers, and prosocial peers), and communities that are beneficial in fostering the well-being of high-risk children. In environment-focused interventions, adverse environmental effects (such as low socioeconomic status) can be reduced by enhancing protective environmental factors (such as after-school programs) (Vera &

Shin, 2006). Social and emotional learning (SEL) is widely used in schools to promote children's social and emotional skills. SEL can be implemented in a school environment in several ways by focusing on classroom instruction and extracurricular activities or supporting the school climate. Promoting social and emotional skills is important for helping children and adolescents become more resistant to aggressive behaviors and truancy and preventing school dropout. (Elias, 1997)

In Finnish schools, behavioral and emotional strengths have been emphasized by providing positive behavior support (PBS) (Paananen et al., 2023) and positive education and character strength interventions (Vuorinen, 2022). PBS is an approach that offers behavioral support for children with disabilities and behavioral problems. It involves positive behavioral interventions that trigger socially important behavioral changes that make problem behaviors less effective, efficient, and relevant and desired behaviors more functional. Interventions in positive behavioral support emphasize the redesign of the environment and curriculum and the removal of rewards that maintain problem behaviors (Sugai et al., 2000). Character strengths can be divided into six virtues: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence. These virtues consist of actual character strengths, such as creativity, bravery, love, teamwork, forgiveness, and appreciation of beauty (Peterson & Seligman, 2004). Positive education refers to supportive systems that are built according to students' character strengths and promote students' well-being (Vuorinen, 2022). Positive education approaches involve teachers facilitating students' recognition of their own strengths and encouraging students to use their strengths in various ways. Students who have more opportunities to use their personal strengths in schoolwork have better educational attainment and are more engaged in school (Vuorinen, 2022). Although positive behavior support and positive education are considered acceptable methods among Finnish teachers, these practices are secondary to other pedagogical practices, and Finnish teachers may have high thresholds for starting positive behavioral support practices (Paananen et al., 2023; Vuorinen, 2022).

The social and academic performance of students improves when schools support their psychological well-being and resilience (Doll, 2021). SBAs are

used in school environments to assess students' strengths and build their core social-emotional competence. SBAs are useful tools for improving students' educational success and well-being and enhancing family–school collaboration. SBAs in schools are aimed at monitoring the psychosocial strengths of students to gain greatest comprehensive information on students' psychosocial development. In the school context, SBAs should be based on a conceptual framework of psychosocial strengths, the feasibility of school-based universal screening measures, and evidence of convincing psychometric properties (Paz et al., 2021). A wide variety of tools are available to measure children's strengths in school environments (Simmons & Lehmann, 2013). Among these, the Behavioral and Emotional Rating Scale (BERS-2) (Epstein, 2004), Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997), and Devereux Student Strengths Assessment (DESSA) (LeBuffe et al., 2009) are commonly used to assess children's behavioral and emotional strengths in schools. The idea of SBA has evolved in Finnish schools. The need for SBAs in Finland is mandated by the national curriculum and three-tiered educational support system, as well as the worldwide ideological shift from using only deficit-based assessment tools (Sointu, 2014). SBA tools are used in Finnish schools to identify the strengths of an individual student or a whole class and, in turn, facilitate meetings with parents, teachers, and other professionals (e.g., school psychologists, school social workers, school nurses) to define students' goals, prepare pedagogical documents, facilitate student counseling, and promote the developmental work of municipalities and schools (Sointu et al., 2018).

2.3 Peer Relationships

Behavioral and emotional strengths and difficulties are individual-level factors that have consequences on children's school adjustment. In this section, school adjustment is discussed in terms of interaction factors and children's peer relationships. Peer relationships can be operationalized as interpersonal relationships that occur among individuals with similar levels of psychological development (La Greca & Harrison, 2005). Peer relationships

are important for children's healthy development and provide crucial contexts for the acquisition of socioemotional skills, such as empathy, cooperation, and problem-solving skills. However, peers can also contribute negatively to social and emotional development through bullying, peer rejection, or deviant peer affiliations (Pepler & Bierman, 2018). There are various levels to peer relationships. On the individual level, the focus is on an individual's position in a peer network; on the dyadic level, research interest is directed toward friendship relations and the dynamics of diverse relationships; on the group level, the focus is on peer cliques and crowds (Dijkstra & Veenstra, 2011). In this study, both the individual (sociometric status, individual's belonging to reciprocal peer relationships) and group (peer cliques) levels of peer relationships were investigated.

2.3.1 Sociometric Status

Sociometric status reflects the degree to which someone is liked or disliked by their peers. Sociometric status can be divided into five status groups based on the positive and negative nominations given by peers (Coie et al., 1982): popular (many positive, few negative), rejected (few positive, many negative), controversial (many positive and negative), neglected (few positive and negative), and average (children who do not fit into any of the other categories based on the nominations they received) (Coie et al., 1982). Children in different status groups have distinct behavioral profiles. Popular children are described as socially competent and less aggressive, whereas rejected children have elevated levels of aggressive and withdrawn behaviors, low levels of sociability, and low cognitive abilities (Newcomb et al., 1993). Children in the neglected status group exhibit low sociability and aggressive behavior. Compared to rejected children, controversial children are aggressive but have good social skills and cognitive abilities (Newcomb et al., 1993). The term perceived popularity has been mentioned in the literature on peer relationship, referring to children known among their peers as popular but who are not well-liked. Compared to traditional sociometric popularity, perceived popularity is associated with aggression and dominance but not with prosocial behavior (Parkhurst & Hopmeyer, 1998).

2.3.2 Peer Groups

Peer groups or cliques are small groups of close friends that are formed based on mutual liking (Ennett et al., 1994; Hartup, 1996). Peer groups are important for children's psychological well-being and socioemotional development because peers provide social and emotional support and enable the acquisition of new social skills (Ciarocchi et al., 2017; Hartup, 1996). The members of peer groups are typically of the same sex, especially before adolescence (Hartup, 1996), and peer groups seem to remain stable over time (Witvliet et al., 2010). Peer group members tend to be similar in their interests, activities, and behavioral characteristics (Ennett et al., 1994; Hartup, 1996). This similarity among peer group members is known as homogeneity (Cohen, 1977) and is a result of selection and socialization processes. The selection process involves children selecting friends with similar characteristics, and the socialization process involves children conforming to the behaviors of their friends over time (Urberg et al., 2003). Even though peer groups are important for children's healthy social and emotional development, involvement in deviant peer groups can lead to maladjustment and behavioral difficulties, such as juvenile justice and delinquency (Stuart et al., 2008).

2.3.3 Reciprocal Peer Relationships

In addition to peer acceptance and friendship-based peer groups, reciprocal peer relationships are important for children's adjustment. A lack of reciprocal friendships during childhood is a risk factor for adjustment problems, including violence and criminality (Kalvin & Bierman, 2017), low self-worth, social anxiety, depression, loneliness, and suicidal ideation later in adulthood (Flink et al., 2015). Usually, children face difficulties in forming mutual friendships for two reasons: they are marginalized by their peers, or they prefer solitude activities and are thus isolated from peer networks (Norwalk et al., 2021). It is worth mentioning that friendlessness and unpopularity are different phenomena. Unpopular or rejected children can still have reciprocal peer relationships and feel content. Further, highly popular children can lack mutual friendships and thus feel lonely and dissatisfied (Wellman, 2020). Behavioral difficulties and low prosocial behavior may cause estrangement from peer groups (Witvliet et al., 2010), and a lack of peer group membership

may also increase behavioral difficulties. Marginalized children become more aggressive, less prosocial, and more victimized over time, whereas isolated children experience more internalizing problems, become more victimized, and get less protection from peers against victimization (Norwalk et al., 2021). Friends and good peer relationships are protective factors against psychological maladjustment. For example, fewer negative psychological adjustment trajectories arise among anxious children with friends than anxious children without friends (Markovic & Bowker, 2017).

2.4 School Adjustment

Children's cognitive and linguistic skills (e.g., language, verbal, math) are the traditional precursors of school adjustment. However, a holistic view of school adjustment that includes interpersonal indicators, such as children's understanding and perceptions of school and the classroom environment, psychological and emotional well-being during the school day, involvement in or disengagement from classroom activities, and academic achievement, is needed (Ladd et al., 2010). It is important to note that children's adjustment to school has social and behavioral components in addition to academic skills and competencies (Ladd et al., 2006).

In this study, children's school adjustment was investigated from two viewpoints: academic and behavioral adjustment. Academic adjustment refers to students' academic achievements, whereas behavioral adjustment involves teacher assessments of behavior and students' involvement in bully-related behaviors (bullying, victimization, and bully victimization). Detailed descriptions of the school adjustment variables and their connections to children's behaviors and peer relationships are presented below.

2.4.1 Academic Achievement

Academic achievement refers to the performance outcomes of activities in schools and other educational institutions. Academic achievement can be measured by using grade point averages (GPAs) or standardized assessments. In developed societies, academic achievement is a key factor in

determining whether students can continue their education (e.g., studying at a university) (Steinmayr et al., 2014). Students with behavioral and emotional difficulties have usually low academic achievement levels, and low academic competence leads to more behavioral and emotional difficulties over time (Ansary et al., 2012; Ansary et al., 2017; Atoum et al., 2018; Efron et al., 2020; Kauffman & Landrum, 2018; Romano et al., 2015). Further, behavioral strengths lead to better academic achievements via improved student–teacher relationships (Sointu et al., 2017), and resilient children exhibit better academic performance across the formal schooling period (Shi et al., 2021). Studies have also reported the importance of prosocial behavior on academic achievement. Prosocial actions, such as cooperating with and helping others and sharing in childhood, are predictors of high academic achievement (Blake et al., 2015; Carprara et al., 2000; Jensen et al., 2023; Oberle et al., 2023).

In addition to affecting children's behaviors, peer relationships have consequences for academic achievement. Many studies have shown that children in popular status groups have high academic achievement levels, whereas peer rejection is associated with academic failure and learning disabilities (Janošević & Petrovic, 2019; Soponaru et al., 2014; Walker & Nabuzoka, 2007; Wentzel & Asher, 1995; Zettergren, 2003). Children who are rejected by their peers because of aggressive behaviors have the greatest risk for academic problems (Wentzel & Asher, 1995). Peer relationship studies have shown that the members of peer groups resemble each other in academic achievement (Gremmen et al., 2017; Kiuru et al., 2009; Laninga-Wijnen et al., 2019; Rambaran et al., 2017) and other school adjustment factors, such as school burnout (Kiuru et al., 2008), class attendance and truancy (Kassarnig et al., 2017; Rambaran et al., 2017); satisfaction with educational track and school engagement (Kiuru et al., 2009), and academic norms (Laninga-Wijnen et al., 2019), especially during adolescence. Socialization and selection processes have been found to explain these similarities in academic achievement. Students tend to select friends with similar academic achievements, and the socialization processes that subsequently place result in students' achievements becoming more similar over time (Gremmen et al., 2017). Many studies have demonstrated that children who have friends or are part of large peer groups have good academic grades (Delgado et al., 2016; Flink et

al., 2015; Wentzel & Caldwell, 1997; Witkow & Fuligni, 2010). Reciprocal peer interactions are also important for the development of academic skills among young age groups and have consequences for later academic achievement (Hanish et al., 2007).

2.4.2 Behavioral Adjustment

Behavioral and emotional difficulties lead to behavioral problems in school environments. Students with behavioral difficulties have problems staying on task (Carr et al., 2022), listening and following their teachers' instructions, and participating in classroom actions (Olivier et al., 2020). Behavioral and emotional strengths tend to enhance favorable classroom behaviors among children. Prosocial behavior is associated with self-regulation, attention, inhibitory control, and the ability to following the behavioral norms of a classroom (Blake et al., 2015).

Peer relationships are also related to children's behaviors. Sociometric popularity is associated with prosocial behavior (Warden & McKinnon, 2003) and less behavioral and emotional difficulties (Perren et al., 2006). Children with behavioral and emotional difficulties face a heightened risk of peer rejection (Perren et al., 2006), whereas peer rejection increases the risk of both externalizing and internalizing difficulties (Sandstrom et al., 2003). Children's friendship-based peer groups are important for behavioral development because children tend to have friends who exhibit similar behaviors. Studies have indicated that the members of children's peer groups are similar in their prosocial behaviors (Chung-Hall & Chen, 2010) and externalizing difficulties, especially during adolescence (Chung-Hall & Chen, 2010; Fortuin et al., 2015; Sijtsema, 2016). However, the similarities in internalizing difficulties remain unclear, and studies have reported mixed results. The findings of some studies support the similarity among peer group members in internalizing difficulties (Hogue & Steinberg, 1995; Siennick & Picon, 2020; Sijtsema, 2016), whereas others have not found such similarities among friends (Fortuin et al., 2015). One explanation for this discrepancy may be that the friendship groups of adolescents with internalizing difficulties are not cohesive (Siennick & Picon, 2020), as children with internalizing difficulties tend to see themselves as less than their friends (Laghi et al., 2013). Usually, friendships serve as

protective factors against behavioral difficulties (Markovic & Bowker, 2017), but involvement in deviant peer groups can lead to problematic behaviors (Stuart et al., 2008). The behaviors of peer group members have consequences for children's social, school, and psychological functioning. When children have more prosocial friends, their social and academic self-perceptions and academic performance improve (Chung-Hall & Chen, 2010).

2.4.3 Bullying, Victimization, and Bully Victimization

Bullying behaviors include bullying, victimization, and bully victimization. Bullying refers to direct and indirect aggressive behaviors toward one's peers. It is deliberate, repeated, and involves a power imbalance between the victim and perpetrator (Olweus, 1978). Peer victimization refers to a child becoming a target of the aggressive behaviors of peers (Hawker & Boulton, 2000). Some children are both bullies and victims and are thus referred to as bully-victims (Salmivalli & Peets, 2018). A child's involvement in bullying-related actions predicts later maladjustment. Bullies have an increased risk of substance abuse (Kretschmer et al., 2017), victimization increases one's tendency to experience depression and anxiety symptoms (Lee, 2021), and bully victimization is associated with the highest risk of multitudinous adjustment problems later in life (Yang & Salmivalli, 2013). Bully-victims tend to perpetrate more physical and verbal bullying than pure bullies, and they are frequent targets of physical, verbal, indirect, and cyber bullying. The manifold victimization experiences may increase the maladjustment of bully-victims compared to pure bullies (Yang & Salmivalli, 2013).

Children with behavioral and emotional difficulties often face difficulties in interacting with their peers and are thus vulnerable to bullying, (Dietrich et al., 2023; Marengo et al., 2018), victimization (Lester & Cross, 2014; Marengo et al., 2018), and especially bully victimization (Marengo et al., 2018; Skrzypiec et al., 2012). Social rejection, behavioral and social difficulties, and weaknesses in self-perception are probable causes for children with behavioral and emotional difficulties being often involved in bullying (Rose et al., 2011; Smith et al., 2012). Bullying perpetration by students with behavioral and emotional difficulties may be a result of learned behaviors (e.g., from family or other social situations), a reaction to prolonged victimization, or for protection from

further victimization (Rose et al., 2011). As in the case of academic achievement, most strength-based studies related to peer relationships and school bullying have focused on resilience and prosocial behavior. Resilient children and adolescents are less likely to engage in bullying and to be victimized by their peers than children at-risk (Griese et al. 2016; Moore & Woodcock, 2017), and prosocial behaviors are negatively associated with bullying, victimization, and bully victimization in most cases (Fu et al., 2023; Griese & Buhs, 2014; Griese et al., 2016; Van Noorden et al., 2016).

Peer relationship problems increase children's risk of bullying, victimization, and bully victimization. Friendless children are more commonly involved in bullying (Hong et al., 2017), and a lack of friends is especially associated with victimization (Estell et al., 2009; Kochel et al., 2015; Perren & Alsaker, 2006; Scholte et al., 2009) and bully victimization (Kochel et al., 2015; Perren & Alsaker, 2006). Children without friends are usually psychologically and socially vulnerable and thus have a heightened risk of victimization (Perren & Alsaker, 2006). Previous studies have demonstrated that the presence of friends is a protective factor against bullying (Bollmer et al., 2005; Kochel et al., 2015; Jones et al., 2012; Ladd et al., 2011). Friendships involving cooperation (Jones et al., 2012), prosociality (Lamarche et al., 2006), companionship, help, closeness, and intimacy (Bollmer et al., 2005; Kawabata & Tseng, 2019) decrease the likelihood of being bullied.

2.5 The Effects of Behavior, Emotions, and Peer Relationships on School Adjustment

Children's behaviors (e.g., aggressive behavior and social withdrawal) and social relationships (e.g., teachers, peers, and family members) have conjoint interactions with overall adjustment (Ladd et al., 2010). For example, behavioral difficulties and peer relationship problems contribute independently to the experience of loneliness. Children with behavioral difficulties may not be accepted by their peers and thus experience loneliness (Vanhalst et al., 2013). Furthermore, children's language skills improve when they have good core language skills and a supportive home learning environment (Bornstein et

al., 2020), and sociable toddlers show more positive peer engagement when caregivers provide behavioral and emotional support (Diebold & Perren, 2022).

Previous studies have shown that both behavior (e.g., Moore & Woodcock, 2017; Romano et al., 2021; Sointu et al., 2017) and peer relationships (Delgado et al., 2016; Marengo et al., 2018; Warden & McKinnon, 2003) are connected to school adjustment. Behavior and peer relationships not only have separate effects but are also interconnected. For example, prosocial behaviors and good peer relationships are associated with improved academic performance (Blake et al., 2015; Carprara et al., 2000; Jensen et al., 2023; Oberle et al., 2023), whereas behavioral difficulties combined with peer relationship problems are related to low academic grades (Delgado et al., 2016; Newcomb et al., 1993; Witvliet et al., 2010). Thus, empirical studies have highlighted the importance of behavioral and social factors as well as their interactional effects on children's development.

It is well known that an individual's behavior and social relationships have conjoint effects on school adjustment (Ladd et al., 2010). The interactional effects of behavioral difficulties and peer relationship problems on school adjustment have been widely studied (e.g., (Delgado et al., 2016; Newcomb et al., 1993; Witvliet et al., 2010). Regarding behavioral strengths, the interactional effects between prosocial behavior, good peer relationships, and favorable school adjustment have been studied (e.g., Blake et al., 2015; Carprara et al., 2000; Jensen et al., 2023; Oberle et al., 2023). However, children's behavioral and emotional strengths are broader phenomena that include, for example, intrapersonal skills, interpersonal relationships, and involvement in school-related activities (Epstein, 2004). In addition to individual strengths, children's behaviors in different environments (e.g., home and school) should also be considered (Sointu et al., 2024). Thus, more research is needed to determine how children's behavioral and emotional strengths are connected to peer relationships and school adjustment on a broader scale.

3 AIMS OF THE DISSERTATION

The main purpose of this study was to determine how children's behaviors, emotions, and peer relationships are connected to their school adjustment. Behavioral and emotional strengths and difficulties were examined to gain a holistic view of children's behaviors. Peer relationships have mostly been studied in adolescent years. In this study, 3rd and 4th graders in elementary schools were considered to add to the extant knowledge on how behavioral correlates affect children's school adjustment and peer relationships in middle childhood. The following research questions were formulated:

1. Do children's self-rated emotional and behavioral strengths, behavioral and emotional difficulties, and teacher-assessed school abilities vary between sociometric status groups? (Study 1)
2. Do similarities among peer group members in behavioral and emotional strengths, prosocial behavior, and behavioral and emotional difficulties among peer group members explain the similarities in their academic achievements and teacher-assessed behaviors? (Study 2)
3. Do children's behaviors and peer group membership predict the level and trend of school adjustment (academic achievement, bullying, victimization, and bully-victim behavior) from third to fourth grade? (Study 3)

4 METHODS

4.1 Data Collection

The data collection for this study was part of a larger research project called the ISKE network project (Eastern Finland Education Development Project), which was operative in 2010–2012. Data were collected from seven municipalities in Eastern Finland, and 31 schools took part in the study. Participation was voluntary, and the schools signed themselves up for the ISKE project. The data for this dissertation were collected in 2011–2012 during normal school lessons; the first data collection stage was in spring 2011 when children were third graders, and the second was in spring 2012 when they were in fourth grade. In studies I and II, only cross-sectional data were used, and in study III, longitudinal data were utilized. In both data collection stages, children self-evaluated their behavioral and emotional strengths and difficulties and bully-related behaviors (bullying, victimization, and bully victimization). Teachers assessed the children's academic achievements and behaviors at school both times. Participation in this study was voluntary for both children and teachers, and all the participating children had parental permission to participate. The children did not had the opportunity to see each other's answers, and they were instructed not to comment on their answers afterwards.

4.2 Participants

In the first round of data collection, 773 third-grade students (379 boys, 394 girls) participated in the study. To ensure maximum validity in peer relationship studies, it is recommended that only classes with a measurement rate of at least 68% and at least five students should be included (Cillessen, 2009). After exceedingly small school classes (> 5 students) and classes with low measurement rates (> 68%) were removed, the final sample comprised 739 children (354 boys, 385 girls). The second round of data collection involved

540 fourth graders. Due to data loss between the data collection rounds, Little's Missing Completely at Random (MCAR) test was performed (Little, 1988). According to the test results, the data were missing completely at random (χ^2 (175) = 165.864, p = 0.678). The missing data in the second round was due to children's school absences at the time of data collection, their moving to another school area, or withdrawals of entire school classes from the study. Less than 5% of participants had an ethnic background other than Finnish. In Finnish schools, third graders are typically 9–10 years old, and fourth graders are 10–11 years old. The class teacher teaches most of the subjects in grades 1–6, and children spend most of the school day with the same classmates.

5 MEASURES

5.1 Behavioral and Emotional Rating Scale 2 (BERS-2)

The participating children filled the Finnish language version of the Behavioral and Emotional Rating Scale 2 (BERS-2) to self-evaluate their behavioral and emotional strengths. The BERS-2 is widely used to assess children's behaviors and emotions from a strength-based perspective (Epstein, 2004). The Finnish version of the BERS-2 is a psychometrically sound instrument for assessing behavioral strengths in Finnish culture (Lambert et al., 2019; Lappalainen et al., 2009; Sointu, 2014). A four-point Likert-type scale (from 1 to 4) is used in the BERS-2, with 1 indicating that the statement is not at all like the child and 4 indicating that the statement is very much like the child (Epstein, 2004). The 52 items of the BERS-2 form five different subscales: interpersonal strengths (IS; how a child interacts with others in social situations), intrapersonal strengths (IaS; how a child understands his or her own functioning), family involvement (FI; how a child interacts with his or her family), school functioning (SF; how a child performs in school), and affective strength (AS, how a child gives and receives affect). The original BERS-2 also has a career strength subscale, but it was not used in this study. Based on these subscales, the overall strength index (SI) score can be calculated. Cronbach's alphas of the subscales varied from good to excellent in this study (IS [$\alpha = 0.88$], IaS [$\alpha = 0.80$], FI [$\alpha = 0.76$], SF [$\alpha = 0.76$], AS [$\alpha = 0.79$]) and SI [$\alpha = 0.94$]). The BERS-2 can be used as a multi-informant assessment tool for children's behaviors and emotions to be evaluated by teachers, parents, and the children themselves (Epstein, 2004). Since the focus of this study was on children's own understanding of their behavioral and emotional strengths, only the youth rating scale was used.

5.2 Strengths and Difficulties Questionnaire (SDQ-Fin)

The children evaluated their prosocial behaviors and behavioral difficulties by filling in the translated Finnish version of the Strengths and Difficulties Questionnaire (SDQ-Fin) (Goodman, 1997, 2001; Koskelainen et al., 2000). According to previous studies, the SDQ-Fin is a suitable tool for assessing children's strengths and difficulties in Finnish culture and populations (Borg et al., 2012; Koskelainen et al., 2000, 2001). The three-point Likert-type scale was used, with 1 indicating that the child did not have the measurable feature and 3 indicating that the child had the feature. The SDQ-Fin consists of five subscales: prosocial behavior, conduct problems, hyperactivity/inattention, emotional symptoms, and peer relationship problems. However, for general population samples, a three-subscale version of SDQ is recommended: prosocial scale (5 items), externalizing difficulties (10 items; conduct problems and hyperactivity/inattention), and internalizing difficulties (10 items; emotional symptoms and peer relationship problems) (Goodman et al., 2010). Cronbach's alphas were good for all the scales used in this study (prosocial scale [$\alpha = 0.73$], externalizing difficulties [$\alpha = 0.72$], internalizing difficulties [$\alpha = 0.75$]).

5.2.1 Bully-Related Behaviors

In addition to behavioral and emotional strengths and difficulties, children self-assessed their bullying-related behaviors (bullying, victimization, bully victimization; Study III). On a scale from 1 to 3, the children evaluated how often they had bullied other children (bullying) and how often they had been bullied by their peers (victimization) that semester, with 1 meaning "not at all" and 3 meaning "often." The bullying and victimization scores were added, and a cut-off point of 2 was used to determine whether a child was a bully-victim (Solberg & Olweus, 2003).

5.2.2 Teachers' Assessments

The teachers assessed the children's academic achievements and behaviors toward other children and teachers in the school environment. Academic achievement was evaluated by calculating the GPA of three academic skills:

reading, writing, and mathematics. The teachers used a standard Finnish subject rating scale ranging from 4 to 10 (poorest to highest) to assess both academic achievement and behavior at school. Behavior assessment is a part of Finnish school culture, and there are national guidelines for the assessment criteria.

5.2.3 Sociometric Questionnaire

The children's peer relationships were evaluated using a sociometric questionnaire (Coie et al., 1982). Each child named up to three classmates with whom they spent time and up to three classmates with whom they did not spend any time. They were allowed to provide cross-sex nominations.

In Study I, the participating children were divided into sociometric status groups (popular, rejected, controversial, neglected, and average) based on their peers' positive and negative nominations. Status groups were created based on four variables that assessed children's peer statuses: liking (L) and disliking (D) scores, social impact (SI), and social preference (SP). The positive nominations that each child received were summed to obtain the L score, and the negative nominations were summed for the D score. The SI score was a sum of the L and D scores, and the SP score was L minus D. These scores were standardized within a school class to avoid distortions in the frequency of liking or disliking due to class size; the mean was 0, and the standard deviation was 1. The following criteria were used to determine children in each sociometric group: popular = $SP > 1.0$, $L > 0$, $D < 0$; rejected = $SP < -1.0$, $L < 0$, $D > 0$; controversial = $SI > 1.0$, $L > 0$, $D > 0$, neglected = $SI < -1.0$, $L < 0$, $D < 0$; and average = $-0.5 < SP < 0.5$, $-0.5 < SI < 0.5$ (DeRosier & Thomas, 2003). Only children who fit into these sociometric categories were included in Study I. There were 88 popular (50 girls, 38 boys), 96 rejected (38 girls, 58 boys), 44 controversial (15 girls, 29 boys), 76 neglected (33 girls, 44 boys), and 135 average (68 girls, 67 boys) children.

The focus of Study II was on children's friendship-based peer groups; therefore, only positive nominations were considered. The children gave 2.32 positive nominations on average, and 4.7.% of the children did not give any positive nominations. Sociograms were drawn to determine the peer groups wherein the links between the children were reciprocal, unilateral,

or indirect. A reciprocal link involved reciprocal nominations between two children. A unilateral link involved a positive nomination given by one child to another, but not vice versa. An indirect link was a link connecting two children via a third child (e.g. Kiuru et al., 2007, 2011; Laursen et al., 2010). The following rules, which have also been used in other peer relationship studies, were utilized to form peer groups: (1) at least 50% of a child's reciprocal and unilateral links had to be within the peer group; (2) a reciprocal, a unilateral, or an indirect link had to exist from each child to every other child in the peer group; and (3) a child had to receive at least one positive nomination from the peer group (e.g. Kiuru et al., 2007, 2011; Laursen et al., 2010). Peer groups were categorized into isolated dyads, cliques, and loose groups. Isolated dyads had only two children who nominated each other. Cliques consisted of at least three members, and most of the nominations were reciprocal. Loose groups were similar to cliques, but less than 85% of links between the members were reciprocal. Children who did not belong to any of these groups were categorized as isolates or liaisons. Isolates were children who did not have any reciprocal, unilateral, or indirect links. Liaisons had links to several peer groups, but most of their nominations were unilateral (Kiuru, 2008). A total of 431 third-grade children (57.5%) were members of peer groups; 71 (16.5%) were members of cliques, 236 (54.8%) were members of loose groups, and 124 (28.8%) were members of isolated dyads. Only members of peer groups were included in Study II because the focus was on the effects of peer groups on children's behaviors and academic achievements. The high number of children without peer groups may be explained by school absences, children's friendships outside their own classrooms (e.g., in parallel classrooms, hobbies, and the neighborhood), or the fact that only three nominations were allowed.

The purpose of Study III was to explore the importance of reciprocal peer relationships for children's school adjustment. Thus, children with peer groups (children in cliques, loose groups, and isolate dyads) and without peer groups (isolates and liaisons) were included in this study. Children who were members of peer groups were classified as having reciprocal friendships, group whereas isolates and liaisons were categorized as being outside of reciprocal friendships. Since reciprocal friendships are especially crucial for

children's school adjustment (Chen et al., 2010; Kindermann, 2007; Ricard & Pelletier, 2016), only the children whose peer relationships were mostly reciprocal were counted as peer group members.

5.3 Statistical Analyses

The statistical analyses were performed using SPSS 27.0 and Mplus version 8.0 (Muthén & Muthén, 2017). In the first study, a univariate analysis of variance (ANOVA) was performed. In Study II, a regression model was formed to examine the associations between behavior, emotions, academic achievement, and teacher-assessed behavior at school. Intraclass correlations (ICCs) were then calculated to analyze similarities in the behavioral strengths and difficulties, academic achievements, and teacher-assessed behaviors of peer group members at school. Finally, a two-level model was constructed to determine whether the self-assessed behaviors and emotions shared by peer group members explained the variances in the teacher-assessed behaviors. Only the associations between self-rated behavioral and emotional strengths and teacher-rated behavior at school were studied at the peer-group level because the ICC of academic achievement was not statistically significant. In Study III, the children's behavioral profiles were formed via latent profile analysis (LPA). The differences between children with reciprocal peer relationships and children without reciprocal friendships in their behavioral profiles were resolved through cross-tabulation. Repeated-measures ANOVA was utilized to investigate the longitudinal effects of behavioral profiles and peer-group membership on the children's academic achievements, emotional school engagement, and bullying involvement.

6 OVERVIEW OF THE STUDIES

6.1 Study I: Behavioural and Emotional Strengths of Sociometrically Popular, Rejected, Controversial, Neglected, and Average Children

The aim of this study was to investigate how sociometric status groups (popular, rejected, controversial, neglected, and average) differ in terms of self-assessed behavioral and emotional strengths and difficulties, prosocial behavior, academic achievement, and teacher-assessed behavior. Gender differences and status-by-gender interaction effects were also examined. ANOVA was performed to analyze the data.

The children in the sociometric status groups differed in their behavioral and emotional strengths and difficulties and school abilities (academic achievement, teacher-assessed behavior). The most prominent differences were between popular and rejected children. Children in the popular status group had more behavioral and emotional strengths and prosocial behaviors and less behavioral and emotional difficulties than rejected children. Further, popular children had better academic achievements and received better behavioral grades from their teachers. The behavioral profiles of the controversial children were quite like the profiles of those in the rejected status group. However, rejected children had both externalizing and internalizing difficulties, whereas controversial children had only externalizing difficulties. Neglected children differed from popular and rejected children in some circumstances. Neglected children were found to have fewer intrapersonal and affective strengths and prosocial behaviors than popular children but fewer externalizing difficulties than rejected children. The teachers' assessments revealed that they behaved better at school than rejected children.

This study revealed some gender differences in children's behavior and emotions and school abilities. The girls' self-assessments of their affective strengths and prosocial behaviors were higher than the boys', whereas the boys reported having more externalizing difficulties than the girls. According

to the teacher assessments, girls behaved better at school than boys. There was only one status-by-gender interaction effect in this study, specifically on prosocial behavior, and this interaction effect was statistically significant only for boys.

The results of this study showed that children's behaviors, emotions, and school abilities are not separate phenomena. Children with manageable peer relationships had favorable perceptions of their own skills and performed better at school than children with peer relationship problems; the latter tended to have both behavioral and academic difficulties and negative views of their own strengths. Rejected and controversial children had more externalizing difficulties, whereas rejected children had more internalizing difficulties also. The teachers reported behavioral differences between popular and rejected children. They assessed popular children's school behaviors as being better than those of average children, whereas the behavioral assessment of rejected children were below average. It is important for teachers to be aware of children who are rejected by their peers so that behavioral interventions can target those who need them the most.

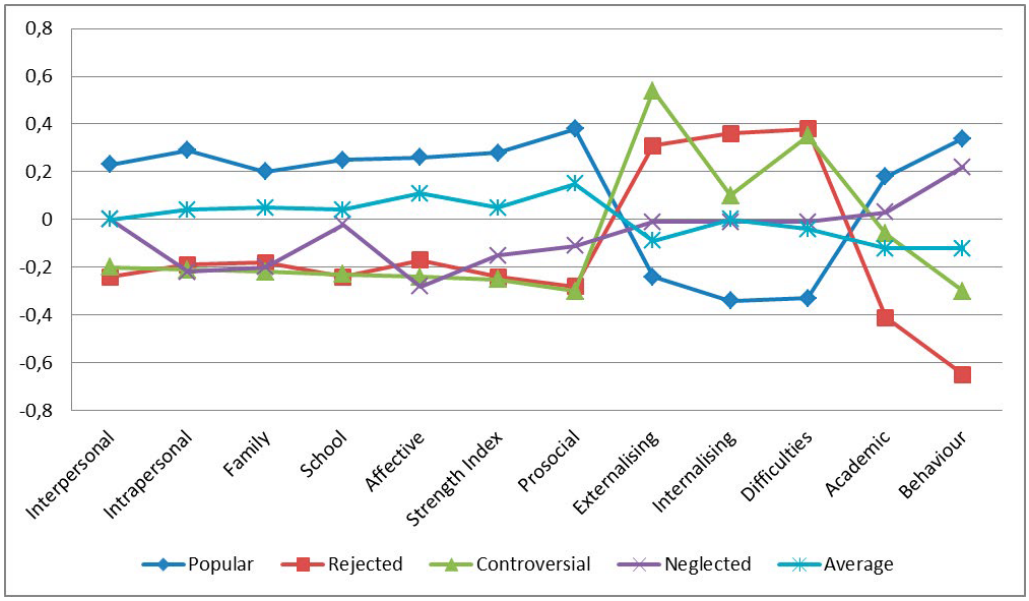

Figure 1. Behavioural profiles of sociometrically popular, rejected, controversial, neglected, and average children (Rytioja et al., 2019).

6.2 Study II: Peer Groups, Academic Achievement, and the Behaviour of Elementary School-Aged Children: A Strength-Based Perspective

This study was conducted to examine the similarities between members of children's friendship-based peer groups in terms of their self-assessed behavioral and emotional strengths and difficulties, academic achievements, and teacher-assessed behaviors. Multilevel modeling was used to investigate the potential similarities between peer group members' behavioral and emotional strengths, prosocial behaviors, and behavioral and emotional difficulties and thereby explain the possible similarities in their academic achievements and teacher-assessed behaviors. A regression model was constructed to determine how the children's strengths and difficulties were connected to their academic achievements and teacher-assessed behaviors.

The results of the regression model revealed that children's school functioning as a strength was positively associated with both academic achievement and teacher-assessed behavior. Externalizing difficulties were negatively related to teacher-assessed behavior, and internalizing difficulties were negatively correlated with academic achievement. Gender was associated with both academic achievement and teacher-assessed behavior, with boys getting lower behavioral grades from their teachers and having poorer academic achievements.

ICCs were calculated to examine the similarities between the members of the friendship-based peer groups. The peer group members were found to resemble each other in their interpersonal and affective strengths, prosocial behaviors, and teacher-assessed behaviors but not in their academic achievements and behavioral and emotional difficulties. According to the study findings, behavioral and emotional traits are more important than academic achievements for peer relationships in middle childhood.

Variables with statistically significant ICCs were included in a two-level model to resolve whether interpersonal and affective strengths and prosocial behaviors explained the similarities in peer group members' teacher-assessed behaviors. No statistically significant associations were found. Since the strengths were highly correlated with each other, the connections

to teacher-assessed behaviors were tested separately for interpersonal and affective strengths and prosocial behavior (Step 1). Affective strengths and prosocial behaviors explained the variance between the peer groups' teacher-assessed behaviors. As most of the children's friendship-based peer groups were composed of same-sex peers (89.5 %), gender was also included in the model (Step 2). Gender effects were significant for interpersonal strengths and affective strengths, prosocial behavior, and teacher-assessed behavior, indicating that differing emotions and behaviors exhibited by the children's peer groups can be explained by gender. The girls belonging to peer groups had more behavioral and emotional strengths and better behavioral grades from their teachers than boys.

The findings also revealed that children's school functioning, as a strength, was positively associated with both academic achievement and teacher-assessed behavior. Thus, enhancing children's scholastic skills, such as task orientation and attentiveness in the classroom, can increase their academic achievements and behavioral grades. The members of the children's peer groups resembled each other in their behavioral and emotional strengths but not in their academic achievements. It is important to consider children's peer groups when implementing behavioral and emotional intervention strategies. Teachers in this study tended to give better behavioral grades to the members of girls' peer groups. It is important for teachers to evaluate children as individuals and make individual-based judgments rather than group-based ones.

6.3 Study III: Longitudinal Effects of Profiles of Behavioural Difficulties and Strengths and Peer Group Membership on Children's School Adjustment

In this study, the longitudinal effects of children's behaviors and emotions (strengths, difficulties, and teacher-assessed behaviors) and reciprocal peer relationships on their school adjustment (academic achievement, school engagement, bullying, victimization, and bully victimization) were examined. First, children's behavioral profiles were constructed based on

their self-assessed behavioral and emotional strengths, externalizing and internalizing difficulties, and teacher-assessed behaviors. A latent profile analysis was conducted to determine the children's behavioral profiles. Four distinct behavioral profiles emerged in this study: (1) very low strengths with clear internalizing and externalizing difficulties (12.65%), (2) average strengths and behaviors with low difficulties (70.36%), (3) very low behavior assessments with very high externalizing difficulties (7.25%), and (4) above-average strengths with high internalizing and externalizing difficulties (9.75%). Interestingly, a group of children were found to have both behavioral and emotional strengths and difficulties. It is possible that these children's behavioral difficulties were not as visible as those of other children and that they did not receive negative feedback from their teachers that could impair their understanding of own strengths.

Cross-tabulation was then performed to examine whether children with different behavioral and emotional profiles were in reciprocal peer relationships. The results revealed that children in Profile 4 with high strengths and difficulties were often without reciprocal peer relationships, despite having behavioral and emotional strengths. It is possible that children in this profile were either rejected by their peers or withdrew themselves from peer relationships.

The last aim of this study was to determine how the behavioral profiles and peer group membership of children in the third grade predicted the changes in school adjustment levels from the third grade to the fourth grade. Two-way repeated measures ANOVAs were used to analyze the data. Interaction effects between behavioral profiles, reciprocal peer relationships, and the school adjustment variables (academic achievement, school engagement and bully-related behavior) were seen only in the children's bullying behaviors. The children's behavioral profiles and reciprocal peer relationships had interaction effects on school bullying. The interaction effects were detected by different slopes over time; the group with no reciprocal peer relationships had an increasing slope, whereas the others had decreasing slopes. The groupwise differences over time were not significant, but the interactions indicate the possibility of a lack of reciprocal peer relationships causing increased bullying

over time. It is possible that children without reciprocal peer relationships perform bullying behaviors to gain status and acceptance among their peers.

Overall, this study showed that children with behavioral and emotional difficulties do not constitute a homogenous group. Understanding that children with behavioral and emotional difficulties have different behavioral profiles is important for implementing intervention strategies for those difficulties. The results also indicate that children with behavioral and emotional difficulties often lack of reciprocal peer relationships. It is important to consider both behavioral and peer relationship factors when implementing bullying prevention and intervention measures. Teachers and other school staff should identify children with peer problems, especially those students who also have behavioral and emotional difficulties. Supporting children's peer relationships and behaviors can help enhance their school adjustment.

7 DISCUSSION

The aim of this dissertation project was to investigate how children's behaviors and emotions and especially their self-assessed behavioral and emotional strengths and peer relationships are associated with their school adjustment. To this end, three studies were conducted from different viewpoints. In the first study, the relationships between sociometric status, behavioral and emotional characteristics, and academic and behavioral adjustment were assessed. In the second study, the relationships between children's friendship-based peer groups and their academic and behavioral adjustment were examined. The third study examined the longitudinal effects of children's behavioral profiles and reciprocal peer relationships on academic achievement, emotional school engagement, and bullying-related behaviors. In this section, the main results are introduced and reviewed from three perspectives: behavior and emotions, the importance of peer relationships, and the interaction effects of behavior and peer relationships. Finally, the theoretical and practical implications are presented.

7.1 Behavior and Emotions in Relation to School Adjustment

One purpose of this study was to determine how children's behavioral and emotional strengths and difficulties are connected to their school adjustment. The findings showed that children's self-assessed behavioral and emotional strengths were associated with good school adjustment. Positive views of behavioral and emotional strengths were connected to improved academic performance, low involvement in bullying-related behaviors, and favorable teacher-assessed behaviors at school. Previous studies have shown that behavioral and emotional difficulties weaken children's adaptation to school (Efron et al., 2020; Marengo et al., 2018; Olivier et al., 2020), whereas prosocial behavior is a precursor to strong academic (Blake et al., 2015; Carprara et al., 2000; Jensen et al., 2023; Oberle et al., 2023) and behavioral (Brass et al., 2022; Fu et al., 2023) adjustment. The results of this study expand on the

previous findings by showing that in addition to behavioral and emotional difficulties, children's behavioral and emotional strengths are also associated with school adjustment. Specifically, children with better self-assessed behavioral strengths are better adjusted to school.

Notably, school involvement as a strength was found to be associated with both academic achievement and teacher-assessed behavior. Previous strength-based studies have reported that resilience (Shi et al., 2021) and prosocial behavior (Blake et al., 2015; Carprara et al., 2000; Jensen et al., 2023; Oberle et al., 2023) are related to academic achievement. Further, protective factors promote adaptation to risk factors and thus protect children and adolescents from developmental and academic problems (Cutuli et al., 2021; Luthar et al., 2000). Children's understanding of their own school-related strengths may serve as protective factors against academic and behavioral difficulties and thus promote their academic and behavioral adaptation to school. However, in this study, prosocial behavior was not connected to academic achievement, as measured by both SDQ and BERS-2. This contradictory finding may be due to cultural factors or the age group considered. The majority of previous studies were performed in cultural environments different from the Finnish school context. It is possible that prosocial norms are not as crucial in Finnish academic life as they are in other cultural circumstances. Some of the earlier studies were longitudinal in design (Blake et al., 2015; Carpara et al., 2000) and indicated that prosocial behavior in childhood predicts later academic achievement. Some studies (Jensen et al., 2023; Oberle et al., 2023) were performed with adolescent samples and demonstrated that prosocial behavior is important for academic performance. The results of this dissertation project showed that children's perceptions of their own school-related strengths are important in supporting their school adjustment, at least in elementary school years.

It is widely known that behavioral and emotional difficulties are associated with low levels of behavioral and emotional strengths (Ansary et al., 2017; Eisenberg et al., 2009; Lambert et al., 2021). However, the present study's findings revealed that behavioral and emotional strengths and difficulties are somewhat separate phenomena because they can co-occur in some circumstances, contrary to prior expectations. In this study, some children

(9.75%) were found to have behavioral and emotional strengths as well as internalizing and externalizing difficulties. According to Volz-Sidiropoulou et al. (2016), children with behavioral difficulties may have over-optimistic perceptions of their own behavioral competence. Since self-evaluations were used in the present study, it is possible that some children with behavioral problems overestimated their behavioral strengths and had unrealistic views of their own behaviors and emotions. The SBA approach is based on the idea that all children and adolescents have strengths (Epstein, 2004). Children with both strengths and difficulties may recognize their strengths but need their teacher's pedagogical support to use those strengths appropriately. It is also possible for children with both behavioral strengths and difficulties to have school-related strengths, making it difficult to recognize their behavioral difficulties in the school environment. If these difficulties are not visible to their teachers, the children may not get the support they need at school.

7.2 The Importance of Peer Relationships for School Adjustment

Peer relationships are important for children's school adjustment (e.g., Delgado et al., 2016; Janošević & Petrovic, 2019; Laninga-Wijnen et al., 2019). Children's relationships with their peers were studied from three different viewpoints: sociometric status, friendship-based peer groups, and reciprocal peer relationships. Sociometric popularity was connected to good academic and behavioral performance, supporting previous studies that have detected interconnections between sociometric status and improved adjustment (Janošević & Petrovic, 2019; Soponaru et al., 2014; Walker & Nabuzoka, 2007; Wentzel & Asher, 1995; Zettergren, 2003). Notably, the association between sociometric popularity and favorable school adjustment was seen in children as young as 9–10 years old in the present study. Thus, children's peer relationships should be taken into consideration as precursors to favorable adaptation to school as early as possible.

Students tend to select friends with similar academic achievements (Gremmen et al., 2017; Kiuru et al., 2009; Laninga-Wijnen et al., 2019; Rambaran

et al., 2017). However, in this study, the members of the children's peer groups did not resemble each other in academic achievement. Previous studies on peer group membership have mostly focused on adolescents, at which age the pressure to conform to friendship norms and behaviors is strong (Clasen & Brown, 1985). In this study, the sample consisted of 9–10-year-old children in their middle childhood—a period during which children's social skills are developing, and the importance of peers is still evolving (Carr et al., 2017; Sørlie et al., 2021). Young children get academic support from their parents and teachers, and the importance of peers increases as children grow older (see Hughes, 2012). The members of the peer groups in this study resembled each other in their teacher-assessed behaviors. It is possible that children tend to have friends who behave similarly to them or that teachers assess the members of a peer group as having similar behavior. In any case, children's peer groups are important for behavioral adjustment before adolescence. Thus, it is meaningful to consider peer groups when implementing intervention programs for children's adjustment to the behavioral norms of school environments.

In this study, a lack of reciprocal peer relationships was associated with an upward trend in bullying behavior over time. It is likely that children who form mutual friendships feel socially secure and satisfied in large peer groups (Markovic & Bowker, 2017) and may not feel the need to gain status and power by bullying their peers. These findings suggest that it is important to consider children's immediate social environments to prevent bullying. The results of this study also indicate that reciprocal peer relationships may serve as protective factors against later adjustment difficulties in middle childhood. However, the time between the measurements taken in this study was only one school year, and it is possible that the suggested positive effects of good peer relationships would grow in time, especially as the importance of peers increases in adolescence. However, it is clear that the formation of positive peer relationships should be supported in the early stages of childhood to promote favorable adjustment and prevent later difficulties.

7.3 Interaction Effects of Behavior and Peer Relationships on School Adjustment

In this study, sociometric popularity was associated with high levels of behavioral and emotional strengths and academic and behavioral adjustment. It is possible that children with behavioral strengths and peer acceptance get more positive feedback from their teachers and thus adjust better to the academic and behavioral norms of a school environment. Previous studies have found that sociometric popularity and positive personality traits are related to academic achievement (Janošević & Petrovic, 2019; Walker & Nabuzoka, 2007). The present study extends the findings of previous study by indicating that children's behavioral and emotional strengths are connected to peer acceptance. Specifically, behavioral strengths and peer acceptance were found to have conjoint associations with academic and behavioral adaptation to school.

Behavioral and emotional strengths and low levels of behavioral difficulties were related to the presence of reciprocal peer relationships. Conversely, having both behavioral and emotional strengths and internalizing and externalizing difficulties was associated with a lack of mutual friendships. It is possible that children with both behavioral strengths and difficulties have school-related strengths but social difficulties. They may need pedagogical support from their teachers and other adults to improve their social skills. Behavioral and emotional difficulties (Dietrich et al., 2023; Marengo et al., 2018) and friendlessness (Hong et al., 2017) have been found to be risk factors for bullying perpetration. The findings of the present study suggest that the presence of reciprocal friendships may be related to the positive development of bullying situations. These findings highlight that reciprocal peer relationships are important for bullying prevention. For example, victimization studies have shown that the social support provided by friends can serve as buffers that reduce the detrimental effects of victimization on children's psychosocial adjustment (Davidson & Demaray, 2007; Qin et al., 2023). It is possible that this kind of social support is also a protective factor against bullying behaviors. Thus, friendships may reduce children's behavioral and emotional difficulties.

Most of the children's friendship-based peer groups involved same-gender peers; only 10% were cross-gender peer groups. Compared to the boys' peer groups, the members of girls' peer groups assessed themselves as having high levels of behavioral and emotional strengths, and teachers gave the girls better behavioral assessments. The gender compositions of the children's peer groups explained the differences in the teachers' behavioral assessments between peer groups, as opposed to the children's self-assessed strengths, which suggests that teachers' behavior assessments are strongly gender related. This may be due to gender differences in peer culture. Boys tend to exhibit physically aggressive actions in their peer groups, whereas girls' peer aggression is less visible and more relational (Shi & Xie, 2012). Boys' play is more active and forceful than girls' play (Fabes et al., 2003), and members of girls' peer groups value prosocial behaviors (Markovic & Bowker, 2014). The teachers in this study may have equated the boys' active playing with disruptive behavior and thus given them lower behavioral grades. It is also possible that the girls' peer culture conformed better to the behavioral norms of the school environment. In general, the results underline the fact that the behavior in children's social environment is a crucial factor affecting their school adjustment and teachers' judgments.

7.4 Theoretical Implications

This study has noteworthy theoretical implications. First, in addition to behavioral difficulties, children's behavioral and emotional strengths are related to school adjustment. In general, strengths were associated with preferable adjustment to school. Both theoretical and empirical foundations have highlighted the negative associations between behavioral difficulties and school adjustment. Behavioral and emotional difficulties predict school adjustment problems, and low adjustment to school is a risk factor for behavioral difficulties (Ladd et al., 2010; Marengo et al., 2018; Marsh et al., 2019; Romano et al., 2015). However, the findings of this study indicate that, in addition to the previously known association between behavioral difficulties and low school adjustment (e.g., Ladd et al., 2010), children's self-assessed

behavioral and emotional strengths are connected to improved school adjustment. Further, behavioral and emotional strengths are connected to both academic and behavioral adjustment. This study showed that behavioral and emotional strengths and difficulties are separate phenomena that can co-occur. Contrary to the general view that high difficulties automatically denote low strengths (Eisenberg et al., 2009), this study showed that high difficulties can co-exist with high strengths. This result emphasizes that children's behaviors and emotions can be complex and ambiguous, involving various dimensions.

Second, the results highlight the importance of peer relationships for children's school adjustment. Multiple dimensions of peer relationships were found to be connected to school adjustment, including peer acceptance, friendship-based peer groups, and reciprocal peer relationships. Peer acceptance was associated with both academic and behavioral adjustment, whereas peer groups and reciprocal friendships were associated with behavioral adaptation to school. This suggests that school adjustment is a phenomenon that not only affects individual students but is also related to the immediate context where peers play a special role. In developmental psychology, peer relationships have been recognized as especially meaningful during adolescence (Hafen et al., 2012), whereas in middle childhood, the importance of peers is still emerging (Sørlie et al., 2021). The findings of this study revealed that peer relationships are already important in middle childhood, especially for children's behavioral adjustment. Based on the results of this study, the roles of peer relationships should be considered in the early and middle childhood stages.

Third, behavioral and emotional strengths were connected to good peer relationships, and these had conjoint associations with school adjustment. The results of this study extend the findings of previous studies by showing that children's behavioral strengths and multiple dimensions of peer relationships are related to children's adaptation to school in middle childhood. Strength-based theories such as positive youth development (Lerner et al., 2005), positive psychology (Seligman & Csikszentmihalyi, 2000), resilience theory (Luthar et al., 2000), and strength-based assessment (Epstein, 2004) emphasize an individual's skills, competencies, and characteristics. By showing the

interconnection between children's behavioral and emotional strengths and peer relationships, this study adds to the knowledge of the social dimension of children's strengths. Behavioral and emotional strengths have been found to predict improvements in academic achievement via strong student–teacher relationships. In other words, behavioral and emotional strengths are predictors of good relationships between students and teachers, which then predicts enhanced academic achievement (Sointu et al., 2017). It is possible that behavioral and emotional strengths are also predictors of improved peer relationships, in turn resulting in increased adjustment to the academic and behavioral demands of the school environment.

7.5 Practical Implications

The results of this study can be used in developing educational practices and assessment strategies. In educational settings, healthcare systems, and social services, children's behavioral and emotional strengths should be observed in addition to behavioral difficulties. Strength-based theories have emphasized that the use of both strength- and difficulties-based assessment practices can provide a holistic view of children's behavior (Lambert et al., 2015; Trout et al., 2003). By recognizing children's behavioral strengths as well as difficulties, targeted behavioral interventions can be developed to prevent possible adjustment difficulties. SBA practices can be used, for example, to recognize children's strengths, in meetings with parents, students, and other school personnel, and when implementing educational plans (Sointu et al., 2018). This study also showed that behavioral and emotional strengths are connected to both peer relationships and school adjustment and are thus important parts of children's development. It is also worth mentioning that children with behavioral and emotional difficulties do not have similar behavioral profiles. Thus, specific intervention practices are needed. In addition to punishment strategies, teachers should provide children with positive guidance, choices that stop inappropriate behavior, or alternative courses of action that end disruptive behavior. Versatile strategies to tackle inappropriate behavior teach children what they need to know to behave

more appropriately in the future, thereby strengthening the student–teacher relationship and addressing the root cause of problematic behavior (Kaiser & Rasminsky, 2021). It is also important to emphasize children's strengths in behavioral guidance and provide positive feedback for appropriate behaviors.

Attention should be paid to children's peer relationships during middle childhood to prevent difficulties later on and to support children's adjustment to the school environment. Teachers can facilitate children's peer relationships in several ways, such as by maintaining positive relationships with their students, avoiding highlighting differences in children's relative abilities, and emphasizing cooperative rather than competitive goal structures. Teachers can maintain the social and emotional climate of the classroom through clear classroom rules and routines, nonpunitive punishment strategies, child-centered practices, positive emotional expression, and instruction that accounts for individual differences (Hughes, 2012). Different intervention strategies that enhance children's socioemotional development, such as SEL (Elias, 1997), Promoting Alternative Thinking Strategies (PATHS; Kusché & Greenberg, 1995), and Second Step (Frey et al., 2005), can be used in school environments. It is important to identify children who need adults' support and guidance in their peer relationships to prevent later adjustment problems. The results of this study revealed that a lack of friends is a risk factor for bullying behaviors. Thus, antibullying programs (e.g., KiVa; Salmivalli & Poskiparta, 2012) can be beneficial in enhancing children's peer relationships. Although peers are crucial elements of children's lives and teachers should be aware of their students' peer relationships, teachers should see children primarily as individuals and avoid making biased assessments based on their peer groups. In addition to peer relationships, children may form social relationships with teachers and other school personnel. Social, pedagogical, and emotional support provided by teachers and other adults can help children develop good relationships with their peers.

Finally, it is especially important to support children who have both behavioral and emotional difficulties and peer relationship problems to prevent further negative development and facilitate their adaptation to school. Behavioral and emotional strengths need to be taught, like any other skills. Children with difficulties in both behavioral management and peer

relationships should be identified in educational systems so that suitable targeted interventions and instructional practices can be established to address their socioemotional difficulties. Focusing on children's socioemotional development largely contributes to academic, behavioral, emotional, and motivational outcomes (Korpershoek et al., 2016), and supporting prosocial behavior inhibits children's estrangement from peer groups (Witvliet et al., 2010). In addition to academic skills and competencies, social and behavioral abilities and peer-mediated learning strategies should be emphasized in educational curricula to enhance children's socioemotional development and adaptation to educational systems. Children's social and behavioral skills can be enhanced by universal, school-based social and emotional programs. Universal preventive strategies have been denoted to improve children's social and emotional skills, attitudes, behaviors, and academic achievement (Durlak et al., 2011) It is important to recognize children's social, behavioral, and emotional difficulties to fully understand the behavioral deficiencies for which children need rehabilitation and guidance. However, to maximize the remedying effect of behavioral interventions and assessment strategies, children's socioemotional strengths and skills should also be noted. Failure to demonstrate a behavioral strength should be seen as an opportunity for learning; thus, children's educational plans should be based on their strengths (Epstein, 2004). To fully understand and address the underlying mechanisms of children's adjustment difficulties, teachers and other personnel in schools, healthcare systems, and social services need to pay attention to children's behavioral and emotional strengths and difficulties, peer relationships, and the reciprocal relations between them.

7.6 Limitations and Directions for Future Research

This study has some limitations that are worth mentioning. First, although the use of self-assessments has certain strengths, it is a limitation of this study. Young children tend to process information selectively to maintain an optimistic view of themselves (Boseovski, 2010). Some children may have problems recognizing their behavioral strengths and difficulties realistically.

According to previous studies, children with behavioral problems (Volz-Sidiropoulou et al., 2016) and peer relationship difficulties (Zakriski & Coie, 1996) tend to overemphasize their skills and capacities. To gain a holistic understanding of children's behaviors and emotions, teacher or parent evaluations should be included in addition to self-evaluations in future studies.

In the sociometric questionnaire, children were required to mention up to three peers from the same classroom. Peer relationships outside the classroom (e.g., in hobbies, parallel classes, or neighborhoods) were not considered. It is possible that the limited number of nominations and delineation of nominations to classrooms led to children with friends being classified as unfriended or rejected. However, in sociometric studies, limited nominations in restricted social settings are more common than unlimited nominations (Cillessen & Bukowski, 2018). Many sociometric studies have been performed in classrooms. According to an individualistic view of social status, children's social statuses are dependent on individual traits and are unchangeable across different social settings, whereas a group view emphasizes the norms of the surrounding social group and that children's social statuses can change according to the social group they're in. It remains unclear whether individual traits determine social status more than group norms (Cillessen & Bukowski, 2018). Thus, future studies should include sociometric investigations of childhood social circumstances other than schools, including hobbies, play groups in the neighborhood, or after-school programs, and provide the option of unlimited nominations.

The effects of children's behaviors and peer relationships on school adjustment were examined in this study. However, many other factors are also associated to children's adjustment to school, such as self-resilience, the parent–child relationship, and teachers' support (Lee et al., 2014). It is possible that some of these factors contributed to the present study's results. It would be meaningful to include other individual, family, and school factors in future school adjustment studies to define the effects of these factors on children's behaviors, peer relationships, and school adjustment.

Children's peer popularity can be categorized as sociometric popularity (Coie et al., 1982) and perceived popularity (Parkhurst & Hopmeyer, 1998),

with each having different behavioral and developmental profiles. Sociometric popularity is associated with prosocial behavior, low aggression, and favorable development (Newcomb et al., 1993), whereas perceived popularity is related to aggressive, dominant behaviors and controversial developmental outcomes (Parkhurst & Hopmeyer, 1998). In this study, only sociometric popularity was reviewed, ignoring the possible effects of perceived popularity. In the future, it would be useful to assess children's perceived popularity in middle childhood and examine this factor's associations with behavioral and emotional strengths and school adjustment. Additionally, sociometric rejection can be distributed to aggressive-rejected and withdrawn-rejected children, whose behaviors and development differ from each other (Zakriski & Coie, 1996). In this study, peer rejection was examined using a unilateral variable, leaving the possible effects of the different dimensions of peer rejection unstudied. Thus, future strength-based studies should examine the distinct types of peer rejection to understand the differences in children's perceptions of their behavioral strengths.

This study mostly followed a cross-sectional design, leading to some causality problems. It is impossible to confirm from the results of this study whether good peer relationships and behavioral and emotional strengths are the causes of good adjustment or if adjustment can enhance children's perceptions of their strengths and ameliorate their peer relationships. Previous studies have demonstrated that the associations between behavioral and emotional difficulties (Efron et al., 2020; Rose et al., 2011; Wang & Fredricks, 2014), peer relationships (Sanchez-Sandoval & Verdugo, 2021; Wentzel, 2003), and school adjustment are bidirectional. The results of this study suggest that bidirectionality exists between behavioral and emotional strengths, peer relationships, and school adjustment. More research is still needed to address the causal relationships between behavioral strengths, peer relationships, and school adjustment. It would also be fruitful to implement universal intervention strategies in Finnish schools and to study the effects of behavioral support interventions on the Finnish school system.

The data for this study were collected in 2011–2012, which is not recent. Nevertheless, the data obtained were valid for drawing conclusions and answering the research questions given in this paper. While some changes

have taken place in schools (e.g., increased usage of electronic devices), the Finnish school system mostly remains the same as it was 12 years ago.

7.7 Ethical Considerations

The study data were collected in 2011–2012 through the ISKE network (Eastern Finland Education Developmental Project). The data collection process and investigations were conducted in accordance with the ethical guidelines of the University of Eastern Finland. The children and their teachers participated voluntarily and had the option of withdrawing from the study without any negative consequences. The children's parents or other legal caregivers provided written permission for their children's participation in this study. The research data were anonymized to protect participants' privacy, and only numerical information was processed during the research.

The use of a sociometric questionnaire raises ethical concerns because the children were asked to evaluate each other in a potentially negative way. Careful instructions and procedures, such as an emphasis on confidentiality and respect for privacy in the classroom, were needed to prevent negative consequences (Cillessen & Bukowski, 2018). The teachers supervised the data collection process, and children were asked not to discuss their answers afterward. During the data analysis, code numbers were used instead of names. Notably, only a small number of problems are associated with sociometric studies. Sociometric studies have many benefits that may outweigh the potential risks; they allow for selecting children for interventions, evaluating the effects of interventions, and increasing the awareness of basic social development processes (Cillessen & Bukowski, 2018).

8 CONCLUSION

The findings of this dissertation extend the literature on joint associations between children's behaviors, emotions, peer relationships, and school adjustment. Children's behavioral and emotional strengths and difficulties were found to be connected to peer relationships, with conjoint relations to school adjustment. This adds to the knowledge of the interaction effects between children's behaviors, peer relationships, and school adjustment. In addition, children's self-assessed behavioral and emotional strengths were connected to school adjustment, peer acceptance, reciprocal peer relationships, and friendship-based peer groups. Children's peer relationships were especially related to behavioral adjustment. Further, children with high strengths and few difficulties had good peer relationships, and these had joint relations with favorable school adjustment. The results of this study can be utilized to enhance children's adaptation to school and thereby prevent the negative cycle by which behavioral difficulties and peer relationship problems affect children's academic and behavioral adjustment.

REFERENCES

Almqvist, F., Puura, K., Kumpulainen, K., Tuompo-Johansson, E., Henttonen, I., Huikko, E., Linna, S., Ikäheimo, K., Aronen, E., Katainen, S., Piha, J., Moilanen, I., Räsänen, E., & Tamminen, T. (1999). Psychiatric disorders in 8-9-year-old children based on a diagnostic interview with the parents. *European Child & Adolescent Psychiatry*, *8*(Suppl. 4), 17–S28. https://doi.org/10.1007/pl00010699

Ang, R. P., Huan, V. S., Chan, W. T., Cheong, S. A., & Leaw, J. N. (2015). The role of delinquency, proactive aggression, psychopathy and behavioral school engagement in reported youth gang membership. *Journal of Adolescence, 41*(1), 148–156. https://doi.org/10.1016/j.adolescence.2015.03.010

Ansary, N. S., McMahon, T. J., & Luthar, S. S. (2012). Socioeconomic context and emotional-behavioral achievement links: Concurrent and prospective associations among low- and high-income youth. *Journal of Research on Adolescence*, *22*(1), 14–30. https://doi.org/10.1111/j.1532-7795.2011.00747.x

Ansary, N. S., McMahon, T. J., & Luthar, S. S. (2017). Trajectories of emotional–behavioral difficulty and academic competence: A 6-year, person-centered, prospective study of affluent suburban adolescents. *Development and Psychopathology*, *29*(1), 215–234. https://doi.org/10.1017/S0954579416000110

Atoum, M., Alhussami, M., & Rayan, A. (2018). Emotional and behavioral problems among Jordanian adolescents: Prevalence and associations with academic achievement. *Journal of Child and Adolescent Psychiatric Nursing*, *31*(2–3), 70–78. https://doi.org/10.1111/jcap.12211

Blake, P. R., Piovesan, M., Montinari, N., Warneken, F., & Gino, F. (2015). Prosocial norms in the classroom: The role of self-regulation in following norms of giving. *Journal of Economic Behavior & Organization*, *115*, 18–29. https://doi.org/10.1016/j.jebo.2014.10.004

Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: The role of friendship quality as a protective factor in peer victimization and bullying. *Journal of Interpersonal Violence*, *20*(6), 701–712. https://doi.org/10.1177/0886260504272897

Borg, A.-M., Kaukonen, P., Salmelin, R., Joukamaa, M., & Tamminen, T. (2012). Reliability of the strengths and difficulties questionnaire among Finnish 4–9-year-old children. *Nordic Journal of Psychiatry*, *66*(6), 403–413. https://doi.org/10.3109/08039488.2012.660706

Bornstein, M. H., Putnick, D. L., & Esposito, G. (2020). Skill-experience transactions across development: Bidirectional relations between child core language and the child's home learning environment. *Developmental Psychology*, *56*(10), 1842–1854. https://doi.org/10.1037/dev0001092

Borowski, S., Zeman, J., Carboni, I., Gilman, R., & Thrash, T. (2017). Adolescent controversial status brokers: A double-edged sword. *School Psychology Quarterly*, *32*(1), 50–61. https://doi.org/10.1037/spq0000167

Boseovski, J. J. (2010). Evidence for "rose-colored glasses": An examination of the positivity bias in young children's personality judgments. *Child Development Perspectives*, *4*(3), 212–218. https://doi.org/10.1111/j.1750-8606.2010.00149.x

Boyd, A., Van de Velde, S., Vilagut, G., de Graaf, R., O´Neill, S., Florescu, S., Alonso, J., & Kovess-Masfety, V. (2015). Gender differences in mental disorders and suicidality in Europe: Results from a large cross-sectional population-based study. *Journal of Affective Disorders*, *173*, 245–254. https://doi.org/10.1016/j.jad.2014.11.002

Bozic, N., Lawthom, R., & Murray, J. (2018). Exploring the context of strengths – A new approach to strength-based assessment. *Educational Psychology in Practice*, *34*(1), 26–40. https://doi.org/10.1080/02667363.2017.1367917

Brass, N. R., Memmott-Elison, M. K., Brockmeier, L., Hung, C., & Bergin, C. (2022). Prosocial behavior and school engagement during adolescence: The mediating role of self-regulation. *Journal of Applied Developmental Psychology*, *83*, 101477–. https://doi.org/10.1016/j.appdev.2022.101477

Buist, K. L., Verhoeven, M., Hoksbergen, R., Ter Laak, J., Watve, S., Paranjpe, A. (2017). Associations of perceived sibling and parent-child relationship quality with internalizing and externalizing problems: Comparing Indian and Dutch early adolescents. *The Journal of Early Adolescence*, *37*(8), 1163–1190. https://doi.org/10.1177/0272431616653473

Carr, A., Skuse, D., Bruce, H., & Dowdney, L. (2017). Social and emotional development in middle childhood. In Carr, A. (Ed.), *Child psychology and psychiatry* (pp. 83–90). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119170235.ch10

Carr, C. E., Umbreit, J., & Hartzell, R. (2022). Instructional level and engagement in students with behavioral disorders. *Behavioral Disorders*, *47*(4), 236–244. https://doi.org/10.1177/01987429211050014

Cefai, C. (2007). Resilience for all: A study of classrooms as protective contexts. *Emotional and Behavioural Difficulties*, *12*(2), 119–134. https://doi.org/10.1080/13632750701315516

Chen, Q., Hughes, J. N., Liew, J., & Kwok, O.-M. (2010). Joint contributions of peer acceptance and peer academic reputation to achievement in academically at-risk children: Mediating processes. *Journal of Applied Developmental Psychology*, *31*(6), 448–459. https://doi.org/10.1016/j.appdev.2010.09.001

Chung-Hall, J., & Chen, X. (2010). Aggressive and prosocial peer group functioning: Effects on children's social, school, and psychological adjustment. *Social Development*, *19*(4), 659–680. https://doi.org/10.1111/j.1467-9507.2009.00556.x

Cillessen, A. H. N. & Bukowski, W. M. (2018). Sociometric perspectives. In W. M. Bukowski, B. P. Laursen, K. H. Rubin, & R. Adams (Eds.), *Handbook of peer interactions, relationships, and groups* (2nd ed., pp. 64-83). The Guildford Press.

Cillessen, A. H. N. (2009). Sociometric methods. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships and groups* (pp. 82–99). The Guilford Press.

Clasen, D. R., & Brown, B. B. (1985). The multidimensionality of peer pressure in adolescence. *Journal of Youth and Adolescence*, *14*(6), 451–468. https://doi.org/10.1007/BF02139520

Cohen, J. M. (1977). Sources of peer group homogeneity. *Sociology of Education*, *50*(4), 227–241. https://doi.org/10.2307/2112497

Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, *18*(4), 557–570. https://doi.org/10.1037/0012-1649.18.4.557

Cox, K. F. (2006). Investigating the impact of strength-based assessment on youth with emotional or behavioral disorders. *Journal of Child and Family Studies, 15*(3), 287–301. https://doi.org/10.1007/s10826-006-9021-5

Cutuli, J. J., Herbers, J. E., Masten, A. S., Reed, M-G. J. (2021). Resilience in development. In S. J. Lopez, L. M. Edwards, & S. C. Marques (Eds.), *The Oxford Handbook of Positive Psychology* (3rd ed., pp. 171–188). Oxford University Press.

Davidson, L. M., & Demaray, M. K. (2007). Social support as a moderator between victimization and internalizing-externalizing distress from bullying. *School Psychology Review*, *36*(3), 383–405. https://doi.org/10.1080/02796015.2007.12087930

Delgado, M. Y., Ettekal, A. V., Simpkins, S. D., & Schaefer, D. R. (2016). How do my friends matter? Examining Latino adolescents' friendships, school belonging, and academic achievement. *Journal of Youth and Adolescence*, *45*(6), 1110–1125. https://doi.org/10.1007/s10964-015-0341-x

DeRosier, M. E., & Thomas, J. M. (2003). Strengthening sociometric prediction: Scientific advances in the assessment of children's peer relations. *Child Development*, *74*(5), 1379–1392. https://doi.org/10.1111/1467-8624.00613

Dever, B. V., Lathrop, J., Turner, M., Younis, D., & Hochbein, C. D. (2022). The mediational effect of achievement goals in the association between teacher–student relationships and behavioral/emotional risk. *School Mental Health*, *14*(4), 880–890. https://doi.org/10.1007/s12310-022-09527-0

Diebold, T., & Perren, S. (2022). Toddlers' peer engagement in Swiss childcare: Contribution of individual and contextual characteristics. *European Journal of Psychology of Education*, *37*(3), 627–648. https://doi.org/10.1007/s10212-021-00552-2

Dietrich, L., Jurkowski, S., Schwarzer, N.-H., & Zimmermann, D. (2023). The role of teachers in the bullying involvement of students with emotional and behavioral difficulties. *Teaching and Teacher Education*, *135*, 104311. https://doi.org/10.1016/j.tate.2023.104311

Dijkstra, J. K. & Veenstra, R. (2011). Peer relations. In B. B. Brown & M. J. Prinstein (Eds.), *Encyclopedia of adolescence, volume 2: Interpersonal and sociocultural factors* (pp. 255–259). Elsevier Inc.

Dol, M., Reed, M., & Ferro, M. A. (2022). Internalizing–externalizing comorbidity and impaired functioning in children. *Children, 9*(10), 1547. https://doi.org/10.3390/children9101547

Doll, B. (2021). Data-based assessment of psychological wellbeing in whole school environments. In K.-A. Allen, A. Reupert, & L. Oades (Eds.), *Building better schools with evidence-based policy: Adaptable policy for teachers and school leaders* (pp. 284–289)*.* Taylor & Francis Group.

Efron, D., Nicholson, J. M., Anderson, V., Silk, T., Ukoumunne, O. C., Gulenc, A., Hazell, P., Jongeling, B., & Sciberras, E. (2020). ADHD at age 7 and functional impairments at age 10. *Pediatrics*, *146*(5), e20201061. https://doi.org/10.1542/peds.2020-1061

Eisenberg, N., Valiente, C., Spinrad, T. L., Cumberland, A., Liew, J., Reiser, M., Zhou, Q., & Losoya, S. H. (2009). Longitudinal relations of children's effortful control, impulsivity, and negative emotionality to their externalizing, internalizing, and co-occurring behavior problems. *Developmental Psychology*, *45*(4), 988–1008. https://doi.org/10.1037/a0016213

Elias, M. J. (1997). *Promoting social and emotional learning: Guidelines for educators*. Association for Supervision and Curriculum Development.

Ennett, S. T., Bauman, K. E., & Koch, G. G. (1994). Variability in cigarette smoking within and between adolescent friendship cliques. *Addictive Behaviors*, *19*(3), 295–305. https://doi.org/10.1016/0306-4603(94)90031-0

Epstein, M. H. (1999). The development and validation of a scale to assess the emotional and behavioral strengths of children and adolescents. *Remedial and Special Education*, *20*(5), 258–262. https://doi.org/10.1177/074193259902000501

Epstein, M. H. (2004). *Behavioral and Emotional Rating Scale: A strength-based approach to assessment: Examiner's manual* (2nd ed.). Pro-Ed.

Estell, D. B., Farmer, T. W., Irvin, M. J., Crowther, A., Akos, P., & Boudah, D. J. (2009). Students with exceptionalities and the peer group context of bullying and victimization in late elementary school. *Journal of Child and Family Studies*, *18*(2), 136–150. https://doi.org/10.1007/s10826-008-9214-1

Fabes, R. A., Martin, C. L., & Hanish, L. D. (2003). Young children's play qualities in same-, other-, and mixed-sex peer groups. *Child Development*, *74*(3), 921–932. https://doi.org/10.1111/1467-8624.00576

Fortuin, J., Van Geel, M., & Vedder, P. (2015). Peer influences on internalizing and externalizing problems among adolescents: A longitudinal social network analysis. *Journal of Youth and Adolescence*, *44*(4), 887–897. https://doi.org/10.1007/s10964-014-0168-x

Frey, K. S., Nolen, S. B., Edstrom, L. V. S., & Hirschstein, M. K. (2005). Effects of a school-based social–emotional competence program: Linking children's goals, attributions, and behavior. *Journal of Applied Developmental Psychology*, *26*(2), 171–200. https://doi.org/10.1016/j.appdev.2004.12.002

Fu, X., Li, S., Shen, C., Zhu, K., Zhang, M., Liu, Y., & Zhang, M. (2023). Effect of prosocial behavior on school bullying victimization among children and adolescents: Peer and student–teacher relationships as mediators. *Journal of Adolescence, 95*(2), 322–335. https://doi.org/10.1002/jad.12116

Gilmour, A. F., Sandilos, L. E., Pilny, W. V., Schwartz, S., & Wehby, J. H. (2022). Teaching students with emotional/behavioral disorders: Teachers' burnout profiles and classroom management. *Journal of Emotional and Behavioral Disorders*, *30*(1), 16–28. https://doi.org/10.1177/10634266211020258

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*(5), 581–586. https://doi.org/10.1111/j.1469-7610.1997.tb01545.x

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*(11), 1337–1345. https://doi.org/10.1097/00004583-200111000-0001

Goodman, R., D. L. Lamping, D. L., & Ploubidis, G. B. (2010). "When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the strengths and difficulties questionnaire (SDQ): Data from British parents, teachers and children." *Journal of Abnormal Child Psychology, 38*, 1179–1191. https://doi.org/10.1007/s10802-010-9434-x

Gremmen, M. C., Dijkstra, J. K., Steglich, C., & Veenstra, R. (2017). First selection, then influence: Developmental differences in friendship dynamics regarding academic achievement. *Developmental Psychology*, *53*(7), 1356–1370. https://doi.org/10.1037/dev0000314

Griese, E. R., & Buhs, E. S. (2014). Prosocial behavior as a protective factor for children's peer victimization. *Journal of Youth and Adolescence*, *43*(7), 1052–1065. https://doi.org/10.1007/s10964-013-0046-y

Griese, E. R., Buhs, E. S., & Lester, H. F. (2016). Peer victimization and prosocial behavior trajectories: Exploring sources of resilience for victims. *Journal of Applied Developmental Psychology*, *44*, 1–11. https://doi.org/10.1016/j.appdev.2016.01.009

Hafen, C. A., Laursen, B., & DeLay, D. (2012). Transformations in friend relationships across the transition into adolescence. In B. P. Laursen, & W. A. Collins (Eds.), *Relationship pathways: From adolescence to young adulthood* (pp. 69–89). SAGE Publications.

Hale, J., Alfonso, V., Berninger, V., Bracken, B., Christo, C., Clark, E., Cohen, M., Davis, A., Decker, S., Denckla, M., Dumont, R., Elliott, C., Feifer, S., Fiorello, C., Flanagan, D., Fletcher-Janzen, E., Geary, D., Gerber, M., Gerner, M., … Jaffe, L. (2010). Critical issues in response-to-intervention, comprehensive evaluation, and specific learning disabilities identification and intervention: An expert white paper consensus. *Learning Disability Quarterly*, *33*(3), 223–236. https://doi.org/10.1177/073194871003300310

Hamre, B. K. (2014). Teachers' daily interactions with children: An essential ingredient in effective early childhood programs. *Child Development Perspectives*, *8*(4), 223–230. https://doi.org/10.1111/cdep.12090

Hanish, L. D., Barcelo, H., Martin, C. L., Fabes, R. A., Holmwall, J., & Palermo, F. (2007). Using the Q-connectivity method to study frequency of interaction with multiple peer triads: Do preschoolers' peer group interactions at school relate to academic skills? *New Directions for Child and Adolescent Development*, *2007*(118), 9–24. https://doi.org/10.1002/cd.198

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development*, *67*(1), 1–13. https://doi.org/10.2307/1131681

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, *41*(4), 441–455. https://doi.org/10.1111/1469-7610.00629

Hogue, A., & Steinberg, L. (1995). Homophily of internalized distress in adolescent peer groups. *Developmental Psychology*, *31*(6), 897–906. https://doi.org/10.1037/0012-1649.31.6.897

Hong, J. S., Kim, D. H., & Piquero, A. R. (2017). Assessing the links between punitive parenting, peer deviance, social isolation and bullying perpetration and victimization in South Korean adolescents. *Child Abuse & Neglect*, *73*, 63–70. https://doi.org/10.1016/j.chiabu.2017.09.017

Hue, M. (2020). Behavioral Disorder: Theory, Research, and Practice. In A. J., Martin, R. A. Sperling, & K. J., Newton (Eds.), *Handbook of educational psychology and students with special needs* (pp. 220-237). Routledge.

Hughes, J. N. (2012). Teachers as managers of students' peer context. In A. M. Ryan & G. W. Ladd (Eds.), *Peer relationships and adjustment at school* (pp. 189–218). Information Age Publishing, Incorporated.

Hymel, S., Rubin, K., Rowden, L., & LeMare, L. (1990). Children's peer relationships: Longitudinal prediction of internalizing and externalizing problems from middle to late childhood. *Child Development*, *61*(6), 2004–2021. https://doi.org/10.2307/1130854

Ikävalko, M., Sointu, E., Lambert, M. C., & Viljaranta, J. (2023). Students' self-efficacy in self-regulation together with behavioural and emotional strengths: Investigating their self-perceptions. *European Journal of Special Needs Education*, *38*(4), 558–572. https://doi.org/10.1080/08856257.2022.2127083

Janošević, M., & Petrovic, B. (2019). Effects of personality traits and social status on academic achievement: Gender differences. *Psychology in the Schools*, *56*(4), 497–509. https://doi.org/10.1002/pits.22215

Jensen, J., Köller, O., & Zimmermann, F. (2023). Does rude or kind behavior predict later academic achievement? Evidence from two samples of adolescents. *The Journal of Early Adolescence*, *44*(3), 334–364. https://doi.org/10.1177/02724316231178688

Jones, S. E., Bombieri, L., Livingstone, A. G., & Manstead, A. S. R. (2012). The influence of norms and social identities on children's responses to bullying. *British Journal of Educational Psychology*, *82*(2), 241–256. https://doi.org/10.1111/j.2044-8279.2011.02023.x

Kaiser, B., & Rasminsky, J. S. (2021). *Addressing challenging behavior in young children: The leader's role*. National Association for the Education of Young Children.

Kalvin, C. B., & Bierman, K. L. (2017). Child and adolescent risk factors that differentially predict violent versus nonviolent crime. *Aggressive Behavior*, *43*(6), 568–577. https://doi.org/10.1002/ab.21715

Kassarnig, V., Bjerre-Nielsen, A., Mones, E., Lehmann, S., & Lassen, D. D. (2017). Class attendance, peer similarity, and academic performance in a large field study. *PloS One*, *12*(11), e0187078–e0187078. https://doi.org/10.1371/journal.pone.0187078

Kauffman, J. M. & Landrum, T. J. (2018). *Characteristics of emotional and behavioral disorders of children and youth* (11th ed.). Pearson.

Kawabata, Y., & Tseng, W.-L. (2019). Relational and physical victimization, friendship, and social and school adjustment in Taiwan. *Journal of Social and Personal Relationships*, *36*(6), 1559–1578. https://doi.org/10.1177/0265407518767771

Keskin, G., Lougheed, J. P., & Duncan, R. (2023). Within- and between-person associations among internalizing and externalizing problems during middle childhood. *Social Development*, 32(3), 889–904. https://doi.org/10.1111/sode.12660

Kindermann, T. A. (2007). Effects of naturally existing peer groups on changes in academic engagement in a cohort of sixth graders. *Child Development*, *78*(4), 1186–1203. https://doi.org/10.1111/j.1467-8624.2007.01060.x

Kiuru N., Aunola K., Vuori J., & Nurmi J.-E. (2007). The role of peer groups in adolescents' educational expectations and adjustment. *Journal of Youth and Adolescence*, *36*, 995–1009. https://doi.org/10.1007/s10964-006-9118-6

Kiuru, N. (2008). *The role of adolescents' peer groups in the school context.* University of Jyväskylä.

Kiuru, N., Aunola, K., Nurmi, J.-E., Leskinen, E., & Salmela-Aro, K. (2008). Peer group influence and selection in adolescents' school burnout: A longitudinal study. *Merrill-Palmer Quarterly*, *54*(1), 23–55. https://doi.org/10.1353/mpq.2008.0008

Kiuru, N., Haverinen, K., Salmela-Aro, K., Nurmi, J.-E., Savolainen, H., & Holopainen, L. (2011). Students with reading and spelling disabilities: Peer groups and educational attainment in secondary education. *Journal of Learning Disabilities*, *44*(6), 556–569. https://doi.org/10.1177/0022219410392043

Kiuru, N., Nurmi, J.-E., Aunola, K., & Salmela-Aro, K. (2009). Peer group homogeneity in adolescents' school adjustment varies according to peer group type and gender. *International Journal of Behavioral Development*, *33*(1), 65–76. https://doi.org/10.1177/0165025408098014

Kochel, K. P., Ladd, G. W., Bagwell, C. L., & Yabko, B. A. (2015). Bully/victim profiles' differential risk for worsening peer acceptance: The role of friendship. *Journal of Applied Developmental Psychology*, *41*, 38–45. https://doi.org/10.1016/j.appdev.2015.05.002

Korpershoek, H., Harms, T., De Boer, H., Van Kuijk, M., & Doolaard, S. (2016). A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes. *Review of Educational Research*, *86*(3), 643–680. https://doi.org/10.3102/0034654315626799

Koskelainen, M., Sourander, A., & Kaljonen, A. (2000). The strengths and difficulties questionnaire among Finnish school-aged children and adolescents. *European Child & Adolescent Psychiatry*, *9*(4), 277–284. https://doi.org/10.1007/s007870070031

Koskelainen, M., Sourander, A., & Vauras, M. (2001). Self-reported strengths and difficulties in a community sample of Finnish adolescents. *European Child & Adolescent Psychiatry*, *10*(3), 180–185. https://doi.org/10.1007/s007870170024

Kretschmer, T., Veenstra, R., Deković, M., & Oldehinkel, A. J. (2017). Bullying development across adolescence, its antecedents, outcomes, and gender-specific patterns. *Development and Psychopathology*, *29*(3), 941–955. https://doi.org/10.1017/S0954579416000596

Kusché, C. A. & Greenberg, M. T. (1995). *The PATHS curriculum.* Developmental Research & Programs.

La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, *34*(1), 49–61. https://doi.org/10.1207/s15374424jccp3401_5

Ladd, G. W., Herald, S. L., & Kochel, K. P. (2006). School readiness: Are there social prerequisites? *Early Education and Development*, *17*(1), 115–150. https://doi.org/10.1207/s15566935eed1701_6

Ladd, G. W., Kochenderfer-Ladd, B., & Rydell, A. (2010). Children's interpersonal skills and school-based relationships. In P. K. Smith & C. G. Hart (Eds.). *The Wiley-Blackwell Handbook of Childhood Social Development* (pp. 181–206). Wiley-Blackwell. https://doi.org/10.1002/9781444390933.ch10

Ladd, G. W., Kochenderfer-Ladd, B., Eggum, N. D., Kochel, K. P., & McConnell, E. M. (2011). Characterizing and comparing the friendships of anxious-solitary and unsociable preadolescents. *Child Development*, *82*(5), 1434–1453. https://doi.org/10.1111/j.1467-8624.2011.01632.x

Laghi, F., Baiocco, R., Cannoni, E., Di Norcia, A., Baumgartner, E., & Bombi, A. S. (2013). Friendship in children with internalizing and externalizing problems: A preliminary investigation with the pictorial assessment of interpersonal relationships. *Children and Youth Services Review*, *35*(7), 1095–1100. https://doi.org/10.1016/j.childyouth.2013.05.007

Laija-Rodriguez, W., Grites, K., Bouman, D., Pohlman, C., & Goldman, R. L. (2013). Leveraging Strengths Assessment and Intervention Model (LeStAIM): A theoretical strength-based assessment framework. *Contemporary School Psychology*, *17*(1), 81–91. https://doi.org/10.1007/BF03340990

Lamarche, V., Brendgen, M., Boivin, M., Vitaro, F., Pérusse, D., & Dionne, G. (2006). Do friendships and sibling relationships provide protection against peer victimization in a similar way? *Social Development (Oxford, England)*, *15*(3), 373–393. https://doi.org/10.1111/j.1467-9507.2006.00347.x

Lambert, M. C., January, S.-A. A., Epstein, M. H., Spooner, M., Gebreselassie, T., & Stephens, R. L. (2015). Convergent validity of the Behavioral and Emotional Rating Scale for youth in community mental health settings. *Journal of Child and Family Studies*, *24*(12), 3827–3832. https://doi.org/10.1007/s10826-015-0191-x

Lambert, M. C., January, S.-A. A., Gonzalez, J. E., Epstein, M. H., & Martin, J. (2021). Comparing behavioral and emotional strengths of students with and without emotional disturbance. *Journal of Psychoeducational Assessment*, *39*(8), 999–1014. https://doi.org/10.1177/07342829211038451

Lambert, M. C., Sointu, E. T., & Epstein, M. H. (2019). A comprehensive review of international research using the Behavioral and Emotional Rating Scale. *International Journal of School & Educational Psychology*, *7*(3), 215–226. https://doi.org/10.1080/21683603.2017.1422061

Landrum, T. J. (2017). Emotional and behavioral disorders. In J. M. Kauffman, D. P. Hallahan, & P. C. Pullen (Eds.), *Handbook of special education* (2nd ed., pp. 312–324). Taylor & Francis.

Laninga-Wijnen, L., Gremmen, M. C., Dijkstra, J. K., Veenstra, R., Vollebergh, W. A. M., & Harakeh, Z. (2019). The role of academic status norms in friendship selection and influence processes related to academic achievement. *Developmental Psychology*, *55*(2), 337–350. https://doi.org/10.1037/dev0000611

Lappalainen, K., Savolainen, H., Kuorelahti, M., & Epstein, M. H. (2009). An international assessment of the emotional and behavioral strengths of youth. *Journal of Child and Family Studies*, *18*(6), 746–753. https://doi.org/10.1007/s10826-009-9287-5

Laursen, B., Bukowski, W., Nurmi, J.-E., Marion, D., Salmela-Aro, K., & Kiuru, N. (2010). Opposites detract: Middle school peer group antipathies. *Journal of Experimental Child Psychology, 106*, 240–256. https://doi.org/10.1016/j.jecp.2010.03.001

Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, *35*(5), 1268–1282. https://doi.org/10.1037/0012-1649.35.5.1268

LeBuffe, P. A., Shapiro, V. B., & Naglieri, J. A. (2009). *The Devereux Student Strengths Assessment.* NC: Kaplan.

Lee, J. (2021). Pathways from childhood bullying victimization to young adult depressive and anxiety symptoms. *Child Psychiatry and Human Development*, *52*(1), 129–140. https://doi.org/10.1007/s10578-020-00997-4

Lee, J. Y., Chung, I. J., & Back, J. L. (2014). A meta-analysis on the predictor variables of the school adjustment of youth. *Korean Journal of Child Studies*, *35*(2), 1–23. https://doi.org/10.5723/KJCS.2014.35.2.1

Lerner, R. M., Almerigi, J. B., Theokas, C., & Lerner, J. V. (2005). Positive youth development a view of the issues. *The Journal of Early Adolescence*, *25*(1), 10–16. https://doi.org/10.1177/0272431604273211

Lester, L., & Cross, D. (2014). Do emotional and behavioural difficulties in primary school predict adolescent victimisation trajectories? *Emotional and Behavioural Difficulties*, *19*(4), 356–370. https://doi.org/10.1080/13632752.2013.876854

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, *83*(404), 1198–1202. https://doi.org/10.1080/01621459.1988.10478722

Liu, K., Thompson, R. C., Watson, J., Montena, A. L., & Warren, S. L. (2023). Developmental trajectories of internalizing and externalizing symptoms in youth and associated gender differences: A directed network perspective. *Research on Child and Adolescent Psychopathology*. https://doi.org/10.1007/s10802-023-01106-4

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*(3), 543–562. https://doi.org/10.1111/1467-8624.00164

Marengo, D., Jungert, T., Iotti, N. O., Settanni, M., Thornberg, R., & Longobardi, C. (2018). Conflictual student-teacher relationship, emotional and behavioral problems, prosocial behavior, and their associations with bullies, victims, and bullies/victims. *Educational Psychology*, *38*(9), 1201–1217. https://doi.org/10.1080/01443410.2018.1481199

Markovic, A., & Bowker, J. C. (2014). Shy, but funny? Examining peer-valued characteristics as moderators of the associations between anxious-withdrawal and peer outcomes during early adolescence. *Journal of Youth and Adolescence*, *44*(4), 833–846. https://doi.org/10.1007/s10964-014-0113-z

Markovic, A., & Bowker, J. C. (2017). Friends also matter: Examining friendship adjustment indices as moderators of anxious-withdrawal and trajectories of change in psychological maladjustment. *Developmental Psychology*, *53*(8), 1462–1473. https://doi.org/10.1037/dev0000343

Marsh, R. J., Higgins, K., Morgan, J., Cumming, T. M., Brown, M., & McCreery, M. (2019). Evaluating school connectedness of students with emotional and behavioral disorders. *Children & Schools*, *41*(3), 153–160. https://doi.org/10.1093/cs/cdz013

Martel, M. M. (2013). Sexual selection and sex differences in the prevalence of childhood externalizing and adolescent internalizing disorders. *Psychological Bulletin*, *139*(6), 1221–1259. https://doi.org/10.1037/a0032247

Merrell, K. W., Felver-Gant, J. C., & Tom, K. M. (2011). Development and validation of a parent report measure for assessing social-emotional competencies of children and adolescents. *Journal of Child and Family Studies*, *20*(4), 529–540. https://doi.org/10.1007/s10826-010-9425-0

Merritt, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C., & Peugh, J. L. (2012). The contribution of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review*, *41*(2), 141–159. https://doi.org/10.1080/02796015.2012.12087517

Moore, B., & Woodcock, S. (2017). Resilience, bullying, and mental health: Factors associated with improved outcomes. *Psychology in the Schools*, *54*(7), 689–702. https://doi.org/10.1002/pits.22028

Muthén, L. K., & Muthén, B. O. (2017). Mplus (Version 8.0) [Computer software]. Muthén & Muthén.

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, *113*(1), 99–128. https://doi.org/10.1037/0033-2909.113.1.99

Norwalk, K. E., Milojevich, H. M., Dawes, M., Hamm, J. V., & Farmer, T. W. (2021). Heterogeneity of social marginalization in early adolescence: Longitudinal associations with behavioral and social adjustment. *Journal of Youth and Adolescence*, *50*(11), 2123–2135. https://doi.org/10.1007/s10964-021-01457-5

Oberle, E., Ji, X. R., & Molyneux, T. M. (2023). Pathways from prosocial behaviour to emotional health and academic achievement in early adolescence. *The Journal of Early Adolescence*, *43*(5), 632–653. https://doi.org/10.1177/02724316221113349

Oh, Y., Greenberg, M. T., Willoughby, M. T., & Family Life Project Key Investigators (2020). Examining longitudinal associations between externalizing and internalizing behavior problems at within-and between-child levels. *Journal of Abnormal Child Psychology*, *48*, 467–480. https://doi-org.ezproxy.uef.fi:2443/10.1007/s10802-019-00614-6

Olivier, E., Morin, A. J. S., Langlois, J., Tardif-Grenier, K., & Archambault, I. (2020). Internalizing and externalizing behavior problems and student engagement in elementary and secondary school students. *Journal of Youth and Adolescence*, *49*(11), 2327–2346. https://doi.org/10.1007/s10964-020-01295-x

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Hemisphere.

Paananen, M., Karhu, A., & Savolainen, H. (2023). Individual behavior support in positive behavior support schools in Finland. *International Journal of Developmental Disabilities*, *69*(1), 45–52. https://doi.org/10.1080/20473869.2022.2116236

Painter, K. (2012). Outcomes for youth with severe emotional disturbance: A repeated measures longitudinal study of a wraparound approach of service delivery in systems of care. *Child & Youth Care Forum*, *41*(4), 407–425. https://doi.org/10.1007/s10566-011-9167-1

Parkhurst, J. T., & Hopmeyer, A. (1998). Sociometric popularity and peer-perceived popularity: Two distinct dimensions of peer status. *The Journal of Early Adolescence*, *18*(2), 125–144. https://doi.org/10.1177/0272431698018002001

Paz, J., Lambros, K., & Lewis, S. (2021). Strength-based approaches for assessing student wellbeing. In K.-A. Allen, A. Reupert, & L. Oades (Eds.), *Building better schools with evidence-based policy: Adaptable policy for teachers and school leaders* (pp. 272–283). Taylor & Francis Group.

Pepler, D. J., Bierman, K.L. (2018). *With a little help from my friends: The importance of peer relationships for social-emotional development.* Edna Bennett Pierce Prevention Research Center, Pennsylvania State University.

Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry*, *47*(1), 45–57. https://doi.org/10.1111/j.1469-7610.2005.01445.x

Perren, S., Von Wyl, A., Stadelmann, S., Bürgin, D., & von Klitzing, K. (2006). Associations between behavioral/emotional difficulties in kindergarten children and the quality of their peer relationships. *Journal of the American Academy of Child and Adolescent Psychiatry*, *45*(7), 867–876. https://doi.org/10.1097/01.chi.0000220853.71521.cb

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification.* American Psychological Association; Oxford University Press.

Polanczyk, G. V., Salum, G. A., Sugaya, L. S., Caye, A., & Rohde, L. A. (2015). Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *Journal of Child Psychology and Psychiatry*, *56*(3), 345–365. https://doi.org/10.1111/jcpp.12381

Poulou, M. (2014). The effects on students' emotional and behavioural difficulties of teacher-student interactions, students' social skills and classroom context. *British Educational Research Journal*, *40*(6), 986–1004. https://doi.org/10.1002/berj.3131

Poulou, M. S. (2017). Students' emotional and behavioral difficulties: The role of teachers' social and emotional learning and teacher-student relationships. *The International Journal of Emotional Education*, *9*(2), 72–89.

Poulou, M. S., Garner, P. W., & Bassett, H. H. (2022). Teachers' emotional expressiveness and classroom management practices: Associations with young students' social-emotional and behavioral competence. *Psychology in the Schools, 59*(3), 557–573. https://doi.org/10.1002/pits.22631

Qin, X., Laninga-Wijnen, L., Steglich, C., Zhang, Y., Ren, P., & Veenstra, R. (2023). Does having vulnerable friends help vulnerable youth? The co-evolution of friendships, victimization, and depressive symptoms in Chinese adolescents' social networks. *Child Development*, *94*(6), 1531–1549. https://doi.org/10.1111/cdev.13945

Rambaran, J. A., Schwartz, D., Badaly, D., Hopmeyer, A., Steglich, C., & Veenstra, R. (2017). Academic functioning and peer influences: A short-term longitudinal study of network-behavior dynamics in middle adolescence. *Child Development*, *88*(2), 523–543. https://doi.org/10.1111/cdev.12611

Ricard, N. C., & Pelletier, L. G. (2016). Dropping out of high school: The role of parent and teacher self-determination support, reciprocal friendships and academic motivation. *Contemporary Educational Psychology*, *44–45*, 32–40. https://doi.org/10.1016/j.cedpsych.2015.12.003

Romano, E., Babchishin, L., Marquis, R., & Fréchette, S. (2015). Childhood maltreatment and educational outcomes. *Trauma, Violence & Abuse*, *16*(4), 418–437. https://doi.org/10.1177/1524838014537908

Romano, L., Angelini, G., Consiglio, P., & Fiorilli, C. (2021). Academic resilience and engagement in high school students: The mediating role of perceived teacher emotional support. *European Journal of Investigation in Health, Psychology and Education*, *11*(2), 334–344. https://doi.org/10.3390/ejihpe11020025

Rose, C. A., Monda-Amaya, L. E., & Espelage, D. L. (2011). Bullying perpetration and victimization in special education: A review of the literature. *Remedial and Special Education*, *32*(2), 114–130. https://doi.org/10.1177/0741932510361247

Ryan, A. M. & Shin, H. (2018). Peers, Academics, and Taechers. In W. M. Bukowski, B. P. Laursen, K. H. Rubin, & R. Adams (Eds.), *Handbook of peer interactions, relationships, and groups* (2nd ed., pp. 637–656). The Guilford Press

Rytioja, M., Lappalainen, K., & Savolainen, H. (2019). Behavioural and emotional strengths of sociometrically popular, rejected, controversial, neglected, and average children. *European Journal of Special Needs Education*, *34*(5), 557–571. https://doi.org/10.1080/08856257.2018.1560607

Salmivalli, C. & Peets, K. (2018). Bullying and victimization. In W. M. Bukowski, B. P. Laursen, K. H. Rubin, & R. Adams (Eds.), *Handbook of peer interactions, relationships, and groups* (2nd ed., pp. 302–321). The Guilford Press.

Salmivalli, C., & Poskiparta, E. (2012). Making bullying prevention a priority in Finnish schools: The KiVa antibullying program. *New Directions for Youth Development*, *2012*(133), 41–53. https://doi.org/10.1002/yd.20006

Sanchez-Sandoval, Y., & Verdugo, L. (2021). School adjustment and socio-family risk as predictors of adolescents' peer preference. *Frontiers in Psychology*, *12*, 645712–645712. https://doi.org/10.3389/fpsyg.2021.645712

Sandstrom, M. J., Cillessen, A. H. N., & Eisenhower, A. (2003). Children's appraisal of peer rejection experiences: Impact on social and emotional adjustment. *Social Development (Oxford, England)*, *12*(4), 530–550. https://doi.org/10.1111/1467-9507.00247

Scholte, R. H. J., Overbeek, G., Ten Brink, G., Rommes, E., De Kemp, R. A. T., Goossens, L., & Engels, R. C. M. E. (2009). Significance of reciprocal and unilateral friendships for peer victimization in adolescence. *Journal of Youth and Adolescence*, *38*(1), 89–100. https://doi.org/10.1007/s10964-008-9287-6

Scott, S. (2015). Oppositional and conduct disorders. In A. Thapar & D. S. Pine (Eds.), *Rutter's child and adolescent psychiatry* (5th ed., pp. 913–930). Wiley Blackwell.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *The American Psychologist*, *55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Shi, B., & Xie, H. (2012). Socialization of physical and social aggression in early adolescents' peer groups: High-status peers, individual status, and gender. *Social Development, 21*(1), 170–194. https://doi.org/10.1111/j.1467-9507.2011.00621.x

Siennick, S. E., & Picon, M. (2020). Adolescent internalizing symptoms and the "tightknittedness" of friendship groups. *Journal of Research on Adolescence*, *30*(S2), 391–402. https://doi.org/10.1111/jora.12484

Sijtsema, J. J. (2016). Preadolescents and their friends: Similarity in aggression and depressive problems as a function of social status and friendship reciprocity. *International Journal of Behavioral Development*, *40*(6), 565–576. https://doi.org/10.1177/0165025415607380

Simmons, C. A. & Lehmann, P. (2013). Children and adolescents. In C. A. Simmons & P. Lehmann (Eds.), *Tools for strengths-based assessment and evaluation* (pp. 453–524). Springer.

Skrzypiec, G., Slee, P. T., Askell-Williams, H., & Lawson, M. J. (2012). Associations between types of involvement in bullying, friendships and mental health status. *Emotional and Behavioural Difficulties*, *17*(3–4), 259–272. https://doi.org/10.1080/13632752.2012.704312

Smith, H., Polenik, K., Nakasita, S., & Jones, A. P. (2012). Profiling social, emotional and behavioural difficulties of children involved in direct and indirect bullying behaviours. *Emotional and Behavioural Difficulties*, *17*(3–4), 243–257. https://doi.org/10.1080/13632752.2012.704315

Sointu, E. T. (2014). *Multi-informant assessment of behavioral and emotional strengths*. University of Eastern Finland.

Sointu, E. T., Savolainen, H., Lappalainen, K., & Lambert, M. C. (2017). Longitudinal associations of student-teacher relationships and behavioural and emotional strengths on academic achievement. *Educational Psychology*, *37*(4), 457–467. https://doi.org/10.1080/01443410.2016.1165796

Sointu, E., Savolainen, H., Lappalainen, K., Kuorelahti, M., Hotulainen, R., Närhi, V., Lambert, M. C., & Epstein, M. H. (2018). *Käyttäytymisen ja tunteiden vahvuuksien arviointiväline*. [Behavioral and Emotional Rating Scale]. PS-Kustannus.

Sointu, E., Vuorinen, K. & Uusitalo, L. (2024). *Poikkeavuuksien tunnistamisesta vahvuuksiin.* [From identifying anomalies to strengths]. In M. Jahnukainen & T. Harrikari (Eds.), *Lasten erityishuolto ja –opetus Suomessa* [Special care and education for children in Finland] (pp. 566–607). Vastapaino.

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus Bully/Victim Questionnaire. *Aggressive Behavior*, *29*(3), 239–268. https://doi.org/10.1002/ab.10047

Soponaru, C., Tincu, C., & Iorga, M. (2014). The influence of the sociometric status of students on academic achievement. *Agathos: An International Review of the Humanities and Social Sciences*, *5*(2), 149–168.

Steinmayr, R., Meißner A., Weidinger A. F., Wirthwein L. (2014). Academic achievement. In Meyer L. H. (Ed.), *Oxford bibliographies online: Education*. Oxford University Press. https://doi-org.ezproxy.uef.fi:2443/10.1093/

Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A. P., Turnbull, H. R., Wickham, D., Wilcox, B., & Ruef, M. (2000). Applying positive behavior support and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions*, *2*(3), 131–143. https://doi.org/10.1177/109830070000200302

Sørlie, M.-A., Hagen, K. A., & Nordahl, K. B. (2021). Development of social skills during middle childhood: Growth trajectories and school-related predictors. *International Journal of School & Educational Psychology*, *9*(1), 69–87. https://doi.org/10.1080/21683603.2020.1744492

Trout, A. L., Ryan, J. B., La Vigne, S. P., & Epstein, M. H. (2003). Behavioral and Emotional Rating Scale: Two studies of convergent validity. *Journal of Child and Family Studies*, *12*(4), 399–410. https://doi.org/10.1023/A:1026059906344

Urberg, K. A., Luo, Q., Pilgrim, C., & Degirmencioglu, S. M. (2003). A two-stage model of peer influence in adolescent substance use: Individual and relationship-specific differences in susceptibility to influence. *Addictive Behaviors*, *28*(7), 1243–1256. https://doi.org/10.1016/S0306-4603(02)00256-3

Walker, A., & Nabuzoka, D. (2007). Academic achievement and social functioning of children with and without learning difficulties. *Educational Psychology, 27*(5), 635–654. https://doi.org/10.1080/01443410701309175

Van Noorden, T. H. J., Haselager, G. J. T., Lansu, T. A. M., Cillessen, A. H. N., & Bukowski, W. M. (2016). Attribution of human characteristics and bullying involvement in childhood: Distinguishing between targets. *Aggressive Behavior*, *42*(4), 394–403. https://doi.org/10.1002/ab.21634

Vanhalst, J., Luyckx, K. & Goossens, L. (2013). Experiencing loneliness in adolescence: A matter of individual characteristics, negative peer experiences, or both?: Loneliness: A child-by-environment model. *Social Development, 23*, 100–118. https://doi.org/10.1111/sode.12019

Wang, M.-T., & Fredricks, J. A. (2014). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child Development*, *85*(2), 722–737. https://doi.org/10.1111/cdev.12138

Warden, D., & MacKinnon, S. (2003). Prosocial children, bullies and victims: An investigation of their sociometric status, empathy and social problem-solving strategies. *British Journal of Developmental Psychology*, *21*(3), 367–385. https://doi.org/10.1348/026151003322277757

Wellman, H. M. (2020). Friends, secrets, and lies. In H. Wellman & K. Lind (Eds.), *Reading Minds* (pp. 23–34). Oxford University Press. https://doi.org/10.1093/oso/9780190878672.003.0003

Wentzel, K. R. (2003). Sociometric status and adjustment in middle school: A longitudinal study. *The Journal of Early Adolescence*, *23*(1), 5–28. https://doi.org/10.1177/0272431602239128

Wentzel, K. R., & Asher, S. R. (1995). The academic lives of neglected, rejected, popular, and controversial children. *Child Development*, *66*(3), 754–763. https://doi.org/10.1111/j.1467-8624.1995.tb00903.x

Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development*, *68*(6), 1198–1209. https://doi.org/10.2307/1132301

Vera, E. M., & Shin, R. Q. (2006). Promoting strengths in a socially toxic world: Supporting resiliency with systemic interventions. *The Counseling Psychologist*, *34*(1), 80–89. https://doi.org/10.1177/0011000005282365

Witkow, M. R., & Fuligni, A. J. (2010). In-school versus out-of-school friendships and academic achievement among an ethnically diverse sample of adolescents. *Journal of Research on Adolescence*, *20*(3), 631–650. https://doi.org/10.1111/j.1532-7795.2010.00653.x

Witvliet, M., van Lier, P. A. C., Cuijpers, P., & Koot, H. M. (2010). Change and stability in childhood clique membership, isolation from cliques, and associated child characteristics. *Journal of Clinical Child and Adolescent Psychology*, *39*(1), 12–24. https://doi.org/10.1080/15374410903401161

Volz-Sidiropoulou, Boecker, M., & Gauggel, S. (2016). The positive illusory bias in children and adolescents with ADHD: Further evidence. *Journal of Attention Disorders*, *20*(2), 178–186. https://doi.org/10.1177/1087054713489849

Vuorinen, K. (2022). *Character strength interventions: Introducing, developing, and studying character strength teaching in Finnish education.* University of Helsinki.

Yang, A., & Salmivalli, C. (2013). Different forms of bullying and victimization: Bully-victims versus bullies and victims. *European Journal of Developmental Psychology*, *10*(6), 723–738. https://doi.org/10.1080/17405629.2013.793596

Yeung, R., & Leadbeater, B. (2010). Adults make a difference: The protective effects of parent and teacher emotional support on emotional and behavioral problems of peer-victimized adolescents. *Journal of Community Psychology*, *38*(1), 80–98. https://doi.org/10.1002/jcop.20353

Zakriski, A. L., & Coie, J. D. (1996). A comparison of aggressive-rejected and nonaggressive-rejected children's interpretations of self-directed and other-directed rejection. *Child Development*, *67*(3), 1048–1070. https://doi.org/10.1111/j.1467-8624.1996.tb01782.x

Zettergren, P. (2003). School adjustment in adolescence for previously rejected, average and popular children. *British Journal of Educational Psychology*, *73*(2), 207–221. https://doi.org/10.1348/00070990360626949

ORIGINAL PUBLICATIONS

STUDY I

Rytioja, M., Lappalainen, K., & Savolainen, H. (2019). Behavioural and emotional strengths of sociometrically popular, rejected, controversial, neglected, and average children. *European Journal of Special Needs Education, 34*(5), 557–571. https://doi.org/10.1080/08856257.2018.1560607

STUDY II

Rytioja, M., Lappalainen, K., & Savolainen, H. (2024). Peer groups, academic achievement, and the behaviour of elementary school-aged children: A strength-based perspective. *Infant and Child Development*. https://doi.org/10.1002/icd.2489

STUDY III

Rytioja, M., Lappalainen, K. & Savolainen, H. Longitudinal effects of profiles of behavioural difficulties and strengths and peer group membership on children's school adjustment [manuscript under review].

STUDY I

Rytioja, M., Lappalainen, K., & Savolainen, H. (2019). Behavioural and emotional strengths of sociometrically popular, rejected, controversial, neglected, and average children. *European Journal of Special Needs Education, 34*(5), 557–571. https://doi.org/10.1080/08856257.2018.1560607

STUDY II

Rytioja, M., Lappalainen, K., & Savolainen, H. (2024). Peer groups, academic achievement, and the behaviour of elementary school-aged children: A strength-based perspective. *Infant and Child Development*. https://doi.org/10.1002/icd.2489

Received: 14 April 2023 | Revised: 5 December 2023 | Accepted: 12 December 2023

DOI: 10.1002/icd.2489

REPORT

WILEY

Peer groups, academic achievement and the behaviour of elementary school-aged children: A strength-based perspective

Marleene Rytioja[1] | Kristiina Lappalainen[1] | Hannu Savolainen[1,2]

[1]Philosophical Faculty, School of Educational Sciences and Psychology, Special Education, University of Eastern Finland, Joensuu, Finland

[2]Optentia Research Unit, North West University, Potchefstroom, South Africa

Correspondence
Marleene Rytioja, Philosophical Faculty, School of Educational Sciences and Psychology, Special Education, University of Eastern Finland, Joensuu, Finland.
Email: marleer@uef.fi

Funding information
Finnish National Board of Education, Grant/Award Numbers: 146/509/2010, 219/509/2009; Otto A. Malm Lahjoitusrahasto; Suomen Kulttuurirahasto

Abstract

The purpose of this study was to examine how the members of children's peer groups resemble each other in terms of behavioural and emotional strengths, academic achievement and behaviour at school. The participants were 739 9- to 10-year-old children (354 boys, 385 girls) from 30 Finnish elementary schools. 431 children (241 girls, 190 boys) were part of peer groups. Less than 5% of participants were other than Finnish origin. The children self-assessed their behavioural and emotional strengths, and teachers evaluated the children's academic achievement and behaviour at school. Children also filled the sociometric questionnaire and sociograms were drawn to identify peer groups. Standardized beta values of regression analyses were used as indicators of effect sizes. The results showed that when observed as a strength, children's school functioning was positively linked to both academic achievement and behaviour at school. The intraclass correlations (ICC) revealed that members of peer groups resembled each other in terms of behavioural strengths, and behaviour at school, but not in academic achievement. The gender composition of peer groups explained the variance in behaviour at school between peer groups. The results of this study

highlight the importance to consider children's peer group also when implementing behavioural interventions.

KEYWORDS
academic achievement, behaviour assessment, behavioural and emotional strengths, elementary school-aged children, peer groups

1 | INTRODUCTION

Children spend most of the school day interacting with their peers. It is not unexpected that children's peer relationships have implications for many parts of their lives. Numerous studies have indicated that peer relationships have effects on children's academic achievement (e.g., Chen et al., 2005, 2008; Guay et al., 1999) and their behavioural antecedents (e.g., Chen et al., 2008; Liem & Martin, 2011; Wentzel et al., 2010). Children interact more with behaviourally similar peers (Farrell et al., 2016; Gremmen et al., 2019; Witvliet et al., 2010), and from early adolescence, the members of children's peer groups start to resemble each other in terms of academic achievement (Gremmen et al., 2017; Kiuru et al., 2008).

The assessment of children's behaviour has been mostly concerned with problems, deficits and pathologies, whereas children's strengths, skills and competencies are less studied (Renkly & Bertolini, 2018). However, using a strength-based approach, a more holistic view of children's behaviour can be obtained. Strength-based assessment also provides tools to assess the absence of necessary skills that can be important for development (Climie & Henley, 2016). It has also been detected that strength-based assessment and intervention models can lead to an overall positive school environment and to students feeling more motivated to recognize academic and behavioural issues that need to be fixed (Brownlee et al., 2012). In this study, the focus of children's peer relationships and behavioural and emotional strengths provides a novel and different perspective on children's behavioural and emotional life. The intention of this study is to raise awareness of children's behavioural and emotional strengths and their connectedness to children's peer relationships.

In middle childhood (between the ages of 5 and 12), children start elementary school, learn the exhaustive list of skills needed in adulthood and form successful relationships with peers (Huston & Ripke, 2006). At this age, children learn many academic skills, such as reading and mathematics, and become more aware of themselves (Eccles, 1999). In middle childhood, play is the most crucial way to interact with agemates, and it is important for children's social, emotional and cognitive development (Bergen & Fromberg, 2009). Because in middle childhood children start to form more cohesive peer groups compared to younger children (Huston & Ripke, 2006). This study was performed by middle childhood sample.

The purpose of this study was to examine how elementary school-aged children's self-assessed behavioural and emotional strengths are connected to their academic achievement and behaviour at school. The connections between behavioural and emotional strengths, academic achievement and children's behaviour at school were investigated both at the individual and the peer group level. The similarities between peer group members regarding their behavioural and emotional strengths, academic achievement and behaviour at school are also investigated.

1.1 | Peer relationships, academic achievement and behaviour

Children's behaviour has been typically described by behavioural and emotional difficulties which can be distributed to externalizing and internalizing problems. Externalizing problem behaviour involves disruptive behaviour such as

fighting, conduct problems or physical or verbal aggression, whereas internalizing problems typically consist of social withdrawal, shyness, anxiety or depression. Externalizing and internalizing difficulties can co-occur and they usually lead academic and peer relationship problems (Kauffman & Landrum, 2018).

Peer relationships are interpersonal relationships established during social interaction among peers (La Greca & Harrison, 2005). Peer relationships play an important role in children's scholastic development because relationships with peers foster feelings of connection with classmates and thus enable children to participate in classroom activities (Guay et al., 1999). Children gain social support from their peers to manage better in school-related tasks (Wentzel et al., 2010), and the behavioural characteristics of peer groups have effects on children's academic performance (Chen et al., 2005). For example, academic achievement of victimized children declines if a child is part of aggressive peer group (Schwartz et al., 2008) whereas prosocial peers provide protection against harmful effects of victimization (Lamarche et al., 2006). According to earlier studies, if schools are fostering positive and adaptive peer groups this can lead to better educational and behavioural outcomes for all.

Children's social and emotional skills develop throughout their middle childhood years. During this age period, children experience the transition to elementary school, and their participation in peer-related activities increases (Carr et al., 2017; Sørlie et al., 2021). Conformity to peer pressure increases especially in early adolescence (Huston & Ripke, 2006). For example, aggressive and disruptive behaviour in classrooms is related to an increased likelihood of having aggressive friends (Powers et al., 2013) whereas friends' prosocial behaviour is associated with increased prosocial behaviour (Farrell et al., 2016). It is useful to explore children's behavioural and emotional strengths, and peer relationships at this age when their behavioural and emotional skills are still evolving.

1.2 | Peer group similarity in academic achievement and behaviour

Peer group means a group of people who are linked by common interests and typically similar age (Adler & Adler, 1998). According to earlier studies, peer group members resemble each other in terms of academic achievement, especially in adolescence. In a Finnish sample of ninth-grade students, 49% of the variance in academic achievement was found to be due to similarities between peer group members (Kiuru et al., 2008). The academic similarity in younger elementary school-aged children's peer groups has been studied less frequently.

The members of students' peer groups resemble each other in both positive (e.g., prosocial behaviour) and negative (e.g., aggressive behaviour) behavioural characteristics (Farrell et al., 2016). Students tend to select friends who are similar to themselves in academic achievement and externalizing difficulties. Peers also influence one another in the area of academic achievement and externalizing difficulties (Rambaran et al., 2017). Mechanisms such as information exchange, modelling and reinforcement explain the similarities among friends (Ryan & Shin, 2018). However, less is known about how the members of children's peer groups resemble each other in terms of their self-assessed behavioural and emotional strengths and behaviour at school, especially in the elementary school age group.

In middle childhood, children have increased cognitive capabilities and self-awareness, but they do not experience as much peer pressure as adolescents. Thus, this age period may be a good time to maximize the potential for positive growth that can help children's well-being (Huston & Ripke, 2006).

1.3 | Behavioural and emotional strengths

Students' behavioural and emotional strengths can be viewed based on several approaches. Strengths can be theorized from, for example, the perspectives of positive youth development (e.g., Damon, 2004) or positive psychology

(Peterson & Seligman, 2004). Examples of typical strength-based measurement models are the five Cs of positive youth development (Geldhof et al., 2014) and strengths of character (e.g., Peterson & Park, 2009). One typically assessed children's strength is prosocial behaviour which means desirable social behaviour like helping, sharing and co-operating (Kauffman & Landrum, 2018). Strengths can be also assessed from a special education or mental health perspective (Epstein, 2004; Sointu, 2014) or measured with the Behavioural and Emotional Rating Scale 2 (BERS-2; Epstein, 2004) which was used in this study.

Earlier research has indicated that children's behavioural and emotional strengths are connected to their academic achievement and behaviour at school. Behavioural and emotional strengths in fifth grade are connected to better academic achievement in seventh grade (Sointu et al., 2017), whereas teacher-rated school functioning and prosocial behaviour explain academic achievement in younger children (Whitley et al., 2010). Students with school-identified emotional disturbance problems have reported lower behavioural and emotional strengths (Lambert et al., 2021), and youths with below-average strengths have more behavioural and emotional impairments (Barksdale et al., 2010). Children who are in popular sociometric status group have more behavioural and emotional strengths, better academic achievement and better teacher-rated behaviour at school compared to children who are rejected by their peers (Rytioja et al., 2019). However, behavioural and emotional strengths are less studied from peer group perspective. One purpose of this study is to resolve are the members of children's peer groups similar in terms of their behavioural and emotional strengths and do the strengths of peer group members explain possible similarities in academic achievement and teacher-rated behaviour at school.

Focusing on children's behavioural and emotional strengths instead of their problems and deficits in middle childhood can further contribute to their mental well-being (Brownlee et al., 2012). Strength-based approaches have been detected to have positive consequences on children's long-term learning outcomes, and by identifying their preferences, passions and abilities, a positive effect can be obtained with regard to students' self-efficacy (Galloway & Reynolds, 2015).

1.4 | Gender differences

Children tend to play with same-sex friends, especially in middle childhood (Fabes et al., 2003; Martin et al., 2013). Boys' and girls' peer groups differ in terms of behavioural antecedents. The members of girls' peer groups are described as being more relationally aggressive, whereas boys typically embody physically aggressive behaviour in their peer groups (Shi & Xie, 2012). Boys like to interact in groups, and their same-sex play is more active-forceful, takes place further away from adults, and is more stereotyped, while girls prefer to play in smaller dyads and closer to adult supervision (Fabes et al., 2003). Boys' and girls' peer cultures also differ in terms of emotional expressivity. Girls tend to use more emotion explanations and labels compared to boys. Girls use a higher proportion of collaborative speech, especially with same-gender dyads (Tenenbaum et al., 2011), and they also use more conflict-mitigating strategies in discrepancy situations (Noakes & Rinaldi, 2006).

Gender differences also exist in academic achievement and in other scholastic behaviour. Many studies have proved that girls have better grade point averages (GPAs) compared to boys (e.g., Whitley et al., 2010). Previous strength-based studies have indicated that according to teacher ratings, girls have more behavioural and emotional strengths (Whitley et al., 2010) and better social skills, such as assertion, self-control and cooperation, compared to boys (Sørlie et al., 2021).

1.5 | Research questions

Many of the existing studies related to peer groups were performed by adolescent samples, whereas peer groups in middle childhood (9–10 years old) are less studied. In addition, the focus of behavioural studies has typically been

in children's behavioural problems and difficulties. It is a meaningful addition to the extant literature to find out how the members of elementary school-aged children's peer groups resemble each other in their academic achievement and behavioural characteristics and whether children's self-assessed behavioural and emotional strengths are related to their academic achievement and behaviour. To fill this gap in the previous literature, the following research questions were specified:

1. How are elementary school-aged children's self-assessed behavioural and emotional strengths connected to their academic achievement and teacher-rated behaviour at school?
2. How homogeneous are the members of elementary school-aged children's peer groups with regard to their behavioural and emotional strengths, prosocial behaviour, behavioural and emotional difficulties, academic achievement and teacher-rated behaviour at school?
3. Does similarity among peer group members in behavioural and emotional strengths, prosocial behaviour and behavioural and emotional difficulties explain the similarity in their academic achievement and teacher-rated behaviour at school?

2 | METHODS

2.1 | Design and procedures

The data were collected in spring 2011 from seven municipalities in Eastern Finland. The ethical standards of the University of Eastern Finland were followed in the conducting of the study and children responded anonymously to the questionnaire. Children self-assessed their own behavioural and emotional strengths and difficulties. They also filled in a sociometric questionnaire. All the children's data were collected during regular school lessons. Teachers also evaluated their students' academic achievement (mathematical skills, reading and writing) and behaviour at school (behaviour towards other children and teachers). This study is cross-sectional and all data were collected at the same time point. For a more accurate review of the data collection, see Sointu et al. (2014).

2.2 | Participants

The participants of this study were 739 third graders (354 boys, 385 girls) from 30 schools and 50 classes. The data collection was part of an educational development project supported by the Finnish National Board of Education and schools signed up for the project themselves. Participating was voluntary for schools, teachers and children. All the participants had parental permission to take part in this study. The majority of the participants had Finnish origin, and less than 5% came from other ethnicities. In the Finnish school system, third graders are typically 9–10 years old, and they spend most of the school day with the same classmates. Class teachers educate their students in most subjects in grades 1–6.

2.3 | Measures

2.3.1 | Behavioural and emotional rating scale-2

The children's behavioural and emotional strengths were assessed using the Finnish translated version of the Behavioural and emotional rating scale 2 (BERS-2; Epstein, 2004; Sointu et al., 2014). The BERS-2 evaluates

children's emotional and behavioural strengths based on 52 items in five subscales: (1) interpersonal strength (IS)—how a child interacts with others in social situations (e.g., 'When my feelings are hurt, I stay calm'.); (2) intrapersonal strength (IaS)—how a child understands his or her own functioning (e.g., 'I trust myself'.); (3) family involvement (FI)—how a child interacts with his or her family (e.g., 'I get along well with my family'.); (4) school functioning (SF)—how a child performs in school (e.g., 'I pay attention in class'.) and (5) affective strength (AS)—how a child gives and receives affect (e.g., 'It's okay when people hug me'). These five subscales form an overall strength index (SI) score. The original BERS-2 also includes an optional career strength (CS) scale, but this subscale was not used in this study. The BERS-2 has separate questionnaires for parents, teachers and youths. We were interested in children's self-ratings of their own behavioural and emotional strengths, and only the youth rating scale was used.

Within Finnish culture, the Finnish translated version of the BERS-2 has been found to be a psychometrically sound instrument with acceptable measurement properties (Lambert et al., 2019; Lappalainen et al., 2009; Sointu et al., 2014). Cronbach's alphas were calculated for this study, and they ranged from good to excellent for all the subscales (IS [$\alpha = 0.88$], IaS [$\alpha = 0.80$], FI [$\alpha = 0.76$], SF [$\alpha = 0.76$], AS [$\alpha = 0.79$]) and SI [$\alpha = 0.94$]. A four-point Likert-type scale (ranging from 1 to 4) was used in the BERS-2, where 4 means the statement relates strongly to the child, and 1 signifies that the statement does not relate to the child at all (Epstein, 2004).

2.3.2 | Strengths and difficulties questionnaire

Because behavioural and emotional difficulties have consequences for children's management at school, these aspects were also estimated in this study. The Finnish translated version (SDF-Fin) of the strengths and difficulties questionnaire (SDQ) was used to measure both children's strengths and problem behaviour (Goodman, 1997, 2001; Koskelainen et al., 2000). The SDQ-Fin consists of prosocial behaviour (e.g., 'I try to be nice to other people. I care about their feelings'.), conduct problems (e.g., 'I get very angry and often lose my temper'.), hyperactivity/inattention (e.g. 'I am restless, I cannot stay still for long'.), emotional symptoms ('I get a lot of headaches, stomachaches or sickness'.) and peer relationship problems (e.g. 'I would rather be alone than with people of my age'.) scales, and it is also considered a psychometrically sound instrument in Finnish culture (Borg et al., 2012; Koskelainen et al., 2000, 2001). In general population samples, it may be better to use a three-subscale version of the SDQ (Goodman et al., 2010). Consequently, the prosocial scale (5 items), externalizing problems (10 items; conduct problems and hyperactivity/inattention scales) and internalizing problems (10 items; emotional symptoms and peer relationship problem scales) were used in this study. The measurement scale in the SDQ ranged from 1 to 3, where 1 means that the child does not have the measurable characteristic, and 3 signifies that the child has the characteristic. High scores mean that the child has internalizing and externalizing symptoms or a high level of prosocial behaviour. In this study, children self-evaluated their own externalizing and internalizing difficulties and prosocial behaviour. The Cronbach's alphas were good for all the scales used (the prosocial scale [$\alpha = 0.73$], externalizing problems [$\alpha = 0.72$], internalizing problems [$\alpha = 0.75$]).

2.3.3 | Teacher evaluations

Teacher evaluations of academic achievement and children's behaviour at school were used to examine how children manage at school. Teachers evaluated their students' reading, writing and mathematical skills, as well as their behaviour at school (behaviour towards other students and teachers). Behavioural evaluations are teachers' view of children's behaviour at school environment. Standard Finnish subject rating (4 is the poorest rating and 10 is the best) was used in the teacher evaluations. The total scores of these evaluations were calculated to demonstrate children's academic achievement (reading, writing and mathematical skills) and behaviour at school. The Cronbach's alphas were good (academic achievement [$\alpha = 0.82$], behaviour at school [$\alpha = 0.75$]).

2.4 | Peer group identification

Sociometric measurement was used to identify children's peer groups (Coie et al., 1982). Children named three classmates with whom they spend time and three classmates with whom they do not spend time. Cross-sex nominations were allowed. Only positive nominations were used to identify children's peer groups. The number of positive nominations varied from zero to three. The average number of nominations was 2.32, and 4.7% of the children did not give any positive nominations.

Peer groups were formed on the basis of reciprocal, unilateral and indirect links. A reciprocal link is a mutual positive nomination between two children. A unilateral link is a positive nomination given by one child to another, but it is not reciprocal. An indirect link is an association where two children are connected to each other via a third child (e.g., Kiuru et al., 2007, 2011; Laursen et al., 2010).

Sociograms were drawn for each classroom to identify children's peer groups. The peer groups were formed based on the following criteria: (1) at least 50% of a child's reciprocal and unilateral links had to be within the peer group, (2) either a reciprocal, a unilateral or an indirect link had to exist between each child and every other child in the peer group and (3) a child had to receive at least one positive nomination from the peer group. All these group membership criteria had to be met for a child to belong to a certain peer group. The child could only be part of one peer group. If they had links to many peer groups, children were assigned to the peer group within which they had the most peer nominations. Children who were absent from school were also included in peer groups if the following criteria were met: (1) 50% of the peer nominations received were from a particular peer group and (2) they received at least two nominations from their peer group. These criteria have also been used in other studies to identify peer groups (e.g., Kiuru et al., 2007, 2011; Laursen et al., 2010).

Peer group members can be classified into isolate dyads, cliques and loose groups. Isolate dyads have only two children who nominate each other. They form a reciprocal link and are not part of any other peer group. Cliques consist of at least three members, and they are highly cohesive peer groups. At least 85% of all possible nominations are reciprocal in cliques. Loose groups are groups that meet the criteria of peer group formation but, in contrast to cliques, fewer than 85% of the links are reciprocal. Those children who do not belong to any groups are isolates or liaisons. Isolates are lone children who do not have any reciprocal, unilateral, or indirect links. Liaisons have links to several peer groups, but they do not belong to any group (Kiuru, 2008).

A total of 431 children (57.5%) were members of peer groups. 71 (16.5%) were members of cliques, 236 (54.8%) were members of loose groups and 124 (28.8%) were members of isolate dyads. The size of the peer groups varied from 2 to 9, with an average of 3.24, and there were a total of 133 peer groups. Of the peer groups, 89.5% were same-sex groups. Children who were not part of any peer group (isolates) or who did not met the reciprocity criteria (liaisons) were removed from the final analyses. A comparison of group members (n = 431) and non-members (n = 309) indicated that the children who were members of peer groups had better academic achievement ($M = 8.35$, SD = 0.87; $t(662) = 1.67$, $p = 0.00$) than children who were liaisons or isolates ($M = 8.11$, SD = 0.83). Members of peer groups had fewer internalizing symptoms ($M = 1.51$, SD = 0.33; $t(716) = -2.54$, $p = 0.011$) than non-members ($M = 1.58$, SD = 0.38). No differences were found with regard to the other variables. In terms of gender, 55.5% of girls and 44.5% of boys were members of peer groups. Girls were therefore more likely to be members of peer groups than boys ($\chi^2(1, N = 431) = 6.95$, $p = 0.008$).

2.5 | Data analysis

The data analysis was performed through the following steps: (1) The regression model was constructed to examine how children's self-assessed strengths were associated with their behaviour at school and academic achievement. (2) The intraclass correlations (ICC) were calculated to indicate how much of the variance was

due to similarity between peer group members. (3) A two-level model was constructed to examine whether the strengths and difficulties shared by peer group members predicted children's academic achievement and behaviour at school. The data were analysed using Mplus statistical package 8.0 (Muthén & Muthén, 1998–2017).

3 | RESULTS

3.1 | Preliminary analyses

First, the intercorrelations between the variables were calculated for peer group members. Correlations were counted both within- and between-level (for more information, see Table 1).

Significant gender differences were observed in terms of prosocial behaviour, academic achievement (GPA) and behaviour at school. Only peer group members were included in these comparisons. Girls were found to have more prosocial behaviour ($M = 2.64$, SD $= 0.34$, $t(413) = 4.31$, $p = < 0.001$) than boys ($M = 2.48$, SD $= 0.41$), better academic achievement ($M = 8.49$, SD $= 0.82$, $t(385) = 3.69$, $p = <0.001$) than boys ($M = 8.17$, SD $= 0.89$) and better behaviour at school ($M = 9.06$, SD $= 0.71$, $t(385) = 8.11$, $p = <0.001$) than boys ($M = 8.43$, SD $= 0.79$).

3.2 | Regression model

A regression model was constructed to examine how children's self-assessed behavioural and emotional strengths were connected to their academic achievement and behaviour at school. Because the focus of this study was on peer group members, only children with peer group were included. Behaviour at school and academic achievement were contained in the same model because they are correlated with each other ($r = 0.376$, $p = 0.000$). The model was saturated; thus, the model fit indices are not presented. The results indicate that gender is associated with both academic achievement and behaviour. Girls received better academic achievement and behavioural ratings from their teachers. School functioning, when observed as a strength, was especially related to academic achievement and behaviour, whereas other behavioural and emotional strengths were not observed to have such an effect. Externalizing and internalizing disorders were negatively associated with behaviour at school and academic achievement respectively. Interpersonal strengths were shown to have a negative effect with regard to academic achievement, and intrapersonal strengths had a similar influence in terms of behaviour at school (see Figure 1). These unexpected and abnormal results are probably due to a suppressor effect (A suppressor effect occurs when a variable has zero correlation with the dependent variable while still contributing to the predictive validity of the test pattern; Lancaster, 1999).

3.3 | ICC calculation

The ICCs were calculated to indicate how much of the variance was due to individual differences (within peer group variance) and what proportion was due to differences between peer groups (between peer group variation) (Liljequist et al., 2019). The ICCs were statistically significant for interpersonal and affective strengths, prosocial behaviour and behaviour at school (for a more accurate review, see Table 1). The statistically significant ICCs were used to construct the two-level model. ICCs were also calculated for schools. Only 1.2% of variance was explained by differences between schools. In addition, differences between schools are very small in Finland according to PISA study (Ministry of Education and Culture, 2019). Thus, the school-level model was not included.

TABLE 1 Correlations (between-level above the diagonal, within-level below the diagonal) and intraclass correlations.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	ICC
1. Gender[a]	-	-	1.00	-	−0.63***	−0.30	-	-	-	−0.83***	−0.63**	-	-	
2. Academic achievement	8.36	0.87	−0.11	1.00	-	-	-	-	-	-	-	-	-	0.092
3. Behaviour at school	8.86	0.81	0.01	0.36***	1.00	0.24	-	-	-	0.53**	0.48**	-	-	0.395***
4. Interpersonal strengths	3.46	0.38	−0.15*	0.09	0.24***	1.00	-	-	-	0.23	0.37	-	-	0.093*
5. Intrapersonal strengths	3.58	0.35	−0.04	0.12*	0.09	0.74***	1.00	-	-	-	-	-	-	0.080
6. Family involvement	3.48	0.39	0.01	0.08	0.16**	0.66***	0.67***	1.00	-	-	-	-	-	0.088
7. School functioning	3.47	0.38	−0.04	0.27***	0.32***	0.70***	0.62***	0.58***	1.00	-	-	-	-	0.092
8. Affective strengths	3.29	0.51	−0.11	0.10	0.07	0.71***	0.70***	0.62***	0.55***	1.00	0.85***	-	-	0.185*
9. Prosocial behaviour	2.56	0.38	−0.15*	0.07	0.17**	0.69***	0.56***	0.50***	0.49***	0.60***	1.00	-	-	0.156*
10. Externalizing disorders	1.50	0.33	0.10	−0.28***	−0.29***	−0.48***	−0.37***	−0.38***	−0.50***	−0.30***	−0.37***	1.00	-	0.038
11. Internalizing disorders	1.52	0.33	−0.07	−0.26***	−0.07	−0.16**	−0.29***	−0.26***	−0.24***	−0.12*	−0.12*	0.56***	1.00	0.011

Note: Correlations were calculated only for peer group members. Because of significant intraclass correlations, only correlations of behaviour at school, interpersonal strengths, affective strengths and prosocial behaviour were estimated at the peer-group (between) level.

Abbreviations: ICC, intraclass correlation; M, mean, SD, standard deviation.

[a]1, girl; 2, boy.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

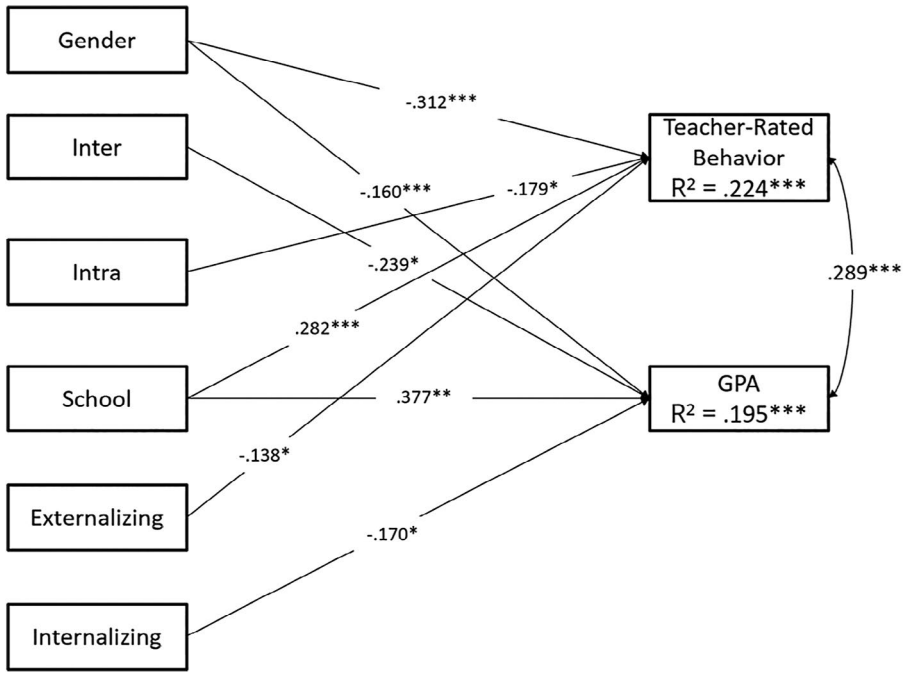

FIGURE 1 Regression model of the associations between behavioural and emotional strengths, teacher-rated behaviour at school and academic achievement (Grade Point Average GPA). Only statistically significant associations are presented in this model. R^2, *R* squared.

3.4 | Two-level model

Two-level model was executed to resolve whether the strengths and prosocial behaviour of peer groups would explain the peer group members' behaviour at school. Only variables with statistically significant ICCs were included in the between-level model (interpersonal and affective strengths, prosocial behaviour and behaviour at school), and all the existing variables were tested in the within-level one. Academic achievement was not included as an outcome variable in the two-level model because there was no statistically significant ICC, and the connections between behavioural and emotional strengths and academic achievement were presented earlier (see Figure 1). The model was saturated; thus, the model fit indices are not presented. No statistically significant associations were found (see Figure 2).

Because strengths were highly correlated with each other (see Table 1), the connection to behaviour grades was tested separately for each independent variable (step 1). All the executed models were saturated; thus, the model fit indices are not presented. There was no statistically significant association between interpersonal strengths and behaviour at school at the between level, Affective strengths explained the variance in behaviour at school between peer groups. The variance between peer groups in terms of prosocial behaviour explained the variance in behaviour at school between peer groups (see Table 2).

Because children mostly tend to interact with same-sex peers, the gender effects were tested also (step 2). All the associations between behaviour at school and interpersonal and affective strengths and prosocial behaviour were non-significant. Gender revealed significant effects between behaviour at school and interpersonal strengths, affective strengths and prosocial behaviour between peer groups (see Table 3). These results indicate that girls and boys differ significantly in their behaviour at school. The members of

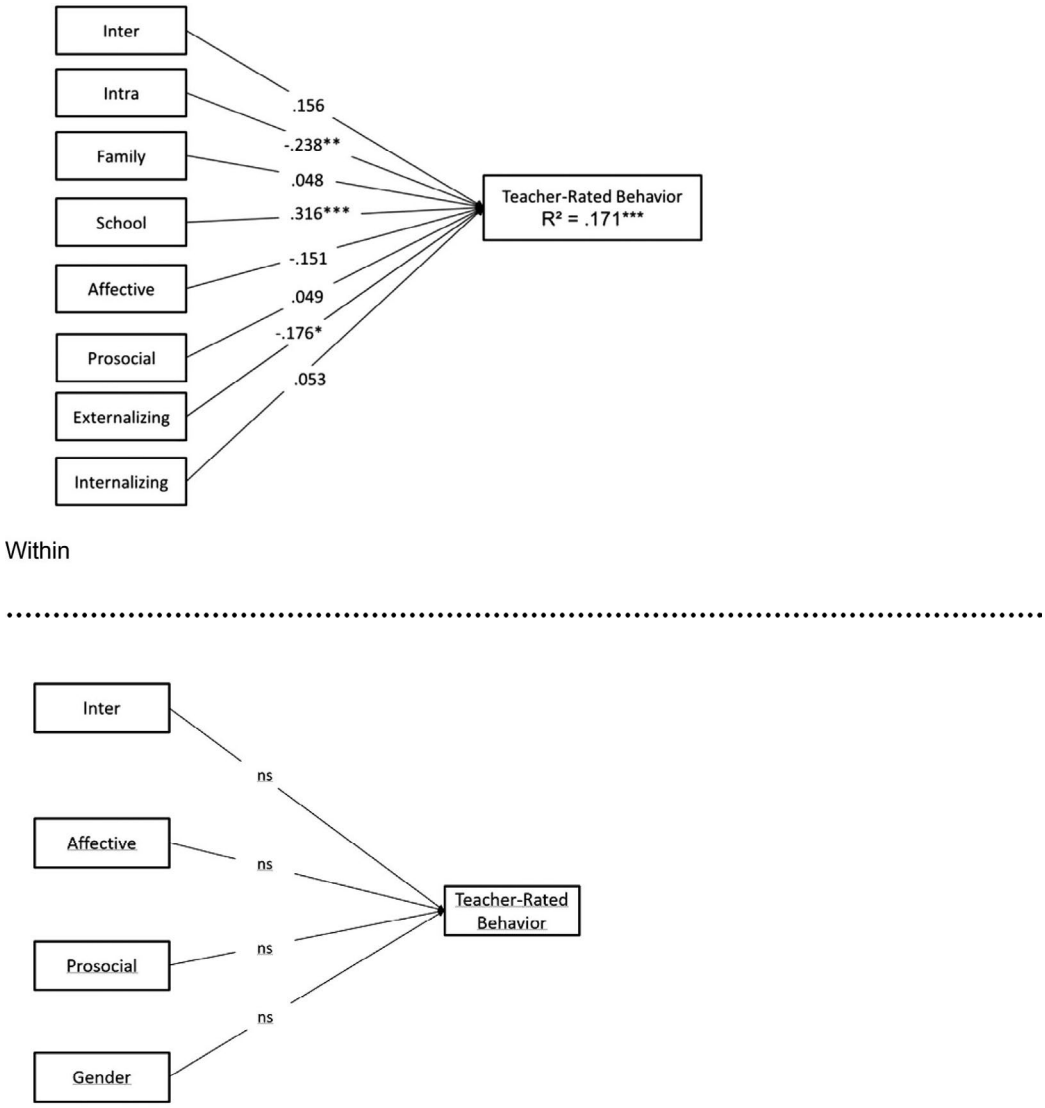

FIGURE 2 A two-level model of the associations between behavioural and emotional strengths and behaviour at school. Only variables with statistically significant ICCs are included in the between-level part of the model. R^2, *R* squared.

girls' peer groups received better ratings from their teachers regarding their behaviour. There was variance between peer groups in relation to affective strengths and prosocial behaviour, but this variance was explained to a large extent by gender differences. The members of girls' peer groups had more affective strengths and prosocial behaviour, and they obtained better behavioural ratings from their teachers.

TABLE 2 Multilevel model of interpersonal strengths, affective strengths, prosocial behaviour, gender and behaviour at school (step 1).

Step 1	Interpersonal strengths		Affective strengths		Prosocial behaviour		Gender[a]	
	β_{within}	$\beta_{between}$	β_{within}	$\beta_{between}$	β_{within}	$\beta_{between}$	β_{within}	$\beta_{between}$
	(SE)	(SE)	(SE)	(SE)	(SE)	(SE)	(SE)	(SE)
	0.238***	0.256	0.075	0.379*	0.319**	0.363*	0.040	−0.662***
	(0.057)	(0.194)	(0.061)	(0.161)	(0.102)	(0.158)	(0.087)	(0.084)
R^2	0.057*	0.065	0.006	0.144	0.030	0.132	0.002	0.438***

Note: Only variables with statistically significant ICCs were included.
Abbreviation: SE = standard error.
[a]1, girl; 2, boy.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

TABLE 3 Multilevel model of interpersonal strengths, affective strengths, prosocial behaviour, gender and behaviour at school (step 2).

Step 2	Gender and interpersonal strengths		Gender and affective strengths		Gender and prosocial behaviour	
	β_{within}	$\beta_{between}$	β_{within}	$\beta_{between}$	β_{within}	$\beta_{between}$
	(SE)	(SE)	(SE)	(SE)	(SE)	(SE)
Gender[a]	0.061	−0.649***	0.043	−0.697***	0.056	−0.631***
	(0.084)	(0.107)	(0.087)	(0.158)	(0.087)	(0.135)
Interpersonal strengths	0.247***	0.054				
	(0.057)	(0.203)				
Affective strengths			0.067	−0.061		
			(0.062)	(0.217)		
Prosocial behaviour					0.178**	0.060
					(0.054)	(0.188)
R^2	0.062*	0.441***	0.006	0.440***	0.033	0.439***

Note: Only variables with statistically significant ICCs were included.
Abbreviation: SE, standard error.
[a]1, girl; 2, boy.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

4 | DISCUSSION

The purpose of this study was to examine how elementary school-aged children's behavioural and emotional strengths are associated with their academic achievement and behaviour at school, and how the members of children's peer groups resemble each other in terms of behavioural and emotional strengths, academic achievement and behaviour. School functioning, when observed as a strength, was associated with academic achievement and behaviour but only at the individual level. This result is congruent with peer group similarity, where the members of children's peer groups do not resemble each other in terms of academic achievement, and school-related skills are enhanced when the clustering effect is not considered. It also replicates earlier studies where school-related strengths were found to be associated with better academic results (Sointu et al., 2017; Whitley et al., 2010). Whereas it is important to enhance children's behavioural and emotional strengths to enable their effective

functioning at school and in peer groups, it is also important to support their skills related to school functioning to promote their academic achievement. Children who have more study-related skills (Putwain et al., 2013) and are more passionate about learning (Salmela & Uusiautti, 2015) typically experience better academic adjustment.

The strength-based perspective of middle childhood-aged children's peer relationships provides a new insight for peer relationship studies. The members of children's peer groups resemble each other in terms of interpersonal and affective strengths, prosocial behaviour and behaviour at school, but not with regard to academic achievement. This result is inconsistent with earlier studies where similarities in academic achievement have been strongly indicated (e.g., Fortuin et al., 2016; Gremmen et al., 2017; Kiuru et al., 2008). However, previous studies have been based on teenager samples, whereas this study included middle childhood-aged children. According to this study, academic achievement is not such a significant factor in peer relationships between younger children. In adolescence, students start to use peers as a source of social support instead of parents and teachers and favour greater use of ability grouping (Hughes, 2012). High-achieving students also actively befriend with each other as they enter early adolescence (Gremmen et al., 2017). This study revealed that elementary school-aged children prefer skills related to 'being a good friend' over those linked to academic achievement. Rather than academic achievement, behavioural correlates are more substantial in middle childhood-aged children's peer groups. It is important to pay attention to children's behavioural and emotional functioning in their peer groups to enhance children's favourable behavioural and emotional well-being.

According to this study, the differences in children's behavioural evaluation are mostly explained by children's gender rather than behavioural and emotional strengths shared by peer group members. One explanation for this result is that teachers view behaviour in peer groups in a different way. Regarding problematic behaviour, in children's peer groups, aggressive and disruptive actions are viewed more negatively by teachers compared to social withdrawal or rough-and-tumble play (Coplan et al., 2015). Prosocial behaviour is valued, especially in girls' peer groups (Markovic & Bowker, 2014), and previous teacher ratings have indicated that girls have more behavioural and emotional strengths than boys (Whitley et al., 2010). Teachers also play a role in children's peer groups. They provide information and guidance, encourage children to behave in appropriate ways, and control actions that are atypical or unaccepted in peer groups. Teachers also facilitate children's social interactions, opportunities and general peer dynamics (Farmer et al., 2011).

4.1 | Limitations

This study has several limitations. Only those children who were part of peer groups were included in this study and many children were not included in the peer groups. This can be due to school absences and because of nominations limited to only three peers from the same classroom and it does not take into account friends from children's hobbies, neighbourhoods, or other classes in the same school. Moreover, reciprocity was emphasized when peer groups were formed. In future studies, it is important to examine the behavioural and emotional strengths of all children, including those that do not belong to a peer group. Although self-evaluations are a workable tool to assess how a child feels regarding his or her own strengths and skills, children can overestimate their own strengths and competencies, especially at younger ages (between the ages of 3 and 10) (Boseovski, 2010). These kinds of evaluation biases can lead to distortions of children's behavioural traits and may cause children to highlight their own strengths instead of providing a realistic view of their strengths and difficulties. In further studies, it would be preferable to use multiple informants for strength ratings (e.g., teachers, parents and self-evaluations) to gain a more realistic view of children's behavioural and emotional lives.

The data of this study are quite old and of course, some changes have been taken place in schools and education (e.g., increased usage of electronic devices). However, the school environment where children spend time and interact with their peers remains still quite similar to at the time of data collection.

This study does not consider variables that have been detected as having associations with children's academic achievement (e.g., socioeconomic status, parental involvement, student–teacher interaction) (Moreira et al., 2013). In the future, it would be useful to examine how children befriend each other in terms of socioeconomic factors or interaction with teachers or parents and how these factors are associated with children's academic achievement and behavioural assessment at the peer group level. The correlational relationships between elementary school-aged children's self-assessed strengths, academic achievement and behaviour are examined in this study but cannot be interpreted as strong causal relationships because of the cross-sectional design. The longitudinal studies are needed to resolve whether behavioural similarities between peers effect on behavioural ratings or does children's similar behavioural ratings lead them to befriend with each other. However, children's academic grades or feedback on their behaviour can have consequences for children's interpretations of their own behavioural and emotional skills. In further studies, it is important to clarify how feedback regarding children's skills and competencies is associated with their strengths and abilities.

4.2 | Practical implications

The results of this study indicate that teachers evaluate the members of girls' peer groups as behaving better at school compared to the members of boys' peer groups. It has previously been detected that teachers give girls better grades for academic subjects, and this is probably due to gender bias in grading. These kinds of gender biases are explained by better in-class behaviour and more diligent homework performance by girls, which confound teachers' grades (Protivinsky & Munich, 2018). It is possible that teachers also have gender biases regarding behaviour evaluations. It is important that teachers consider children primarily as individuals and make individual-based rather than group-based judgements.

According to this study, the members of children's peer groups resemble each other in terms of their behavioural and emotional strengths and teacher-rated behaviour at school. This result highlights the importance of considering also children's peer group when implementing behavioural interventions. In addition to academic skills and competencies, teachers should pay more attention to children's behavioural and emotional lives in school environment.

One significant result of this study was that children's self-assessed school functioning, as a strength, was associated with better academic achievement and teacher-rated behaviour at school. By enhancing children's school-related skills like task-orientation and attentiveness in classroom, both academic achievement and behavioural grades can be increased. Teachers should also pay attention how much they emphasize school-related skills when assessing children's behaviour compared to other behavioural and emotional skills like interpersonal competencies or affective abilities.

5 | CONCLUSION

Self-evaluations of elementary school-aged children's emotional and behavioural strengths were used in this study. The strength-based perspective provides a new insight into children's behavioural and emotional lives and allows a more holistic view of children's behaviour to be obtained. The use of self-assessment evaluation tools provides a view of children's well-being from their own perspective. However, it is also important to gain information about the peer relationships of younger children to support children's behaviour and relationships with agemates at an early stage.

This study revealed that the members of children's peer groups resemble each other in terms of their behaviour at school but not with regard to academic achievement. Children's self-experienced behavioural and emotional strengths do not explain the variance in children's behavioural ratings at school between peer groups. The differences in children's behavioural evaluations are highly explained by the gender composition of peer groups and it is meaningful for teachers to make rather individual than group-based evaluations.

AUTHOR CONTRIBUTIONS

Marleene Rytioja: Writing – original draft. **Kristiina Lappalainen:** Supervision. **Hannu Savolainen:** Supervision.

FUNDING INFORMATION

This work was supported by the Finnish Cultural Foundation, the Otto A. Malm Foundation and Finnish National Board of Education (FNBE) grant code 219/509/2009, 146/509/2010.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

PEER REVIEW

The peer review history for this article is available at https://www.webofscience.com/api/gateway/wos/peer-review/10.1002/icd.2489.

DATA AVAILABILITY STATEMENT

Research data are not shared.

ETHICS STATEMENT

The study was done in accordance with the ethical guidelines of the University of Eastern Finland.

ORCID

Marleene Rytioja https://orcid.org/0000-0002-1830-3806
Kristiina Lappalainen https://orcid.org/0000-0001-8102-7931
Hannu Savolainen https://orcid.org/0000-0002-1264-3746

REFERENCES

Adler, P. A., & Adler, P. (1998). *Peer power : Preadolescent culture and identity*. Rutgers University Press.

Barksdale, C. L., Azur, M., & Daniels, A. M. (2010). Behavioral and emotional strengths among youth in systems of care and the effect of race/ethnicity. *Journal of Emotional and Behavioral Disorders*, *18*(4), 236–246. https://doi.org/10.1177/1063426609351700

Bergen, D., & Fromberg, D. P. (2009). Play and social interaction in middle childhood. *Phi Delta Kappan*, *90*(6), 426–430.

Borg, A.-M., Kaukonen, P., Salmelin, R., Joukamaa, M., & Tamminen, T. (2012). Reliability of the strengths and difficulties questionnaire among Finnish 4–9-year-old children. *Nordic Journal of Psychiatry*, *66*(6), 403–413. https://doi.org/10.3109/08039488.2012.660706

Boseovski, J. (2010). Evidence for "rose-colored glasses": An examination of the positivity bias in young children's personality judgments. *Child Development Perspectives*, *4*(3), 212–218. https://doi.org/10.1111/j.1750-8606.2010.00149.x

Brownlee, K., Rawana, E. P., & MacArtthur, J. (2012). Implementation of a strengths-based approach to teaching in an elementary school. *Journal of Teaching and Learning*, *8*(1), 1–12. https://doi.org/10.1111/1467-8578.12131

Carr, A., Skuse, D., Bruce, H., & Dowdney, L. (2017). Social and emotional development in middle childhood. In A. Carr (Ed.), *Child psychology and psychiatry* (pp. 83–90). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119170235.ch10

Chen, X., Chang, L., He, Y., & Liu, H. (2005). The peer group as a context: Moderating effects on relations between maternal parenting and social and school adjustment in Chinese children. *Child Development*, *76*(2), 417–434. https://doi.org/10.1111/j.1467-8624.2005.00854.x

Chen, X., Chang, L., Liu, H., & He, Y. (2008). Effects of the peer group on the development of social functioning and academic achievement: A longitudinal study in Chinese children. *Child Development*, *79*(2), 235–251. https://doi.org/10.1111/j.1467-8624.2007.01123.x

Climie, E. A., & Henley, L. (2016). A renewed focus on strengths-based assessment in schools: Strengths-based assessment. *British Journal of Special Education*, *43*(2), 108–121. https://doi.org/10.22329/jtl.v8i1.3069

Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, *18*(4), 557–570. https://doi.org/10.1037/0012-1649.18.4.557

Coplan, R. J., Bullock, A., Archbell, K. A., & Bosacki, S. (2015). Preschool teachers' attitudes, beliefs, and emotional reactions to young children's peer group behaviors. *Early Childhood Research Quarterly*, *30*, 117–127. https://doi.org/10.1016/j.ecresq.2014.09.005

Damon, W. (2004). What is positive youth development? *The Annals of the American Academy of Political and Social Science*, *591*(1), 13–24. https://doi.org/10.1177/0002716203260092

Eccles, J. (1999). The development of children ages 6 to 14. *The Future of Children*, *9*(2), 30–44. https://doi.org/10.2307/1602703

Epstein, M. H. (2004). *Behavioral and emotional rating scale: A strength-based approach to assessment: Examiner's manual* (2nd ed.). Pro-Ed.

Fabes, R. A., Martin, C. L., & Hanish, L. D. (2003). Young children's play qualities in same-, other-, and mixed-sex peer groups. *Child Development*, *74*(3), 921–932. https://doi.org/10.1111/1467-8624.00576

Farmer, T. W., McAuliffe Lines, M., & Hamm, J. V. (2011). Revealing the invisible hand: The role of teachers in children's peer experiences. *Journal of Applied Developmental Psychology*, *32*(5), 247–256. https://doi.org/10.1016/j.appdev.2011.04.006

Farrell, A. D., Thompson, E. L., & Mehari, K. R. (2016). Dimensions of peer influences and their relationship to adolescents' aggression, other problem behaviors and prosocial behavior. *Journal of Youth and Adolescence*, *46*(6), 1351–1369. https://doi.org/10.1007/s10964-016-0601-4

Fortuin, J., van Geel, M., & Vedder, P. (2016). Peers and academic achievement: A longitudinal study on selection and socialization effects of in-class friends. *The Journal of Educational Research*, *109*(1), 1–6. https://doi.org/10.1080/00220671.2014.917257

Galloway, R., & Reynolds, B. (2015). Positive psychology in the elementary classroom: The influence of strengths-based approaches on children's self-efficacy. *Open Journal of Social Sciences*, *3*(9), 16–23. https://doi.org/10.4236/jss.2015.39003

Geldhof, G. J., Bowers, E. P., Boyd, M. J., Mueller, M. K., Napolitano, C. M., Schmid, K. L., & Lerner, R. M. (2014). Creation of short and very short measures of the five Cs of positive youth development. *Journal of Research on Adolescence*, *24*(1), 163–176. https://doi.org/10.1111/jora.1203

Goodman, A., Lamping, D. L., & Ploubidis, G. B. (2010). When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the Strengths and Difficulties Questionnaire (SDQ): Data from British parents, teachers and children. *Journal of Abnormal Child Psychology*, *38*(8), 1179–1191. https://doi.org/10.1007/s10802-010-9434-x

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*(5), 581–586. https://doi.org/10.1111/j.1469-7610.1997.tb01545.x

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*(11), 1337–1345. https://doi.org/10.1097/00004583-200111000-0001

Gremmen, M., Berger, C., Ryan, A., Steglich, C., Veenstra, R., & Dijkstra, J. K. (2019). Adolescents' friendships, academic achievement, and risk behaviors: Same-behavior and cross-behavior selection and influence processes. *Child Development*, *90*(2), E192–E211. https://doi.org/10.1111/cdev.13045

Gremmen, M. C., Dijkstra, J. K., Steglich, C., & Veenstra, R. (2017). First selection, then influence: Developmental differences in friendship dynamics regarding academic achievement. *Developmental Psychology*, *53*(7), 1356–1370. https://doi.org/10.1037/dev0000314

Guay, F., Boivin, M., & Hodges, E. V. E. (1999). Predicting change in academic achievement: A model of peer experiences and self-system processes. *Journal of Educational Psychology*, *91*(1), 105–115. https://doi.org/10.1037/0022-0663.91.1.105

Hughes, J. N. (2012). Teachers as managers of students' peer context. In A. M. Ryan & G. W. Ladd (Eds.), *Peer relationships and adjustment at school* (pp. 189–218). Information Age Publishing, Incorporated.

Huston, A. C., & Ripke, N. M. (2006). Middle childhood: Contexts of development. In A. C. Huston & M. N. Ripke (Eds.), *Developmental contexts in middle childhood: Bridges to adolescence and adulthood* (pp. 1–22). Cambridge University Press.

Kauffman, J. M., & Landrum, T. J. (2018). *Characteristics of emotional and behavioral disorders of children and youth* (11th ed.). Pearson.

Kiuru, N. (2008). *The role of adolescents' peer groups in the school context*. University of Jyväskylä.

Kiuru, N., Aunola, K., Nurmi, J.-E., Leskinen, E., & Salmela-Aro, K. (2008). Peer group influence and selection in adolescents' school burnout: A longitudinal study. *Merrill-Palmer Quarterly*, *54*(1), 23–55. https://doi.org/10.1353/mpq.2008.0008

Kiuru, N., Aunola, K., Vuori, J., & Nurmi, J.-E. (2007). The role of peer groups in adolescents' educational expectations and adjustment. *Journal of Youth and Adolescence*, *36*, 995–1009. https://doi.org/10.1007/s10964-006-9118-6

Kiuru, N., Haverinen, K., Salmela-Aro, K., Nurmi, J.-E., Savolainen, H., & Holopainen, L. (2011). Students with reading and spelling disabilities: Peer groups and educational attainment in secondary education. *Journal of Learning Disabilities*, *44*(6), 556–569. https://doi.org/10.1177/0022219410392043

Koskelainen, M., Sourander, A., & Kaljonen, A. (2000). The strengths and difficulties questionnaire among Finnish school-aged children and adolescents. *European Child & Adolescent Psychiatry*, *9*(4), 277–284. https://doi.org/10.1007/s007870070031

Koskelainen, M., Sourander, A., & Vauras, M. (2001). Self-reported strengths and difficulties in a community sample of Finnish adolescents. *European Child & Adolescent Psychiatry*, *10*(3), 180–185. https://doi.org/10.1007/s007870170024

La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology*, *34*(1), 49–61. https://doi.org/10.1207/s15374424jccp3401_5

Lamarche, V., Brendgen, M., Boivin, M., Vitaro, F., Pérusse, D., & Dionne, G. (2006). Do friendships and sibling relationships provide protection against peer victimization in a similar way? *Social Development (Oxford, England)*, *15*(3), 373–393. https://doi.org/10.1111/j.1467-9507.2006.00347.x

Lambert, M. C., January, S.-A. A., Gonzalez, J. E., Epstein, M. H., & Martin, J. (2021). Comparing behavioral and emotional strengths of students with and without emotional disturbance. *Journal of Psychoeducational Assessment*, *39*(8), 999–1014. https://doi.org/10.1177/07342829211038451

Lambert, M. C., Sointu, E. T., & Epstein, M. H. (2019). A comprehensive review of international research using the behavioral and emotional rating scale. *International Journal of School & Educational Psychology*, *7*(3), 215–226. https://doi.org/10.1080/21683603.2017.1422061

Lancaster, B. P. (1999). Defining and interpreting suppressor effects: Advantages and limitations. (ED426097). ERIC. https://files.eric.ed.gov/fulltext/ED426097.pdf

Lappalainen, K., Savolainen, H., Kuorelahti, M., & Epstein, M. H. (2009). An international assessment of the emotional and behavioral strengths of youth. *Journal of Child and Family Studies*, *18*(6), 746–753. https://doi.org/10.1007/s10826-009-9287-5

Laursen, B., Bukowski, W., Nurmi, J.-E., Marion, D., Salmela-Aro, K., & Kiuru, N. (2010). Opposites detract: Middle school peer group antipathies. *Journal of Experimental Child Psychology*, *106*, 240–256. https://doi.org/10.1016/j.jecp.2010.03.001

Liem, G. A. D., & Martin, A. J. (2011). Peer relationships and adolescents' academic and non-academic outcomes: Same-sex and opposite-sex peer effects and the mediating role of school engagement. *British Journal of Educational Psychology*, *81*(2), 183–206. https://doi.org/10.1111/j.2044-8279.2010.02013.x

Liljequist, D., Elfving, B., & Skavberg Roaldsen, K. (2019). Intraclass correlation – A discussion and demonstration of basic features. *PLoS One*, *14*(7), e0219854. https://doi.org/10.1371/journal.pone.0219854

Markovic, A., & Bowker, J. C. (2014). Shy, but funny? Examining peer-valued characteristics as moderators of the associations between anxious-withdrawal and peer outcomes during early adolescence. *Journal of Youth and Adolescence*, *44*(4), 833–846. https://doi.org/10.1007/s10964-014-0113-z

Martin, C. L., Kornienko, O., Schaefer, D. R., Hanish, L. D., Fabes, R. A., & Goble, P. (2013). The role of sex of peers and gender-typed activities in young children's peer affiliative networks: A longitudinal analysis of selection and influence. *Child Development*, *84*(3), 921–937. https://doi.org/10.1111/cdev.12032

Ministry of Education and Culture. (2019). PISA 18 first results – Finland among top performers. https://urn.fi/URN:ISBN:978-952-263-684-3

Moreira, P. A. S., Dias, P., Vaz, F. M., & Vaz, J. M. (2013). Predictors of academic performance and school engagement — Integrating persistence, motivation and study skills perspectives using person-centered and variable-centered approaches. *Learning and Individual Differences*, *24*, 117–125. https://doi.org/10.1016/j.lindif.2012.10.016

Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (11th ed.). Muthén & Muthén.

Noakes, M. A., & Rinaldi, C. M. (2006). Age and gender differences in peer conflict. *Journal of Youth and Adolescence*, *35*(6), 881–891. https://doi.org/10.1007/s10964-006-9088-8

Peterson, C., & Park, N. (2009). Classifying and measuring strengths of character. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 25–33). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195187243.013.0004

Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification*. American Pscyhological Association (APA) and Oxford University Press.

Powers, C. J., Bierman, K. L., & Eccles, J. (2013). The multifaceted impact of peer relations on aggressive-disruptive behavior in early elementary school. *Developmental Psychology*, *49*(6), 1174–1186. https://doi.org/10.1037/a0028400

Protivinsky, T., & Munich, D. (2018). Gender bias in teachers' grading: What is in the grade? *Studies in Educational Evaluation*, *59*, 141–149. https://doi.org/10.1016/j.stueduc.2018.07.006

Putwain, D., Sander, P., & Larkin, D. (2013). Academic self-efficacy in study-related skills and behaviours: Relations with learning-related emotions and academic success. *British Journal of Educational Psychology*, *83*(4), 633–650. https://doi.org/10.1111/j.2044-8279.2012.02084.x

Rambaran, J. A., Schwartz, D., Badaly, D., Hopmeyer, A., Steglich, C., & Veenstra, R. (2017). Academic functioning and peer influences: A short-term longitudinal study of network-behavior dynamics in middle adolescence. *Child Development*, *88*(2), 523–543. https://doi.org/10.1111/cdev.12611

Renkly, S., & Bertolini, K. (2018). Shifting the paradigm from deficit oriented schools to asset based models: Why leaders need to promote an asset orientation in our schools. *Empowering Research for Educators*, *2*(1), 4.

Ryan, A. M., & Shin, H. (2018). Peers, academics, and teachers. In W. M. Bukowski, B. P. Laursen, & K. H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 637–656). The Guilford Press.

Rytioja, M., Lappalainen, K., & Savolainen, H. (2019). Behavioural and emotional strengths of sociometrically popular, rejected, controversial, neglected, and average children. *European Journal of Special Needs Education*, *34*(5), 557–571. https://doi.org/10.1080/08856257.2018.1560607

Salmela, M., & Uusiautti, S. (2015). A positive psychological viewpoint for success at school – 10 characteristic strengths of the Finnish high-achieving students. *High Ability Studies*, *26*(1), 117–137. https://doi.org/10.1080/13598139.2015.1019607

Schwartz, D., Gorman, A. H., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2008). Friendships with peers who are low or high in aggression as moderators of the link between peer victimization and declines in academic functioning. *Journal of Abnormal Child Psychology*, *36*(5), 719–730. https://doi.org/10.1007/s10802-007-9200-x

Shi, B., & Xie, H. (2012). Socialization of physical and social aggression in early adolescents' peer groups: High-status peers, individual status, and gender. *Social Development (Oxford, England)*, *21*(1), 170–194. https://doi.org/10.1111/j.1467-9507.2011.00621.x

Sointu, E. T. (2014). *Multi-informant assessment of behavioral and emotional strengths*. University of Eastern Finland.

Sointu, E. T., Savolainen, H., Lambert, M. C., Lappalainen, K., & Epstein, M. H. (2014). Behavioral and emotional strength-based assessment of Finnish elementary students: Psychometrics of the BERS-2. *European Journal of Psychology of Education*, *29*(1), 1–19. https://doi.org/10.1007/s10212-013-0184-3

Sointu, E. T., Savolainen, H., Lappalainen, K., & Lambert, M. C. (2017). Longitudinal associations of student-teacher relationships and behavioural and emotional strengths on academic achievement. *Educational Psychology (Dorchester-on-Thames)*, *37*(4), 457–467. https://doi.org/10.1080/01443410.2016.1165796

Sørlie, M.-A., Hagen, K. A., & Nordahl, K. B. (2021). Development of social skills during middle childhood: Growth trajectories and school-related predictors. *International Journal of School & Educational Psychology*, *9*(1), 69–87. https://doi.org/10.1080/21683603.2020.1744492

Tenenbaum, H. R., Ford, S., & Alkhedairy, B. (2011). Telling stories: Gender differences in peers' emotion talk and communication style. *British Journal of Developmental Psychology*, *29*(4), 707–721. https://doi.org/10.1348/2044-835X.002003

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology*, *35*(3), 193–202. https://doi.org/10.1016/j.cedpsych.2010.03.002

Whitley, J., Rawana, E. P., Pye, M., & Brownlee, K. (2010). Are strengths the solution? An exploration of the relationships among teacher-rated strengths, classroom behaviour, and academic achievement of young students. *McGill Journal of Education*, *45*(3), 495–510. https://doi.org/10.7202/1003574ar

Witvliet, M., Olthof, T., Hoeksma, J. B., Goossens, F. A., Smits, M. S. I., & Koot, H. M. (2010). Peer group affiliation of children: The role of perceived popularity, likeability, and behavioral similarity in bullying. *Social Development (Oxford, England)*, *19*(2), 285–303. https://doi.org/10.1111/j.1467-9507.2009.00544

How to cite this article: Rytioja, M., Lappalainen, K., & Savolainen, H. (2024). Peer groups, academic achievement and the behaviour of elementary school-aged children: A strength-based perspective. *Infant and Child Development*, e2489. https://doi.org/10.1002/icd.2489

STUDY III

Rytioja, M., Lappalainen, K. & Savolainen, H. Longitudinal effects of profiles of behavioural difficulties and strengths and peer group membership on children's school adjustment [manuscript under review].

PUBLICATIONS OF THE UNIVERSITY OF EASTERN FINLAND
DISSERTATIONS IN EDUCATION, HUMANITIES, AND THEOLOGY

1. Taru Viinikainen. *Taipuuko "akrobaatti Aleksandra"? Nimikekonstruktio ja nimikkeen taipuminen lehtikielessä 1900-luvulta 2000-luvulle*. 2010.
2. Pekka Metso. *Divine Presence in the Eucharistic Theology of Nicholas Cabasilas*. 2010.
3. Pekka Kilpeläinen. *In search of a postcategorical utopia. James Baldwin and the politics of 'Race' and sexuality*. 2010.
4. Leena Vartiainen. *Yhteisöllinen käsityö. Verkostoja, taitoja ja yhteisiä elämyksiä*. 2010.
5. Alexandra Simon-López. *Hypersurrealism. Surrealist literary hypertexts*. 2010.
6. Merja Sagulin. *Jälkiä ajan hiekassa. Kontekstuaalinen tutkimus Daniel Defoen Robinson Crusoen suomenkielisten adaptaatioiden aatteellisista ja kirjallisista traditioista sekä subjektikäsityksistä*. 2010.
7. Pirkko Pollari. *Vapaan sivistystyön kieltenopettajien pedagogiset ratkaisut ja käytänteet teknologiaa hyödyntävässä vieraiden kielten opetuksessa*. 2010.
8. Ulla Piela. *Kansanparannuksen kerrotut merkitykset Pohjois-Karjalassa 1800- ja 1900-luvuilla*. 2010.
9. Lea Meriläinen. *Language transfer in the written English of Finnish students.* 2010.
10. Kati Aho-Mustonen. *Group psychoeducation for forensic long-term patients with schizophrenia*. 2011.
11. Anne-Maria Nupponen. *»Savon murre» savolaiskorvin. Kansa murteen havainnoijana*. 2011.
12. Teemu Valtonen. *An insight into collaborative learning with ICT: Teachers' and students' perspectives*. 2011.
13. Teemu Kakkuri. *Evankelinen liike kirkossa ja yhteiskunnassa 1944-1963. Aktiivinen uudistusliike ja konservatiivinen sopeutuja*. 2011.
14. Riitta Kärkkäinen. *Doing better? Children's and their parents' and teachers' perceptions of the malleability of the child's academic competences.* 2011.
15. Jouko Kiiski. *Suomalainen avioero 2000-luvun alussa. Miksi avioliitto puretaan, miten ero koetaan ja miten siitä selviydytään*. 2011.
16. Liisa Timonen. *Kansainvälisty tai väisty? Tapaustutkimus kansainvälisyysosaamisen ja kulttuurienvälisen oppimisen merkityksenannoista oppijan, opettajan ja korkeakoulutoimijan pedagogisen suhteen rajaamissa kohtaamisen tiloissa*. 2011.
17. Matti Vänttinen. *Oikeasti hyvä numero. Oppilaiden arvioinnin totuudet ja totuustuotanto rinnakkaiskoulusta yhtenäiskouluun*. 2011.
18. Merja Ylönen. *Aikuiset opin poluilla. Oppimistukikeskuksen asiakkaiden opiskelukokemuksista ja kouluttautumishalukkuudelle merkityksellisistä tekijöistä.* 2011.
19. Kirsi Pankarinkangas. *Leskien keski-iässä tai myöhemmällä iällä solmimat uudet avioliitot. Seurantatutkimus.* 2011.
20. Olavi Leino. *Oppisopimusopiskelijan oppimisen henkilökohtaistaminen ja oppimismahdollisuudet työpaikalla.* 2011.
21. Kristiina Abdallah. *Translators in production networks. Reflections on agency, quality and ethics*. 2012.
22. Riina Kokkonen. *Mittarissa lapsen keho ja vanhemmuus – tervettä lasta sekä "hyvää" ja "huonoa" vanhemmuutta koskevia tulkintoja nyky-Suomessa*. 2012.
23. Ari Sivenius. *Aikuislukion eetos opettajien merkityksenantojen valossa.* 2012.
24. Kamal Sbiri. *Voices from the margin. Rethinking history, identity, and belonging in the contemporary North African anglophone novel.* 2012.
25. Ville Sassi. *Uudenlaisen pahan unohdettu historia. Arvohistoriallinen tutkimus 1980-luvun suomalaisen romaanin pahan tematiikasta ja "pahan koulukunta" -vuosikymmenmääritteen muodostumisesta kirjallisuusjärjestelmässä.* 2012.
26. Merja Hyytiäinen. *Integroiden, segregoiden ja osallistaen. Kolmen vaikeasti kehitysvammaisen oppilaan opiskelu yleisopetuksessa ja koulupolku esiopetuksesta toiselle asteelle*. 2012.
27. Hanna Mikkola. *"Tänään työ on kauneus on ruumis on laihuus." Feministinen luenta syömishäiriöiden ja naissukupuolen kytköksistä suomalaisissa syömishäiriöromaaneissa*. 2012.
28. Aino Äikäs. *Toiselta asteelta eteenpäin. Narratiivinen tutkimus vaikeavammaisen nuoren aikuisen koulutuksesta ja työllistymisestä*. 2012.
29. Maija Korhonen. *Yrittäjyyttä ja yrittäjämäisyyttä kaikille? Uusliberalistinen hallinta, koulutettavuus ja sosiaaliset erot peruskoulun yrittäjyyskasvatuksessa*. 2012.
30. Päivikki Ronkainen. *Yhteinen tehtävä. Muutoksen avaama kehittämispyrkimys opettajayhteisössä*. 2012.
31. Kalevi Paldanius. *Eläinlääkärin ammatti-identiteetti, asiakasvuorovaikutuksen jännitteiden hallinta ja kliinisen päättelyn yhteenkietoutuminen sekapraktiikassa*. 2012.
32. Kari Korolainen. *Koristelun kuvailu. Kategorisoinnin analyysi.* 2012.
33. Maija Metsämäki. *Influencing through language. Studies in L2 Debate.* 2012.
34. Pål Lauritzen. *Conceptual and procedural knowledge of mathematical functions.* 2012.
35. Eeva Raunistola-Juutinen. *Äiti ja nunna – Kirkkojen maailmanneuvoston naisten vuosikymmenen ortodoksiset naiskuvat*. 2012.

36. Marja-Liisa Kakkonen. *Learning entrepreneurial competences in an international undergraduate degree programme. A follow-up study.* 2012.
37. Outi Sipilä. *Esiliina aikansa kehyksissä – moniaikaista tekstiilikulttuuria ja representaatioita kodista, perheestä, puhtaudesta ja käsityöstä 1900-luvun alkupuolen Suomessa*. 2012.
38. Seija Jeskanen. *Piina vai pelastus? Portfolio aineenopettajaopiskelijoiden ammatillisen kehittymisen välineenä*. 2012.
39. Reijo Virolainen. *Evankeliumin asialla – Kurt Frörin käsitys evankelisesta kasvatuksesta ja opetuksesta Saksassa 1930-luvulta 1970-luvulle.* 2013.
40. Katarzyna Szal. *Finnish literature in Poland, Polish literature in Finland – Comparative reception study from a hermeneutic perspective.* 2013.
41. Eeva-Liisa Ahtiainen. *Kansainvälistymisen ja laadunvarmistuksen yhteys ammattikorkeakoulun asiakirjateksteissä. Tapaustutkimus*. 2013.
42. Jorma Pitkänen. *Fides Directa – Fides Reflexa. Jonas Laguksen käsitys vanhurskauttavasta uskosta.* 2013.
43. Riitta Rajasuu. *Kuopiossa, Oulussa ja Turussa vuosina 1725–1744 ja 1825–1844 syntyneiden kastenimet.* 2013.
44. Irina Karvonen. *Pyhän Aleksanteri Syväriläisen koulukunta – 1500-luvun luostarihistoriaa vai 1800-luvun venäläiskansallista tulkintaa?* 2013.
45. Meri Kytö. *Kotiin kuuluvaa. Yksityisen ja yhteisen kaupunkiäänitilan risteymät.* 2013.
46. Jörg Weber. *Die Idee von der Mystagogie Jesu im geistigen Menschen: Einführung in die »christliche Theosophie« des Corpus Areopagiticum.* 2013.
47. Tuija Lukin. *Motivaatio matematiikan opiskelussa – seurantatutkimus motivaatiotekijöistä ja niiden välisistä yhteyksistä yläkoulun aikana.* 2013.
48. Virpi Kaukio. *Sateenkaari lätäkössä. Kuvitellun ja kerrotun ympäristöestetiikka.* 2013.
49. Susanna Pöntinen. *Tieto- ja viestintäteknologian opetuskäytön kulttuurin diskursiivinen muotoutuminen luokanopettajaopiskelijoiden puheessa.* 2013.
50. Maria Takala-Roszczenko. *The 'Latin' within the 'Greek': The feast of the Holy Eucharist in the context of Ruthenian Eastern rite liturgical evolution in the 16th–18th Centuries.* 2013
51. Erkki Nieminen. *Henki vastaan alkoholi: AA-toiminnan synty ja kehitys Lahdessa 1950-1995.* 2014.
52. Jani Kaasinen. *Perinnerakentaminen käsitteenä ja osana teknologiakasvatusta – Opettajaopiskelijoiden käsitykset, käsitysten jäsentyneisyys ja muutos perinnerakentamisen opintojakson aikana.* 2014.
53. Gerson Lameck Mgaya. *Spiritual gifts: A sociorhetorical interpretation of 1 cor 12–14.* 2014.
54. Pauli Kallio. *Esimiehen muuttuvat identiteetit: Narratiivinen tutkimus keskijohdon identiteeteistä ja samastumisesta organisaatiomurroksessa.* 2014.
55. Sirpa Tokola-Kemppi. *Psykoanalyyttisen psykoterapian merkityksiä kirjailijahaastattelujen valossa.* 2014.
56. Dhuana Affleck. *How does dialogical self theory appear in the light of cognitive analytic therapy? Two approaches to the self.* 2014.
57. Teemu Ratinen. *Torjuttu Jumalan lahja. Yksilön kamppailu häpeällistä seksuaalisuutta vastaan.* 2014.
58. Päivi Löfman. *Tapaustutkimus itseohjautuvuudesta sairaanhoitajakoulutuksen eri vaiheissa.* 2014.
59. Päivi Kujamäki. *Yhteisenä tavoitteena opetuksen eheyttäminen. Osallistava toimintatutkimus luokanopettajille.* 2014.
60. Henriikka Vartiainen. *Principles for design-oriented pedagogy for learning from and with museum objects.* 2014.
61. Päivi Kaakkunen. *Lukudiplomin avulla lukemaan houkutteleminen yläkoulussa. Lukudiplomin kehittämistutkimus perusopetuksen vuosiluokilla 7–9.* 2014.
62. Jari Kukkonen. *Scaffolding inquiry in science education by means of computer supported collaborative learning: pupils' and teacher students' experiences*. 2015.
63. Petteri Nieminen. *Unified theory of creationism − Argumentation, experiential thinking and emerging doctrine*. 2015.
64. Esa Asikainen. *"Me olemme postipaketteja": Tutkimus Helsingin vammaiskuljetuksista vuosina 2002–2007*. 2015.
65. Anna Logrén. *Taiteilijapuheen moniäänisyys. Tutkimus mediavälitteisen ja (kuva)taiteilijalähtöisen taiteilijapuheen muotoutumisesta.* 2015.
66. Päivi Virkki. *Varhaiskasvatus toimijuuden ja osallisuuden edistäjänä.* 2015.
67. Terhi Nevalainen. *Pinkit piikkikorot. Chick lit -kirjallisuuden postfeministiset sisällöt ja lukijat niiden merkityksellistäjinä.* 2015.
68. Soile Tikkanen. *Development of an empathic stance. Dialogical sequence analysis (DSA) of a single case during clinical child neurological assessment procedures.* 2015.
69. Erja Laakkonen. *Aikuisuuden kulttuuriset kuvat 25–35-vuotiaiden naisten haastattelupuheissa ja naistenlehtiteksteissä*. 2015.
70. Wu Enqin. *What does design expose? A comparative study of Finnish modern furniture and Chinese Ming-style furniture.* 2015.
71. Vuokko Malinen. *Uuspari, uusperheen parisuhde ja koulutuksellisen intervention mahdollisuudet sen tukemiseen.* 2015.
72. Juhana Venäläinen. *Yhteisen talous: tutkimus jälkiteollisen kapitalismin kulttuurisesta sommittumasta.* 2015.

73. Johanna Hokkanen. *Kotien lääkekasvatus.* 2015.
74. Eveline Omagano Anyolo. *Implementing education for sustainable development in Namibian schools.* 2015.
75. Satu Tuomainen. *Recognition and student perceptions of non-formal and informal learning of English for specific purposes in a university context.* 2015.
76. Jari Ruotsalainen. *Iholle kaiverrettu: Tatuoimisen kulttuurinen murros Suomessa.* 2015.
77. Sanna Hillberg. *Relativization in Scottish standard English: a corpus-based study on newspaper language.* 2015.
78. Virpi Turunen. *Pellavalangan neulonta kotineulekoneella.* 2015.
79. Emilia Valkonen. *"Me myymme ja markkinoimme kursseja" Markkinaorientaation piirteet kansalaisopistoissa.* 2015
80. Petri Haapa. *Suomalaisen peruskoulun rehtori koulun tietokonepohjaisen hallinto-ohjelman käyttäjänä.* 2016.
81. Helena Valkeapää. *Maahanmuuttaja-afgaanien kotitalouden toiminta ja akkulturaatio.* 2016.
82. Airi Hakkarainen. *Matematiikan ja lukemisen vaikeuksien yhteys toisen asteen koulutuspolkuun ja jatko-opintoihin tai työelämään sijoittumiseen.* 2016.
83. Maria Kok. *Varjon kieliopillistuminen: Itse-sanan paradigman rakenne ja merkityksenkehitys itäisessä itämerensuomessa.* 2016.
84. Päivi Vesala. *Koulupihan merkitys alakoulun oppilaille. Lapsen ja ympäristön vastavuoroisen suhteen analyysi.* 2016.
85. Izabela Czerniak. *Anglo-Scandinavian language contacts and word order change in early English.* 2016.
86. Serja Turunen. *Matkalla musiikkiin. Fenomenologinen tutkimus peruskoulun 3.–4.-luokkalaisten taidemusiikin kuuntelukokemuksista koulun musiikkikasvatuskontekstissa.* 2016.
87. Minna Parkko. *Stailaaminen: Työtehtävät, osaaminen ja sijoittuminen*, 2016.
88. Kaisa Pihlainen. *Merkityksellisyyttä, vastuullisuutta ja uuden luomista – Erityistä tukea tarvitsevan lapsen ja vanhemman toiminnasta teknologiakerhossa.* 2016.
89. Peppi Sievers. *Uskonnollisten ja hengellisten kysymysten käsittely suomalaisissa psykoterapioissa.* 2016.
90. Matti Mäkelä. *Kun häpeästä tuli kunniaa ja provokaatio. Näkökulmia tabuja rikkovaan taiteeseen.* 2016.
91. Minna Kumpulainen. *Learning translation. An empirical study into the acquisition of interlingual text production skills.* 2016.
92. Mustapha Kharoua. *Traumatic realism in diasporic African writing.* 2016.
93. Merja Suomi. *Metamorphoses of a text within the Stalinist context. Kornei Chukovskii's "A High Art" in the 1930s.* 2016.
94. Vesa Korhonen. *High support need and minimally verbal children with autism: exploration of technology-based research methodology and the case of attending to eyes.* 2016.
95. Kati Turkama. *Difficulty of the translation of primary and complex metaphors: An experimental study.* 2017.
96. Arja-Irene Tiainen. *Sairaanhoitajaopiskelijoiden harjoittelun ohjaajien ohjausorientaatio ja sen muutokset 1999–2010.* 2017.
97. Tiina Kirvesniemi. *Tieto ja tiedon luominen päiväkodin henkilöstön kokemana.* 2017.
98. Päivi Ruotsalainen. *Interventiotutkimus oppilaiden motoristen taitojen ja lukutaidon kehittymisestä sekä niiden välisistä yhteyksistä ensimmäisen kouluvuoden aikana.* 2016.
99. Tuomas Järvenpää. *Roots reggae from Cape Town to Helsinki – An ethnographic study of local belonging and Cosmopolitan imagination in Rastafarian reggae music.* 2017.
100. Helena Tuomela. *Soittavat nuoret koulussa. Tapaustutkimus musiikkipainotteista koulua käyvien 6.–9.-luokkalaisten musiikkiaineiden opiskelumotivaatioon ja soittajaidentiteettiin liittyvistä arvostuksista.* 2017.
101. Anne Lindblom. *Stepping out of the shadows of colonialism to the beat of the drum. The meaning of music for five First Nations children with autism in British Columbia, Canada.* 2017.
102. Olga Rouhe. *Kieliopin rakenne-erojen vaikutus suomi–venäjä-simultaanitulkkauksen sujuvuuteen.* 2017.
103. Василий Буйлов. *Идиостиль Андрея Платонова: интертекстуально-концептуальный и лингвопереводоведческий аспекты (анализ на материале повести «Котлован»).* 2017.
104. Joanne Jalkanen. *Why English? School choice as sociolinguistic practice in Finnish primary education.* 2017.
105. Shuo Wang. *"Your next boss is Chinese": How European employees perceive organizational cultures in Chinese multinational companies.* 2017.
106. Katja Dindar. *Researching social interaction in autism. Shifting the focus from 'within individuals' to 'in interaction'.* 2017
107. Terttu Rajala. *Mishima Yukion kirjallisuuskäsitys ja dialogi Nihon rōmanha-ryhmän kanssa toisen maailmansodan aikaisen ja sen jälkeisen Japanin kulttuuristen muutosten kontekstissa.* 2017.
108. Salli Anttonen. *A Feel for the Real: Discourses of Authenticity in Popular Music Cultures through Three Case Studies.* 2017.
109. Janne Rantala. *Rakenne, julkinen muisti ja vastakulttuuri Maputon räp-musiikissa (Mosambik) ja pohjoismaisessa uusspiritualistisessa yhteisössä.* 2017.
110. Titta Kettukangas. *Perustoiminnot-käsite varhaiskasvatuksessa.* 2017.
111. Riitta Sikiö. *Reading and spelling skill development in elementary school: Effects of minority languages and parental home involvement.* 2017.

112. Jaakko Pappinen. *Functions of Satan in Early Christianity*. 2017
113. Katariina Waltzer. *Rikoksen uusijan elämänkulku: hyvinvoinnin ja syrjäytymisen polut*. 2017.
114. Barnali Sarkar. *Space, place, and the environment in the contemporary Anglophone Indian novel*. 2017.
115. Sanni Sivonen. *Gods for tourists. Stone carving and tourist arts in Mamallapuram, South India.* 2017.
116. Jingoo Kang. *Implementation and implication of inquiry-based science education in the Finnish context. Evidence from international large-scale assessments: PISA and TIMSS*. 2017.
117. Milla Uusitupa. *Rajakarjalaismurteiden avoimet persoonaviittaukset*. 2017.
118. Timo Hirvonen. *Suomenkielinen ennenpyhitettyjen lahjain liturgia – kirkkopolitiikan pyörteistä liturgiseksi liikehdinnäksi.* 2017.
119. Miia Karttunen. *No pittää kahttoo. Puhujan tulevan toiminnan ilmausten kielioppia ja pragmatiikkaa.* 2018.
120. Eeva-Liisa Juvonen. *Työ tekijäänsä neuvoo: Luomupuutarhayrittäjän asiantuntijuuden ja toimijuuden kehittyminen*. 2018.
121. Lea Häyrinen. *Virkistyminen koulupäivän aikana: Oppilaiden kokemuksia kahdessa maaseutukouluympäristössä*. 2018.
122. Juuso Pursiainen. *"Kumpi oli positiivine? Hyvä vai huono?" Vahvuuslähtöisen ja oppilaan sosioemotionaalista kompetenssia tukevan mallin luominen kouluyhteisöön*. 2018.
123. Hanna-Maija Huhtala. *Adornian critiques of reason: autonomy, morality and education*. 2018.
124. Ekaterina Prosandeeva. *Norm and deviance in contemporary Anglophone fiction and autobiography.* 2018.
125. Harri Valkonen. *The dynamics of self-observation in patients with borderline personality disorder (BPD) diagnosis*. 2018.
126. Sini Kontkanen. *Starting points of pre-service teachers' Technological Pedagogical Content Knowledge (TPACK) – introducing a proto-TPACK model*. 2018.
127. Katja Vilhunen. *Neuleblogi osana käsitöitä: neulebloggaajien kokemuksia blogin ja käsitöiden yhdistämisestä.* 2018.
128. Inka Turunen. *Tietokoneavusteisen Lukemaan oppiminen kirjoittamalla - menetelmän käytön yhteys 1. ja 2. luokan oppilaiden luku- ja kirjoitustaitoon sekä lukemismotivaatioon*. 2018.
129. Olli Rissanen. *Ammattitaikurin henkilökohtainen ja verkostoitunut asiantuntijuus.* 2018.
130. Ilona Raunola. *Tulkintoja valosta ja henkisyydestä. Etnografinen tutkimus uususkonnollisesta Valorukous-toiminnasta.* 2018.
131. Eeva Raunela. *"Opin oppimaan itseltäni" - Autoetnografinen toimintatutkimus kielitietoisuuden kehittymisestä dialogista opetusmenetelmää hyödyntäen lukion äidinkielen ja kirjallisuuden opetuksessa*. 2018.
132. Liisa Penttinen. *Vaivaishoidosta yhdistysmuotoiseen seurakuntadiakoniaan: diakoniatyö Kuopion kaupunki- ja maaseurakunnassa sekä siitä eronneissa seurakunnissa 1850–1944*. 2018.
133. Niko Flink. *Early maladaptive schemas, chronic depression and suicidal ideation. The role of maladaptive cognitive structures among patients with depression.* 2018.
134. Maija Surakka. *Ajan paikka. Ajanilmausten kehityspolkuja lasten kielessä.* 2019.
135. Pia-Riitta Stenberg. *Osallistavan draamaprosessin yhteisöllinen suunnittelu. Pedagoginen malli ja toiminta digitaalisessa oppimisympäristössä.* 2019.
136. Zafarullah Sahito. *Job satisfaction and the motivation of teacher educators towards quality education: A qualitative study of the universities of Sindh, Pakistan*. 2019.
137. Alicja Fajfer. *Everyday bordering in stories of mobility. Linguistic encounters in Poland*. 2019.
138. Tatiana Bogrdanova. *Translators of folklore in the British-Russian interaction: cultural mediators' agency at the turn of the twentieth century.* 2019.
139. Nhi Hoang. *Classroom quality and teacher-child interaction in early childhood education: relationships with children's classroom engagement and structural quality in Vietnamese context.* 2019.
140. Juuso Loikkanen. *A bridge between science and theology? William A. Dembski's theory of intelligent design.* 2019.
141. Amit Roy. *Children as Agents of Social Change. An ICT supported pedagogical framework to provide transformative education for sustainability*. 2019.
142. Sanna Väisänen. *Student teachers' study well-being in teacher education: How is it constructed and regulated during studies?* 2019.
143. Ari Koponen. *The interruption of Christ – The language, beauty, and theological aesthetics of David Bentley Hart.* 2019.
144. Juha Majoinen. *Toimintakulttuuri, resurssit ja pedagogia – Oppilaan tukea edistävät ja vaikeuttavat tekijät fyysisessä, sosiaalis-pedagogisessa ja teknologisessa oppimisympäristössä*. 2019.
145. Liisa Näpärä. *Mikä ihmeen digiloikka? Opettajuuden rakentuminen digiloikkadiskurssissa.* 2019.
146. Li Wang. *The Learning Experiences of Chinese Postgraduate Students at the University of Eastern Finland*. 2019.
147. Mari Purola. *Sopimus pirun kanssa. Piru ja ihminen toimijoina suomalaisissa uskomustarinoissa 1840–1960*. 2019.
148. Petri Karkkola. *Basic psychological need satisfaction at work: Measurement and associations with social support, role characteristics and vitality*. 2019.
149. Niina Väänänen. *Sustainable craft: dismantled and reassembled*. 2020.
150. Minna Mäkinen. "*Se ei ragee ja popittaa meidän kaa": matkalla monipuoliseksi musiikkikasvattajaksi.* 2020.

151. Leena Hartus. *Dynamic equivalence and theological terms in bible translations: With special reference to 'righteousness', 'flesh' and 'in Christ'*. 2020.
152. Kaisa Puustinen. *"Jumala pyörähti pari tanssiaskelta" – lastenraamatut funktionaalisen ekvivalenssin valossa.* 2020.
153. Anssi Salonen. *Career-related science education. Instructional framework promoting students' scientific career awareness and the attractiveness of science studies and careers*. 2020.
154. Lauri Tavi. *Prosodic cues of speech under stress: Phonetic exploration of Finnish emergency calls*. 2020.
155. Inkeri Aula. *Angola kutsuu. Afrobrasilialainen maailmointi capoeirassa*. 2020.
156. Laura Kallatsa. *Homoseksuaalisuus ja papit – Suomen evankelis-luterilaisen kirkon pappien käsitykset samaa sukupuolta olevien avioliitosta ja asenteet homoseksuaalisuutta kohtaan*. 2020.
157. Marjo Nenonen. *Tulokset paranevat, miten käy laadun? Tulosperustainen rahoitusmalli koulutuksen tuloksellisuuden ja laadun kehittäjänä ammattikorkeakouluissa*. 2020.
158. Veikko Purmonen. *Venäläisen teologian kaksi tietä – Sergei Bulgakovin ja Georges Florovskyn välinen ortodoksisen teologian identiteettiä ja ekumeniakäsitystä koskeva debatti.* 2020.
159. Aarne Ylä-Jussila. *Heimo, uskonto ja isänmaa. Kirkollinen kansallistamistoiminta Itä-Karjalassa 1941–1944*. 2020.
160. Eveliina Ojala. *The sense of community, mobile devices and social media in Finnish Lutheran confirmation preparation – The challenges when perceiving confirmation camp as liminal space.* 2020.
161. Anne-Maria Kuosa. *Työelämässä koetut moninaiset ja muuttuvat kielitaitotarpeet ruotsin kielen opintojen lähtökohtana oikeustieteen opinto-ohjelmassa*. 2020.
162. Susanna Laamanen. *Suomirockin matkailutarinoiden rakentuminen 1985–1999*. 2021.
163. Kimmo Härmä. *Lukio-opiskelijoiden argumentaatiotaidot – kontekstina yhteiskunnalliset ympäristöaiheet maantieteen opetuksessa.* 2021.
164. Eija Taskinen-Tuovinen. *Körtti-identiteetti – Portaanpään kristillisen opiston identiteetti ja sen muutokset vuosina 1923–1945*. 2021.
165. Anniina Kämäräinen. *Oppilaskeskeisten matematiikan oppituntien sosiaalisen arkkitehtuurin rakentuminen*. 2021.
166. Ilona Kauppi. *Suomalaisen vaatetussuunnittelijan uraosaaminen ja urapolku*. 2021.
167. Kaisa Viinikka. *21st century skills and RE teacher education – A case study of Finnish religious education student teachers and their professional development*. 2021.
168. Ilia Moshnikov. *NUT-partisiipin variaatio rajakarjalaismurteissa*. 2021.
169. Tuomas Kervinen. *René Girard, runouden skandaali ja tulkinnan kysymys. Kulttuuri- ja uskontoteoriasta mimesiksen lukutapoihin*. 2021.
170. Anu Kinnunen. *Löytöretkellä lapsen osallisuuteen: Substantiivinen teoria kouluikäisen erityistä tukea tarvitsevan lapsen osallisuuden mahdollistavasta yhteistoiminnasta*. 2021.
171. Joonas Riikonen. *Relationaalinen minuus ja vastavuoroisuuteen luotu ihminen. Häpeäteologiset konstruktiot modernissa keskustelussa*. 2021.
172. Natalia Koricheva. *Foreign language teaching toolkit to foster young learners to communicate in English: Russian preschool context.* 2021.
173. Toni Saari. *Neuropsychiatric symptoms in Alzheimer's disease: Measurement, follow-up and associations with activities of daily living*. 2021.
174. Elina Hernesniemi. *Opiskelijoiden uupumus, työkuorma ja motivaatio. Kulttuurien välinen tutkimus suomalaisessa ja kiinalaisessa yliopistoympäristössä*. 2021.
175. Ulla Vähärautio-Halonen. *Kasvot kohti Kaabaa: islamin rukousrituaali maahanmuuttotaustaisten toisen sukupolven muslimioppilaiden diskursseina yksityisen ja julkisen rajoilla*. 2021.
176. Josephina Jekonia. *The relationship between parenting styles, parental involvement and children's academic performance in Namibian senior primary schools.* 2021.
177. Elina Weckström. *Kertoen rakennettu – toimien toteutettu: Sosiaalisesti kestävän osallisuuden toimintakulttuurin rakentaminen varhaiskasvatuksessa*. 2021.
178. Mari Parkkinen. *Fragmented Religion in a Turbulent Context. The Personal and Communal Dimensions of Christianity in Palestinian Christians Lifeworlds.* 2021.
179. Oona Piipponen. *Children encountering each other through stories: Developing a dynamic approach to interculturality in primary schools.* 2021.
180. Marko Björn. *Development of an effective pedagogical EEG simulator: design-based research project among biomedical laboratory science students.* 2022.
181. Hanna-Mari Lahtinen. *Child abuse disclosure: from the perspectives of children to influencing attitudes and beliefs held by interviewers.* 2022.

182. Seppo Naapila. *Kouluttajan nonverbaalisen käyttäytymisen vaikutus koulutettavan tilannekohtaiseen motivaatioon.* 2022.
183. Milja Pollari. *Perusopetuksen kestävä ruokakasvatus. Ruokahävikki kotitalouden, maantiedon ja biologian oppikirjoissa.* 2022.
184. Martti Kola. *Crux Christi – Mysterium voluntate Dei : teoteleettisen metodin soveltaminen Osmo Tiililän sovitusopillisessa ajattelussa*. 2022.
185. Martti Keinänen. *Esirukouksen merkitys sairaalle ihmiselle. Terveyden ja tuen tavoittelua hengellisellä selviytymiskeinolla.* 2022.
186. Henna Massinen. *Rajakarjalaismurteiden suomalaistuminen yleisgeminaation ja itämurteiden erikoisgeminaation valossa.* 2022.
187. Basanta Prasad Adhikari. *An investigation of the impact of the key components of the induction programme on new teacher retention in Chitwan district, Nepal.* 2022.
188. Pauliina Lukinmaa. *LGBTIQ+ Activists in St Petersburg: Forming Practices, Identifying as Activists, and Creating Their Own Places.* 2022.
189. Marjukka Piirainen. *Kansan ja kasvien kasvatusta: puutarhatieto kainuulaisen pihakulttuurin muutoksessa.* 2022.
190. Pihla Maria Siim. *Perheen liikkuvat paikat: perheestä ja kuulumisesta neuvottelua Suomen, Venäjän ja Viron ylirajaisessa kontekstissa.* 2022.
191. Marita Tuomi. *Rauhaa ja politiikkaa. Suomen evankelis-luterilaisen kirkon ja Venäjän ortodoksisen kirkon käsitykset rauhasta kirkkojen oppineuvotteluissa 1970–1986 ja 1995.* 2022.
192. Juho Suokas. *User-Centered Translation and Practical Application of Usability Methods.* 2022.
193. Matti Hiltunen. *Student teachers' talk during inquiry-based biology teaching*. 2022.
194. Riikka Iso-Ahola. *Kaunokirjallisuutta karjalaksi - uhanalaisen kielen käännöskulttuurit.* 2022.
195. Juho Kahila. *Digital gaming and metagame activities: Opportunities for children's informal learning.* 2022.
196. Saara-Maria Jurva. *Affective Examples: Cognitive-Emotive Functions of Renarrated Biblical Stories in the Letter to the Hebrews.* 2023.
197. Susanna Tavi. *Contact-induced lexical variation in the Karelian language: corpus-based perspectives on code-copying*. 2023.
198. Juha Lång. *Eye movements and reception of audiovisual translation: an empirical look into interlingually subtitled television programs.* 2023.
199. Krista Koivula. *Couple resilience, dyadic emotion regulation and mental health of parents with a seriously ill child*. 2023.
200. Elsi Takala. *Kanonien katveessa. Naiset, lapset ja ihmisoikeudet ortodoksisessa kirkossa*. 2023
201. Raili Keränen – Pantsu. *Stories that shape our world. Cultural narratives in Finnish worldview education. 2023.*
202. Tiia Liuski. *The Finnish military chaplaincy. A douple bonded profession in a changing operational enviroment. A multi-method study*. 2023.
203. Ville Hartonen. *In limbo. Effects of liminality on asylum seekers' subjective well-being, negotiation of agency, and participatory barriers in educative pre-integrational programmes.* 2023
204. Kati Toivio. *Julkiseksi. Seksuaalisuutta koskeva keskustelu kirkollisessa lehdistössä vuosina 1966–1973*. 2023
205. Katariina Räsänen. *"Minä junnaan paikallani". Opettajan alanvaihdon harkinta ja sen yhteys koettuun työuupumukseen ja työyhteisösuhteeseen.* 2023.
206. Maiju Parviainen. *Seksologiset tulkinnat halun ja seksin merkityksestä heteroparisuhteessa.* 2023.
207. Elina Tourunen. *Virrastani tuli meri. Polveileva traditio Sirakin kirjan kuolemaa ja tuonpuoleista käsittelevien tekstien valossa*. 2023
208. Heli Mutanen. *Kamppailua toimijuudesta ja identiteeteistä: nuoret aikuiset koulutuksen ja työn marginaalissa ja aktivointitoimenpiteissä*. 2024.
209. Ari Pietarinen. *Johtamisasiantuntijuuden rakentuminen kunnallisorganisaatiossa: merkityssidonnaisen toimijuuden näkökulma johtamisasiantuntijuuteen.* 2024.
210. Tanja Helminen. *Pää- ja sivurooleissa sisu: sisu ja sisudiskurssi Suomen kirjallisuudessa ja suomalaisuutta koskevassa keskustelussa.* 2024.
211. Evangelos E. M. Thiani. *Transformative Philanthropic-diakonia of the African Orthodox Church of Kenya*. 2024.
212. Vuokko Isaksson. *Tilkkutyön nousu sängyltä seinälle : arjen käyttötekstiilin muuttuminen visuaalisen ilmaisun välineeksi Suomessa vuosina 1945-2015.* 2024.
213. Marjukka Laiho. *Toivon tekoja yhdessä: Kosmopoliittista elettyä teologiaa tekemässä ja tutkimassa.* 2024.
214. Kati Honkanen. *Paikkojen merkitykset subjektiiviselle hyvinvoinnille.* 2024.
215. Virve Pekkarinen. *Being and developing as a university teacher: the role of emotions and social reflection in developing as a university teacher in different pedagogical development contexts.* 2024.
216. Hanna Koivisto. *Fuksiksi yliopistoyhteisöön: jäsenyyden neuvottelu yliopisto-opiskelijan moraalisella uralla.* 2024.
217. Marleene Rytioja. *The role of behavioral and emotional strengths and peer relationships in children's school adjustment.* 2024.

MARLEENE RYTIOJA

Children with behavioral and emotional difficulties are more prone to peer relationship problems and impaired adjustment to school. In this dissertation the relationship between behavior, emotions, peer relationships, and school adjustment was examined from the perspective of children's behavioral and emotional strengths. The findings can be used when implementing better behavioral intervention strategies, enhancing children's peer relationships, and promoting manageable adjustment to school.

UNIVERSITY OF
EASTERN FINLAND

uef.fi

**PUBLICATIONS OF
THE UNIVERSITY OF EASTERN FINLAND**
Dissertations in Education, Humanities, and Theology

ISBN 978-952-61-5260-8
ISSN 1798-5625