AMERICAN AND FINNISH PARENTS' PERCEPTIONS OF THE DISTANCE LEARNING EXPERIENCE DURING THE 2020 COVID-19 SCHOOL CLOSURE

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ABSTRACT

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By the end of the 2019-2020 academic year, the COVID-19 pandemic had disrupted the academic experience of 1.5 billion students in 165 countries (Early Childhood Education Journal, 2020). Due to school closures, many schools transitioned to distance learning. As students were adapting to a new learning environment, parents faced the challenge of providing a high-quality learning environment and ensuring children's learning and academic attainment. The study was part of a larger project, and this thesis took a preliminary approach and conducted a cross-country comparison between the United States (U.S.) and Finland on parental perceptions of the distance learning experience with regard to family socioeconomic status (SES), as measured by parents' level of education, and parental involvement. An online survey consisting of close-ended and open-ended questions was distributed to the study participants in April 2021. The thesis had a quantitative analytical approach and future research may take a qualitative analytical approach.

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DEDICATIONS

It is with love and genuine gratitude that I dedicate my work to my parents, Minna-Maarit and Jan Karlsson, for their devotion and endless love and support. Thank you for always emphasizing the value of education.

In the memory of my beloved grandfather, Matti Lehto, who always reminded me about the importance of hard work.

For all the parents out there who do their best in helping and guiding their children no matter the circumstances.

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INTRODUCTION

Transition to school marks the beginning of a life trajectory critical to children's future development. Students' academic experience is shaped by many factors, such as demographic characteristics, socioeconomic background, the family environment, school resources, and parental resources. In particular, recognizing the strong association between socioeconomic status (SES) and students' educational performance is crucial to understanding educational disparities and the transmission of inequality which shape students' long-term academic and employment outcomes. Several studies (e.g., Arnold, & Doctoroff, 2003; Entwisle, 2003; Heckman, 2020) have emphasized that low family SES is a risk factor for low academic achievement. Alongside the factors shaping students' educational performance in a traditional school setting, student learning and academic attainment are currently challenged by the COVID-19 pandemic, which has caused schools to physically close down and students to transition to homeschooling or hybrid learning in order to prevent the spread of infection. It is likely that this non-traditional learning format is experienced by children in low-SES families much differently than it is by those in high-SES families (McElrath, 2020).

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the global pandemic has disrupted the academic experience of 1.5 billion students in 165 countries, which is nearly 90% of the world's overall student

population (Early Childhood Education Journal, 2020). Parental ability to provide a high-quality learning environment and to ensure students' learning and academic attainment during the pandemic was challenged at the end of 2019-2020 academic year. The role of parental involvement in distance learning during the COVID-19 pandemic became crucial as the implementation of distance learning for early childhood education in particular could not be carried out independently by children without the assistance of their parents. Thus, in many cases, parents had to adapt to the role of a mentor or a supervisor at the same time as they tried to provide a sense of security and comfort for their children in the midst of the pandemic.

The study sought to conduct a cross-country comparison between the U.S. and Finland on parents' perceptions of children's distance learning experience during the Spring 2020 and Fall 2020 school closures. Distance learning in the study includes online instruction, alternate methods of instruction (such as distributed learning materials via mail), and hybrid instruction (i.e., a combination of asynchronous and synchronous learning). The two countries were selected due to their substantial differences in education systems, student population demographics, and variation in social welfare policies and educational equity. Given the substantial breadth of data collected for this larger research project, the study focuses specifically on how parents' perceptions of their children's distance learning experience vary by family SES, as measured by parents' level of education, and self-reported parental involvement.

Overall, the amount of research on the COVID-19 pandemic and its influence on students' learning is limited because the pandemic is ongoing. Conducting preliminary research on this topic is important because the current literature about the issues affecting

children's educational performance focuses mainly on the traditional school setting. Thus, there is a need to determine whether these issues significantly differ in a distance learning setting. In addition, the study may help with providing guidance on how educational systems should move forward in order to provide high quality teaching in various educational settings.

LITERATURE REVIEW

The literature review begins with a review of how COVID-19 has influenced students' educational experiences and magnified parents' roles in the distance learning environment. The characteristics and administration of Finnish and American education systems and student performance in both countries are reviewed in order to provide an overall picture of how these education systems typically function in a traditional school setting. Thereafter, the focus will move to the factors related to SES that contribute to students' learning and academic attainment in the traditional school setting, such as parental involvement and parental education. The literature review will shed light on some previous preliminary research on parental perceptions of distance learning experience during the COVID-19 pandemic in both countries which has indicated that there has been variance in parental satisfaction related to distance learning and parental role in it. At the end of the literature review, the possible contributions of this study to the existing literature are reviewed.

COVID-19 and Education

COVID-19 has interrupted the learning and development of millions of children worldwide. According to UNESCO, almost 90% (1.5 billion) of the world's students had their learning experience disrupted by policies that were implemented in order to stop the spread of infection (Early Childhood Education Journal, 2020). Although COVID-19 is

not necessarily a “children’s disease,” the disruption of normal daily activities, such as attending school, interacting with family and friends, and playing outdoors, greatly disrupted children’s lives. Due to their vulnerable position as dependents to adults, children are likely to indirectly experience their guardians’ struggle with urgent and multiple adaptive demands related to home, work, and education.

Parental involvement is an important factor influencing student achievement in a traditional school setting and its importance does not decline in the virtual learning environment (Borup et al., 2014; Lee & Figueroa, 2012). Due to the sudden and unexpected school closure, distance learning challenged many parents who concurrently faced difficulties with balancing work and home responsibilities. As children participate in distance learning, parents must adapt to new and often unfamiliar roles, and strengthen their sense of instructional responsibility in order to support their child’s learning (Garbe et al, 2020; Liu et al., 2010). In addition to the challenges related to parental involvement, the availability of economic resources (Hohlfeld et al., 2010), internet access (Hollingworth et al., 2011), desire to use technology (Beckman et al., 2019), sense of digital self-efficacy (Povey et al., 2016), the country and region of residence, and children’s age all contribute to differences in the distance learning experience. A lack of contingency planning exacerbates the negative impact of the pandemic on student learning (Garcia & Weiss, 2020). Generally speaking, public education systems were not built to cope with sudden school closures leading to the struggle of providing effective teaching and safety net for millions of children.

Although distance learning during the pandemic is not necessarily equivalent to a homeschooling experience, research on homeschooling provides a piece of general

advice on how to make distance learning work. For example, homeschooling seems to work well as long as it is structured and parents are involved in children's learning (Martin-Chang et al., 2011). Furthermore, one of the most critical issues of school closure and distance learning is the exacerbation of well-documented opportunity gaps (Garcia & Weiss, 2020). Low-income students are less likely to have access to some conditions and resources that enhance learning and development. In normal conditions, children in low-income families may lack access to adequate food and nutrition, housing, health insurance and care, and financial relief and these problems do not wear off during the pandemic but intensify. Access to electronic devices and the internet is critical for successful distance learning but the opportunity gap and digital divide make it extremely difficult for some students to excel in studies during the pandemic (Hung & Wati, 2020).

In the spring 2020, almost the entire Finnish education system shifted to distance learning due to the COVID-19 pandemic. To avoid the spread of the disease, enacted regulations restricted the education system's liabilities during the pandemic such as the obligation to organize teaching during the spring 2020. In March, the government, under the Emergency Preparedness Act, set restrictions on early childhood education and care (ECEC), pre-school education, basic education, high school and vocational training, and higher education about the liability to provide in-person education. Consequently, the provider of basic education had no obligation to arrange in-person teaching referred to in the Basic Education Act. However, the teaching provider was obliged to provide learning support services and pupil care to the extent and in the manner in which they were implemented in the light of the circumstances. The restrictions did not apply to pre-school pupils, pupils in grades 1 to 3 of basic education, pupils who had received a

special support decision, pupils in extended compulsory education, nor pupils in preparatory education (Goman et al., 2021). For these children, except for pre-school pupils, tuition had to be arranged as other than in-person teaching at the request of a parent or a guardian.

Temporary amendments were made to the Basic Education Act in June 2020 and further in December 2020 (521/2020, 1191/2020). According to the Act, teaching could be transferred into exceptional teaching arrangements until July 31, 2021, by decision of the teaching provider if the teaching cannot be provided safely as in-person teaching at a school or at another place where teaching takes place. During exceptional teaching arrangements, teaching is provided in part, or in whole, other ways than in-person teaching. The later temporary amendments to the Basic Education Act did not apply to pre-school pupils, pupils in grades 1 to 3 of primary education, pupils who had received a special support decision, nor pupils in extended compulsory education or preparatory education (Goman et al., 2021).

In the U.S., 48 states and Washington, D.C. mandated or recommended the closure of schools in April 2020, the month in which COVID-19 rapidly spread across the country (Parolin & Lee, 2021). In the beginning of the next academic year in September 2020, vastly different approaches to distance learning were adopted by different schools, and state and local governments. As a result, the distribution of school closures across the United States was much more uneven from September to December compared to the outbreak of the pandemic in April 2020. Recent studies on the COVID-19 pandemic's impacts on children's educational experience have revealed many consequences. For example, they have demonstrated that students are learning far less

through distance learning than they would in a traditional face-to-face setting (Kaffenberger, 2020; Kuhfeld et al., 2020; Parolin & Lee, 2021).

Parolin and Lee (2021) reviewed the prevalence of large socioeconomic (SES), geographic, and demographic disparities in exposure to school closures in 2020, and found that there were large disparities in exposure to distance learning across the U.S. They suggested these disparities were associated with the exacerbation of regional, racial and class-based divides in educational performance in the U.S. Whereas April 2020 experienced the peak of school closures, during which approximately 89.6% of all schools, including 92% of middle and high schools, shifted to distance learning, in September 2020, only an estimated 40.2% of school were closed in the beginning of new academic year. However, the rate subsequently climbed to 56.1% of schools in December 2020 (Parolin & Lee, 2021). According to the findings, middle and high schools were approximately 6.6% more likely to continue in distance learning through December 2020 than elementary schools since many schools preferred to prioritize in-person learning for younger students. However, schools larger in population size were more likely to have shifted to distance learning. Consequently, in December 2020, approximately 62.3% of all students were exposed to distance learning (Parolin & Lee, 2021).

Parolin and Lee's (2021) study revealed critical trends in distance learning exposure among students of different socioeconomic and demographic characteristics. For example, schools with a high share of students who had low third-grade math scores, experienced homelessness, and/or were eligible for free/reduced-price lunches were associated with continuing distance learning experience from September through December 2020. In specific, an estimated 67.5% of students who had experienced

homelessness and 67% of students with limited English proficiency were exposed to distance learning in December 2020, respectively (Parolin & Lee, 2021). According to Smith and Reeves (2020), exposure to distance learning in 2020 varied by race and ethnicity as students of color were more likely to be exposed to distance learning. Although the distance learning rates were similar in April 2020 despite students' race and ethnicity, the disparities widened throughout the autumn and, in October, an estimated 35.4% of white students were exposed to distance learning, compared with 51.2% of African-American students, 60.2% of Hispanic students, and 64.9% of Asian students, respectively (Parolin & Lee, 2021). By December 2020, although minority students were still more likely to be exposed to distance learning than non-minority students, the rates of school closures increased for all students regardless of their race or ethnicity.

In addition, geographic disparities across the U.S. affected the exposure to distance learning. There was some variation in the average year-over-year decline of in-person appearance in schools in almost every U.S. county from September through December 2020. According to Parolin and Lee (2021), declines of at least 75% in in-person appearance from 2019 to 2020 were concentrated in the counties of West Coast including Washington, Oregon, California, and Nevada, as well as the counties of East Coast including Washington, D.C., Maryland, Massachusetts, New York, and elsewhere. Conversely, the counties with the smallest year-over-year declines in in-person were concentrated in states across the Midwest and upper-Midwest, such as South Dakota, North Dakota, Wyoming, Montana, Iowa, Kansas, and elsewhere (Parolin & Lee, 2021).

The U.S. and Finnish Education Systems

Finland provides free education for all, including the highest level of university and personal studies. In the U.S., parents can choose between free tax-funded public schools or privately funded private schools. Students in the U.S. must pay tuition in order to access higher education. In Finland, the education system seeks to provide an equal opportunity in education to each child regardless of their ethnicity, socioeconomic background, or place of residence. This educational equity is made possible by a wide investment in sustainable and systematic development of school administration, academic culture, and the quality of teacher-student interaction (Kangaslahti, 2013).

According to Burg (2018), the Finnish education system is characterized by an ideology of "teaching less and learning more" meaning that Finns invest less time in school and more time in personal and professional development, curriculum planning, and various school improvement initiatives (p. 3). In the U.S., student performance has been characterized by the No Child Left Behind Act (NCLB) (2002-2015) which emphasized the importance of standardized testing and comparing the performances of schools. Although the Every Student Succeeds Act (ESSA) replaced the NCLB in December 2015 giving states an increased flexibility in regard to setting their own respective standards for measuring school and student performance, the importance of testing and setting high academic standards was not eliminated (Klein, 2016).

The student population in the U.S. is much more diverse in terms of size, language, ethnicity, and socioeconomic status than the student population in Finland. To begin, there were 76.8 million students in the U.S. in 2018 (U.S. Census Bureau) whereas in Finland, the total student population in 2019 was 1.9 million. The U.S. is known for its

ethnically and racially diverse population and, in 2019, 13.7% of the population was foreign born and 22% of the population spoke a language other than English at home. In fact, since 1970, the foreign-born population has continued to increase in size and as a percent of the total population (U.S. Census Bureau). Compared to the U.S., Finland is more ethnically homogeneous; just 3.5% of the population is made up of foreign citizens, one of the lowest rates in the European Union (World Population Review, 2020). In 2019, 7.5% people of the total population spoke some language other than Finnish, Swedish, or Sami (Statistics Finland, 2020). Thus, whereas students in Finland are more likely to receive education in their native language, in the U.S., students from ethnic minority groups are more likely to struggle with English proficiency, level of expectation, and cultural differences which are likely to affect their academic attainment (Fram et al., 2007). Although Gamoran (2001) emphasized dramatic reduction in overt racial discrimination in the U.S. education system for the past century, substantial racial inequalities remain among people of different ethnicities. The two education systems also significantly differ by students' socioeconomic backgrounds. In 2019, the rate of children under 18 living in poverty was 16.8% in the U.S. (U.S. Census Bureau). In Finland, the child relative income poverty rate was only about 3-4% in 2019 (OECD Family Database, 2019). The low poverty rate in Finland is largely explained by a comprehensive social welfare system, which helps every citizen achieve a decent standard of living, work, housing, health, and education (Ministry of Social Affairs and Health, 2019).

Compared with many other Western countries, the U.S has a weak federal government and lacks a tradition of vigorous government intervention which has led to a

highly decentralized education system (Loo, 2018). Although the U.S. Congress enacts laws and policies and the U.S. Department of Education implements the laws that the Congress enacts, education in the U.S. is primarily a state and local responsibility. Similarly, education governance in Finland is based on the principle of decentralization. Although the Ministry of Education and Culture defines education policy and the Finnish National Agency for Education is responsible for its implementation, local authorities have a significant amount of autonomy and responsibility (Eurydice, 2020). Despite similarities in the education governance, an important difference between the two systems is that Finland has a national curriculum. Unlike in the U.S., Finland's national curriculum guides the nation's whole education system by setting a framework for schoolwork by defining the values and objectives for all Finnish schools (Lahdemaki, 2019). The education providers construct their educational curricula within the framework of the national curriculum. Thus, as long as local education providers carry out the basic functions determined by the national curricula, the schools have the authority to provide education according to their own administrative arrangements and visions.

Because the U.S Constitution gave the responsibility of providing basic K-12 education to the states, there are 50 states in charge of their own education systems, resulting in tremendous diversity of education nationwide (Loo, 2018). Whereas states have the overall authority over education matters by regulating the funding of schooling, the hiring of school personnel, school attendance, and school curriculum, local school districts are responsible for coordinating education policies and planning for programs and curricula that meet the educational needs of students (U.S. Department of Education,

2005). Since school expenses are heavily covered by local property taxes, public schools in the U.S. tend to reflect the educational values and financial capabilities of the communities wherein they are located, thus, leading to uneven variation of courses, subjects, and other resources among students.

How well do these education systems manage when it comes to global competence? The Program for International Student Assessment (PISA) is a triennial survey of 15-year-old students around the world that assesses the extent to which they have acquired the essential knowledge and skills in reading, mathematics, and science (OECD, 2018). The Finnish education system has received worldwide attention due to the excellent student performance in PISA throughout the 21st century. In 2000, when the PISA results were first published, Finnish students ranked first in the world for reading, and third for mathematics and science (Burg, 2018). Although there has been remarkably little variation in student performance, the recent PISA results indicate a downward trend in the mean scores of reading, mathematics, and science (Salmela-Aho & Chmielewski, 2019). The decline in scores has been evident since 2006 (OECD, 2018), and the 2012 and 2015 PISA results (OECD, 2014; OECD, 2018) indicated a downward trend in the data, with Finnish students losing ground in reading, math, and science. Despite the decline, Finnish students scored higher than the OECD average in reading (520 score points vs. 487 average score points), mathematics (507 score points vs. 489 average score points), and science (522 score points vs. 489 average score points), respectively (OECD, 2018). However, the negative trend line shows no sign of a reversal of performance in any subject. When it comes to the PISA results of the U.S., the scores in reading since 2000, mathematics since 2003, and science since 2006 have not indicated any significant

improvement or decline. However, reading scores significantly increased between 2009 and 2018 by almost four percentage points to 13.5% (OECD, 2018). In 2018, American students performed above the OECD average in reading (505 score points vs. 487 average score points) and science (502 score points vs. 489 average score points), but below the OECD average in mathematics (478 score points vs. 489 average score points).

SES and Educational Disparity

A wide variety of social, psychological, economic, environmental, and personal factors affect student performance. Mushtaq and Khan (2012) divided these factors into internal and external classroom factors. Internal classroom factors include, for example, language competency, teacher quality, classroom size, classroom guidance and communication, and adequate learning tools. Extracurricular activities, families' socioeconomic status (SES), and social issues in the living environment are some of the examples of external classroom factors.

In general, socioeconomic status (SES) significantly influences people's physical and mental health (DeCarlo et al., 2011; Haider, 2014; Levine, 2011; Russell et al., 2016), family well-being (Melki et al., 2004; Milteer et al., 2012; Trickett et al., 1991), education (Hochschild, 2003; Sheridan & McLaughlin, 2016) and employment (Desmond, 2017). The three main measures used to examine SES are education, income, and occupation. Factors such as educational attainment, income, financial security, and people's perceptions of social status and social class all come together to construct SES (Heckman, 2020). These factors contribute to people's quality of life by providing opportunities and privileges that are available only to people within certain social groups.

SES is influential, because it not only shapes people's personal lives, but ultimately affects society as a whole. Inequities in health distribution, resource distribution, and quality of life are increasing in the U.S. and abroad (Heckman, 2020). Thus, it is beneficial to pay attention to the foundations of socioeconomic inequities and to make an effort to reduce the deep-rooted systemic gaps in socioeconomic status. These disparities are related to student performance and educational issues in three distinctive microsystems—family, school, and neighborhood.

SES contributes to a wide variety of factors that predict children's later academic achievement, such as their emotional, cognitive, and behavioral development (Wiederkehr et al., 2015), academic interest, relationship with adults and peers, and the availability of resources in their family, school, and community. The association between SES and academic achievement is well-established by previous research (Arnold & Doctoroff, 2003; Entwisle, 2003; Harju-Luukkainen et al., 2020; Woolley & Grogan-Kaylor, 2006) and the findings demonstrate how low-SES children face an increased risk of academic failure. The risk of academic underachievement seems to be most dramatic near and below the poverty line due to the negative influence of low-SES on children's early development. In fact, differences in fundamental skills emerge prior to the start of school, and poor literacy and math trajectories among low-SES students become rather prominent early on in childhood (Arnold & Doctoroff, 2003). In addition, the pace of learning tends to be slower among children from low-SES families (Morgan et al., 2009). Many factors related to family-SES are associated with the negative learning and educational outcomes described above, such as the place of residence, parental involvement, and the lack of access to necessary supplies, books, technology, and study

area. However, although family-SES and its influence in children's early development are essential in predicting children's academic attainment, it is also important to understand how factors within school and neighborhood context influence educational outcomes.

Woolley and Grogan-Kaylor (2006) examined a number of protective family, neighborhood, and school variables in respect to school performance, school coherence, and avoidance of problem behavior. According to the findings, several factors from each microsystem—family, school, and neighborhood—predicted school performance, indicating how multiple factors come together to shape students' educational outcomes (Woolley & Grogan-Kaylor, 2006). In specific, the authors emphasized the importance of teacher support and neighborhood safety in predicting students' academic performance. Thus, a wide variety of risk factors in students' family, school, and community life place low-SES children at increased risk for academic underachievement.

Many previous studies demonstrate that neighborhood context does impact educational achievement, even when family characteristics are controlled (Owens, 2010). Neighborhood characteristics, such as people's overall affluence, the level of education, high school dropout rate, unemployment rate, and population diversity all influence children's educational attainment. Although past studies have identified an association between neighborhood traits and children's educational attainment, identifying neighborhood effects and establishing causal interpretations is somewhat difficult because neighborhood characteristics reflect both unmeasured individual-level characteristics and parental characteristics (Owens, 2010). School composition reflects neighborhood characteristics and, thus, is related to family characteristics; however, the

type of formal interaction children are exposed to in the school environment differs from the family and neighborhood contexts.

With regard to structure, there are some dramatic differences in educational quality among American schools. Educational quality consists of a range of subtle processes, experiences, and opportunities at school and in the classroom environment, such as teacher attributes, the social and physical context of learning, and specific activities and events constructing children's learning experience (Fram et al., 2007). For example, children are more likely to succeed when they are instructed by experienced teachers who have strong academic and cognitive skills. Unfortunately, in the U.S., as Aikens and Barbarin (2008) demonstrated, school systems in low-SES communities are often under-resourced. Therefore, it is unsurprising that, on average, schools in high-poverty and high-ethnic minority areas have less experienced teachers who have lower education with fewer credentials (Fram et al., 2007). In addition, unevenly distributed resources among schools in the U.S. lead to opportunity gaps which affect students' educational attainment. In Finland, opportunity gaps are not as exacerbated due to wide investment in social cohesion, educational equity, homogenous student population, sustainable and systematic development of school administration, academic culture, and the quality of teacher-student interaction (Kangaslahti, 2013; Burg, 2018). According to Aho and Grek (2013), Finnish parents did not perceive their SES to have a significant impact on their children's academic experiences or outcomes and the education system was perceived to be equal. However, the study sample largely consisted of high-SES parents. In contrast, Salmela-Aro and Chmielewski (2019) studied the trends in socioeconomic inequality of academic achievement in Finland and concluded that

although the comprehensive school reform of 1972 contributed to declining the SES achievement gaps, the gap has slightly increased in recent years.

Parental Level of Education and Impact on Children's Academic Attainment

One of the most consistent predictors of children's level of educational attainment is their parents' level of educational attainment (Mangione & Speth, 1998; Mayer, 1997; Scott-Jones, 1995; Spera et al., 2009). According to Hernandez and Myers (1993), parents' level of education is important because it reflects the knowledge, experience, and aspirations that parents bring to their children further influencing how well their children do in school. In addition, Scott-Jones (1995) pointed out that parental aspirations for their children's educational attainment (i.e., the level of education parents would like their children to attain) appears to be a particularly important predictor of children's academic achievement. Consequently, parental aspirations for their children's educational attainment appears to be significantly and positively related to their children's setting of academic goals, persistence in school, course enrollment, intellectual accomplishments, and attendance at college (Bronstein et al., 2005; Spera et al., 2009; Wigfield, 1993).

Parental education seems to have long-term effects on children's educational and occupational success. According to Dubow and colleagues (2009), parental education when a child is 8 years old significantly predicts educational and occupational success for the child 40 years later. Parental education, which determines their socialization values as well as their occupation and income, influences the level of education and income their children achieve when they in turn become adults (Breen & Jonsson, 2005; Dubow et al., 2009; Ermisch & Pronzato, 2011; Hauser-Cram, 2009; Hernandez & Myers, 1993).

The study results of Hernandez and Myers (1993) suggest that children whose parents are highly educated are substantially more likely to achieve high educational levels than are children whose parents are less educated, although the degree of advantage or disadvantage associated with parents' education has become smaller over time. By using simple regression analysis, the correlation between parents' and children's education has been demonstrated to be strong and robust to a number of controls, sample selections, and countries (Haveman & Wolfe, 1995; Hertz et al., 2007). Although parental education is only one aspect of family background shaping children's educational experience, it appears to be a particularly important antecedent contributing to children's academic outcomes.

Parental education is closely related to parental involvement. Parental time and investment in children's development is crucial from early on because children learn, in part, by observation (Kalil et al., 2012). Parents with higher education are likely to spend more time with their children (Guryan et al., 2008), and actively develop their children's talents and skills (Lareau, 2002). In addition, they are more likely to be involved in their children's education (Cheadle & Amato, 2011), which contributes to adolescents' educational successes (Cabrera et al., 2018). Parents with less education likely spend less time with their children (Guryan et al., 2008) and appear to let their children's talents and skills develop with little or no guidance or stimulus (Lareau, 2002).

Previous studies have sought to examine the impact of paternal and maternal education on their children's education with conflicting results. According to Pronzato (2012), previous studies have found a strong positive father's effect with a negligible mother's effect on the link between parental education and children's education when

ability and other unobserved characteristics of the parental environment are controlled. In only a few cases, a positive effect has been found for the mother and not for the father. However, Pronzato (2012) emphasized that the results of previous studies have depended on different identification strategies and on different sources of information.

Marks (2008) compared the influence of paternal and maternal socioeconomic characteristics, measured by their occupational status and educational level, on student performance in literacy and numeracy using data from 30 countries, including the U.S. and Finland. The analyzed data was from the OECD's 2000 Program for International Student Assessment (PISA), a study which detects student achievement in reading, mathematics and science of over 172,000 15-year-old students in 6,000 schools in 32 countries. The findings suggested that, based on parental socioeconomic characteristics, the influence of fathers and mothers is comparable in most OECD countries. However, in many countries, paternal occupational status seemed to have a greater impact on student achievement than maternal occupational status whereas the converse seemed to be true for parental education. The relative impact of maternal education appeared to be larger in a number of western European countries: Belgium, Finland (mathematics only), France, Germany, Greece, Iceland and Switzerland. In contrast, in several Anglo-Saxon countries (Australia, New Zealand, and the U.S.) the effects of paternal educational attainment appeared to be stronger than maternal or at least comparable (Marks, 2008).

Some previous studies have examined the role of paternal and maternal education on children's academic performance based on the child's gender with conflicting results. In the U.S., Haveman and Wolfe (1995) concluded that "the human capital of the mother is usually more closely related to the [educational] attainment of the child than is that of

the father. Behrman (1997) also indicated that maternal education appears to be somewhat more important than paternal education, but emphasized that the margin is not as large as suggested and that there is a considerable degree of variation across studies. In Germany, Heineck and Riphahn (2007) concluded that "maternal education has weaker effects on sons' than on daughters' outcomes. In Australia, Baxter (2002) indicated that paternal education has a greater association with sons' educational attainment than does maternal education, and vice versa is true for daughters. In the United Kingdom, Ermisch and Francesconi (2001) did not find significant differences by gender within either generation (Smeeding et al., 2011). However, with a different dataset, Dearden and colleagues (1997) had found paternal education to be more important related to sons' education, and maternal education to be more important related to daughters' education. In Sweden, Björkland and colleagues (2007) indicated that, among children raised by both biological parents, father-son links yielded to be stronger than father-daughter links. The results did not reveal statistical differences in mother-son and mother-daughter links.

In order to examine the role of paternal and maternal education on their sons' and daughters' cognitive ability for a large number of countries, Jerrim and Micklewright (2011) utilized the 2003 PISA results and analyzed all OECD countries except Mexico and Japan. In each country, a minimum of 150 schools were included in the sample, selected with probability proportional to size. They sought to investigate how educational advantages and disadvantages are transferred between generations by exploring gender differences in thirty rich industrialized nations, restricting attention to children living with both biological parents. According to the results, it is more common for paternal education to have greater influence on children's academic performance than maternal

education has, which appears to be particularly true of sons. However, there were plenty of countries which were counterexamples as some results suggested that maternal education has more effect on daughters' performance than on sons', yet the difference is often small. Jerrim and Micklewright (2011) concluded that it is important to consider the influence of parents' education combined. The results suggested that they may typically combine positively; mother's and father's education appear complementary in their association with the child's ability (p. 281).

Since the early 1970s, the importance of maternal socioeconomic characteristics on their children's educational and occupational attainment has been acknowledged (Marks, 2008). Higher levels of maternal education are positively associated with many different academic outcomes for children throughout their development. Prior to children's school entry, higher maternal education has been associated with more advanced spontaneous language production (Dollaghan et al., 1999; Harding et al., 2015; Hauser-Cram, 2009) and standardized cognitive achievement tests (Harding et al., 2015; Magnuson et al., 2009). In addition, Davis-Kean (2005), further indicated that reading to children and being involved in their schooling are important mechanisms by which maternal education relates to children's educational attainment. Maternal education has further been found to be strongly associated with children's academic achievement through elementary, middle, and high school (Harding et al., 2015). In addition, it appears that adolescents with mothers with higher levels of education are more likely to graduate high school and enroll in college (Choi et al., 2008; Sirin, 2005).

Parental education and preparedness to assist children in their education was challenged by the outbreak of the COVID-19 pandemic in 2020, which resulted in school

closures and transition to distance learning. Due to the influential role parental education has on children's academic attainment, this study sought to investigate the possible similarities and differences in parental experience and satisfaction with distance learning based on families' socioeconomic status (SES) as measured by parental level of education.

Parental Perceptions of Distance Learning Experience

The school closure and a rapid shift to distance learning at the end of 2019-2020 academic year placed more educational responsibilities on parents and guardians. Parental involvement (Barwegen et al., 2004), family-SES, and neighborhood affluence are critical factors influencing children's development and academic performance (Anderson et al, 2014; Sastry & Pebley, 2010). Thus, parental perceptions of the distance learning experience are extremely important to examine in order to avoid negative educational outcomes and to inform future policy decision making related to COVID-19 and education. Garbe and colleagues (2020) investigated parents' experiences with distance learning during the spring 2020 school closure in the U.S. The study results indicated that, although parents generally agreed with school closure and were generally satisfied with the support they received from school districts, many struggled with balancing responsibilities, supporting learner motivation, distance learning accessibility, and concerns over learning outcomes.

During the school closure in Finland, researchers from the Universities of Helsinki and Tampere noticed that schools' preparedness to school closure varied considerably (Ahtiainen et al., 2020). Therefore, the researchers decided to study the

perceptions of the student learning experience among students, families, teachers, school principals, and other school personnel to compare the experiences nationwide. Research interests included a wide variety of themes such as the influence of school management on teaching arrangements and the wellbeing of students, families, and school personnel; student grading and possible variation in grading practices among schools; the adequacy and regional variance of digital infrastructure; perceptions of educational equity and student support; and the wellbeing of students, families, and school personnel during the pandemic (Ahtiainen et al., 2020). From May 20th to June 3rd 2020, a total of 35,586 guardians from 214 different municipalities and 838 schools participated in an electronic survey.

The guardians' perceptions were divided into the five following subcategories: students' educational performance and family functioning during the pandemic, parents' perceptions of school operations, study materials and nutrition, educational support, and the wellbeing of families. The study results reflected overall satisfaction among parents but there was significant variation in parents' perceptions of the availability of necessary educational tools and student support, thus, negatively influencing the perceptions of educational equity. Although the vast majority of parents were satisfied with the organization of distance learning and felt that the communication between school and home worked out well, some parents perceived that the responsibility of making distance learning work was largely assigned to them (Finland's Parents' League, 2020).

Parental Involvement in Education

Parental involvement in education refers to parents' use of time and investment of available resources in their children's education in order to improve their learning. The investment taking place at home includes a wide variety of behaviors, such as showing interest about a child's school day, helping with homework, and reading with them. During the 2020 school closure and exceptional teaching arrangements, the role of parental involvement in children's education became evident because early childhood education in a distance learning environment likely requires more direct parental involvement in children's learning. Despite the instructions and schoolwork provided by teachers, many parents participated in distance learning by providing guidance in addition to teachers' instructions. Distance learning format can be challenging to parents for various reasons. They might lack understanding of the learning material or have difficulties to motivate their children when there is a need, they might have limited time to help due to their own work, and the learning environment might lack necessary learning tools to participate in distance learning (Garbe et al., 2020).

According to Garcia and Weiss (2020), distance learning exposed the technology divide among children in the U.S. leading to long-term academic disadvantages to children who lack the necessary resources they now need to learn at home to participate in distance learning. According to data from the National Center for Education Statistics' National Assessment of Educational Progress (NAEP) for eighth-graders, access to online learning was unequally distributed and poor students were less likely to have access to necessary digital learning tools required to attend online teaching. Nearly 16% of eighth-graders overall, and almost a quarter of eighth-graders who are poor, did not

have a desktop or laptop computer at home on which to follow their classes, and about 8% of eighth-graders who are not poor lacked access to these essential devices (Garcia & Weiss, 2020). Consequently, many parents in the U.S. had to find ways to provide necessary learning devices to their children in order for them to participate in their classes. In Finland, schools provided the required digital devices and learning material to students alongside school lunch.

On April 21st, 2020, Finland's Parents' League released an update of the findings of "How are the Families Faring" online survey. By April 21st, 2020, there were 390 respondents across Finland's 53 municipalities including Helsinki, Vantaa, Jyvaskyla, and Oulu to name a few. According to the report, the majority of parents (52%) stated that their family was coping well with the pandemic, 35% of respondents thought that there had not been significant change to better or worse in their ability to cope with the situation, and 13% of parents stated that their family was not coping well (Finland's Parents' League, 2020). In addition, in 53% of respondent's families there were children in need of special support. These families were significantly more likely to fare worse than those families who did not have children with special needs. Since the majority of respondents answered quickly after the survey became available on March 25th, 2020, when most students had been in distance learning for only a couple of weeks, parental perceptions of distance learning format and arrangements may have been partly shaped by the possible stress associated with the urgent shift from in-person learning to distance learning.

According to the study results, some findings indicated that distance learning has worked well despite the urgent shift from in-person learning to distance learning.

Satisfied parental perceptions of distance learning were associated with the availability of essential materials and digital devices, teachers' digital presence and availability for students, a fair amount of appropriate age- and skill-level schoolwork, and a class schedule which students could keep up with independently. Having close contact with teachers and peers, albeit digital, was seen as an important factor in maintaining students' motivation to learn. An active contact between teachers and home was appreciated by many parents as it was not only beneficial to the academic achievement of students but also provided support for parents. The following quote indicates a respondent's satisfaction with distance learning arrangements and contact between school and home:

> "It works well (distance learning)! Students in middle school have access to a digital learning environment, and they have a connection to their teachers during classes. The laptops provided by schools have been irreplaceable in distance learning. In elementary school, student's homework arrives to both Wilma a night before the day homework is assigned to and to WhatsApp (phone app) the same day the homework is assigned to. Keeping contact with teachers works through the same formats. Keeping up with the homework is ensured through the personal contact between students and teacher, and through Wilma" (Finland's Parents' League, 2020).

However, there were also parents who were not satisfied with the distance learning format and arrangements due to reasons such as too much homework, ignoring students with different skills and abilities, inactive contact from teachers leaving students alone with problems related to their schoolwork, and the absence of congruent teaching arrangements. Some respondents perceived distance learning to be a burden to the whole family in which parents have been forced to take the responsibility of children's learning.

> "Teaching has totally become the responsibility of home/parents. Only once a day, students are provided with schoolwork through Wilma—there is no way that 7- and 10-year-old children would be able to cope with the submission and other instructions by themselves. The teacher of the younger student has not once been in direct contact with him/her. The teacher called a parent once a 2-minute phone call to ask how everything was going on. The situation itself is fine, but the recent public comments made by teachers and ministers stating that parents have misunderstood the situation indicating that teachers still have the teaching responsibility are really annoying and far from the truth (Finland's Parents' League, 2020).

The parental perceptions above demonstrate that parents seemed to be less satisfied with distance learning when the contact between teachers and students was insufficient, forcing parents to get more involved in order for children to do well in their studies. In both countries, the distance learning format challenged the self-regulation and study skills of students. Although some students may have found distance learning suitable for them and benefited from asynchronous teaching and learning arrangements, many students were in need of support and guidance (Goman et al., 2021). According to Goman and colleagues' (2021) review, the *Impacts of the Exceptional Teaching Arrangements on the Realization of Equality and Equity at Different Levels of Education—Part III of the evaluation project: Summary and Recommendations of the National Evaluation*, many students experienced strain and increasing need for support during the exceptional teaching arrangements caused by the pandemic. The support from home seemed to become increasingly important during the distance learning for students in elementary- and middle school, and secondary education. Disparity in received support from home was a critical factor creating inequality among students. The absence of in-person contact with teachers was associated with the increasing need of student support in particular among students with learning problems and problems with progressing in

their studies, such as non-native Finnish or Swedish speakers. For children in elementary school, the cooperation between home and school was essential in order to detect students' need for support.

Children and Technology

During recent decades, technology has integrated into people's everyday life across the world and people are more connected to each other than ever before. Digital learning devices have increasingly integrated into students' lives as well. For example, students may use tablets to complete academic assignments or submit their homework. In accordance, digital devices provide countless information and opportunities to learn. Due to the COVID-19 pandemic and exceptional teaching arrangements in 2020, the use of digital learning devices increased for many students and in many cases these devices were likely the primary way to participate in classes and to do schoolwork. The sudden shift from in-person learning environment to distance learning has been especially challenging for those students who have lacked access or digital literacy skills which refers to student's ability to find, evaluate, and use digital information. Because the use of digital devices among children has increased due to the pandemic, it is important to consider the possible effects technology has on children's growth and development.

Young people are not only active online, the use of digital devices starts at younger ages. According to the Centre for Educational Research and Innovation's (CERI) 21st Century Children project, in 2015, a typical 15-year-old reported using the Internet since the age of 10 and spending more than two hours every weekday online after school (an increase of over 40 minutes since 2012), and more than three hours every weekend

day (OECD, 2017). Due to the increase in time that children spend online, concerns over the negative effects of technology on children's socio-emotional, cognitive, and physical development have come to the forefront. Childhood is a time of physical and psychological growth and development. Childhood is a period of high brain plasticity (Burns et al., 2019), and during the first three years of life, a child's brain may create over one million new connections per second—essential for the development of hearing language and cognition (OECD, 2017). The early development of neural networks is linked to more complex activities, such as decision-making and cognitive flexibility. Thus, there has been a concern over whether high technology consumption can "rewire" children's brains and cause problems in later development (Burns et al., 2019).

Although there have been many governmental and medical society groups who have advocated the importance of limiting children's screen time to prevent possible negative effects of digital devices, major brain changes as the result of digital device consumption are unlikely (Mills, 2014). Many researchers have criticized the restriction focused guideline due to the lack of evidence-based research on optimal amounts of screen use or online activities (Gottschalk, 2019) and lack of evidence on causal relationship between screen time and mental health issues (Orben & Przybylski, 2019). The CERI report emphasizes that rather than focusing on the amount of time children spend using digital devices, it is more important to consider the type of technology and what it is used for. For example, many young people use the Internet or cell phones to keep contact with friends, or tablets to do their schoolwork. Thus, in many ways, digital devices are used to facilitate everyday life. Some precautionary approach to the use of digital devices is still recommended, such as turning off devices when not used, avoiding

screen time an hour before bedtime, and designating media-free times and locations. According to the CERI report, it is key to maintain a focus on the activities that are strongly associated with healthy development, such as good quality, regular sleep and quality time spent with family and friends; these and many other factors are more important than taking a hard line over screen time limits to ensure the best start in life (Burns et al., 2019).

Although technology has a prevalent role in children's lives today, children from different socioeconomic backgrounds do not have an equal access to digital devices and the effect of this unequal distribution has become increasingly evident during the COVID-19 pandemic and distance learning, further contributing to disparities in learning outcomes. According to the Household Purse Survey, a survey created to indicate how American households have fared during the COVID-19 pandemic, high-income households with children were using online resources at higher rates than those in lower-income households and low-income households reported higher rates of using paper materials sent home from school than high-income households (McElrath, 2020). With approximately 93% of people with school-aged children reported engaging in some form of distance learning, children in low-income households were less likely to rely on online resources. In recent studies, inequality in access to computers and the internet has been widely documented; lower-income households are less likely than higher-income households to have internet access and computer availability (McElrath, 2020). In addition, children from low-income households are likely to live in households with lower levels of internet and computer proficiency and attend schools which are not well prepared to provide online instruction. Thus, in order to measure the effect of distance

learning format on students, the prevalence and disparity of digital inequality among families from different socioeconomic statuses is important to measure.

Contribution to the Existing Literature

The unexpected and rapid shift to distance learning at the end of 2019-2020 academic year as the result of the COVID-19 outbreak calls for examining parents' experiences and needs in the distance learning environment. Due to the recentness of the pandemic, preliminary research on parental experiences is extremely crucial in order to provide early intervention against the obstacles faced by parents. As clear stakeholders of their children's academic achievement, parents' skills, struggles, and needs in distance learning environments are necessary to investigate (Garbe et al., 2020).

A study on parental experiences and struggles yields useful data which can be used to identify trends facilitating the development of programs and policies that target parental needs in the distance learning environment. Thus, research on COVID-19 and parental experiences can help schools with organizing distance learning in a way that satisfies families. In addition, research facilitates outlining the prevailing attitudes on how the education policies have worked so far and whether something needs to be drastically changed in order to efficiently restore the basic educational activities during the pandemic.

According to Watson and colleagues (2011), online education has been one of the fastest-growing educational trends for over the past decade. However, although online education is not a new practice, educators all over the world have faced the challenge of facilitating students' distance learning experience. As a result, parents have been assigned

to take bigger responsibility for their children's learning. Although the importance of parental involvement is established by many previous studies (Barwegen et al., 2004; Garbe et al., 2020; Liu et al., 2010), some researchers have called for additional research in order to better understand the importance of parental involvement in distance learning formats (Black, 2009; Cavanaugh et al., 2009; Rice, 2009). However, it is likely that the importance of parental involvement in children's educational performance has multiplied during the pandemic which is constantly challenging the functioning of people's daily lives.

As previously mentioned, prior literature on the educational issues children face in distance learning is limited because the vast majority of research has focused on the traditional school settings. Thus, the study sought to contribute to the existing knowledge and research by its preliminary and cross-national approach to the topic. In addition, the study provides information on whether parental involvement differed during the Spring and Fall 2020 school closure, and whether issues in a distance learning setting differ from the issues in a traditional school setting. The study adds to the information already collected on COVID-19 and distance learning by previous studies such as the "Socioeconomic, Geographic and Demographic Disparities Related to the Exposure of Distance Learning—Report," by Parolin and Lee (2021) and the "Final Report of the Year 2020," published by the Finnish Education Evaluation Centre (FINEEC) among others.

The data collected from both countries have demonstrated how the exceptional teaching arrangements during the pandemic have weakened students' opportunities for equal and equitable learning conditions. In the U.S., the notable disparities in exposure to

distance learning is concerning because recent studies have demonstrated that students exposed to distance learning have made 'little or no progress while learning from home' according to progressions in test scores. Further, students from disadvantaged socio-economic backgrounds may face even steeper declines in learning outcomes (Parolin & Lee, 2021). In Finland as well, the exceptional teaching arrangements have negatively influenced the equal and equitable preconditions for learning at different levels. It is evident that some students did not cope well with the distance learning format and problems associated with self-regulation skills, other social skills, learning difficulties, and resources at home increase inequality among students. Whereas past studies have primarily focused on the influence of COVID-19 and distance learning in one country, the current study adds to the information collected by paying attention to cross-country similarities and differences in parental satisfaction related to distance learning.

THE PROPOSED STUDY

The overall goal of this research project is to understand parents' perceptions of how the special teaching arrangements during the COVID-19 pandemic in 2020 affected children's learning in Finland and the U.S., and whether the perceptions significantly vary by country, SES, and a variety of school, family, and student factors. Given the substantial amount of information collected, this thesis focuses specifically on the following research questions: (1) Is there an association between family SES (as measured by parental education) and parents' perceptions of their children's educational experience during the school closure and does this vary by country?, and (2.) Is parental involvement associated with parents' perceptions of their children's learning during the school closure?

METHODOLOGY

Due to the preliminary approach, the study was based on a mixed methods research design, the integration of qualitative and quantitative research components. Survey data collection was conducted with a structured electronic survey via Qualtrics consisting of close-ended and open-ended questions (see Appendix A for more detail about questionnaire design). The survey questions were designed to collect data on parents' sociodemographic characteristics, overall perceptions of distance learning experience, parental involvement, communication between home and school, and the availability of adequate learning resources.

A careful construction of survey questionnaires is essential because poorly implemented surveys can lead to misleading questions and inaccurate answers, therefore, biasing the study results (Schutt, 2015). Thus, the survey questionnaire was well-screened, and revised before it was administered to the participants. Three existing, vetted measures utilized by previously conducted research were used as a guidance in creating the survey questionnaire. These researches include (1) "How Are They Faring; the impacts of the COVID-19 Pandemic on the Lives of Families and Young Children in Massachusetts," published by the Harvard Graduate School of Education, (2) the "Household Pulse Survey During COVID-19" sponsored by the U.S. Census Bureau and other federal agencies, and (3) the "COVID Impact Survey: Week 3, National Findings" conducted by NORC at the University of Chicago on behalf of the Data Foundation.

An electronic survey design is one of the most popular forms of social research due to its low cost, flexibility, and ability to reach many people in a short period of time (Schutt, 2015). Electronic survey design enables the data collection from a sample of individuals who might be geographically widely spread. Thus, it was an efficient way to reach out to the parents in the U.S. and Finland (see Appendix B for more detail about the strengths and weaknesses of survey design). The survey was administered in April, 2021. By the time surveys were issued, a year had passed since schools in the U.S. and Finland had been physically closed and distance learning environments established. In the U.S., electronic surveys were administered through email and popular media. In Finland, the surveys were administered through Wilma, an online service designed to facilitate the evaluation of academic experience and attainment, and communication between school and home. The dependent variable of the proposed study is parents' perceptions of the distance learning experience and the independent variables included in the proposed study are family-SES, as measured by parents' level of education, and parental involvement, as measured by the average time spent per child on distance learning.

Survey Design

The survey consisted of five distinct sections which aimed to collect data that would help with understanding parents' perceptions of children's distance learning experience during the COVID-19 pandemic in 2020, and how the distance learning arrangements during the Spring and Fall 2020 affected children's learning in both countries. In addition, the data imply possible differences among American and Finnish parents' perceptions and among parents from different socioeconomic backgrounds.

The first section contained questions about participants' demographic characteristics. Gathering demographic information was used to identify concrete characteristics of a participant in order to indicate one's place in a general population and further detect differences in the perceptions of American and Finnish parents. Demographic information allows the division of participants into subgroups based on, for example, their race or education level. Demographic questions are important because they are an effective way to better understand the different sectors of the population of interest as they help with determining whether the experience of participants significantly differ based on age, race, ethnicity, education, income, employment, marital status, etcetera. Due to its private nature, answering demographic questions might be uncomfortable for some participants. However, demographic data is useful as researchers seek to provide analysis of collected data which will resonate with the population of interest.

The second section contained questions about the overall impact of the COVID-19 pandemic on participants' families. The question design for this section was retrieved from the "Household Pulse Survey during COVID-19" sponsored by the U.S. Census Bureau and other federal agencies, which sought to provide up-to date information about the impact of the COVID-19 pandemic on the U.S. population by measuring the impact of COVID-19 on employment status, food security, housing security, education disruptions, physical and mental wellbeing. In addition, questions related to loss of employment income and reasons for the loss were retrieved from the "COVID Impact Survey: Week 3, National Findings" conducted by NORC at the University of Chicago on behalf of the Data Foundation. The section consisted of questions on how COVID-19

pandemic had impacted participant's employment status, possible loss of income, ability to cover everyday living expenses, and overall wellbeing. The third section contained questions about children's distance learning experience. In this section, participants were asked to answer questions separately about each child. Answering questions concerning the experience of each child was essential because many families have more than one child and children may have had a wide variety of distance learning experiences depending on whether they were in elementary school or middle school in 2020.

The fourth section contained questions about the availability of necessary resources for children in the distance learning environment. The fifth and final section contained questions about participants' perceptions of their children's learning experience considering all of their children together. Questions in both sections referred to the "How Are They Faring; the impacts of the COVID-19 Pandemic on the Lives of Families and Young Children in Massachusetts," published by the Harvard Graduate School of Education. The study describes families' experiences during the first few months of the COVID-19 pandemic in Massachusetts. The data contained by the survey yield insight into parents' pandemic-related concerns; life changes, disruptions, and adjustments; family needs; and children's lives at home (Gonzales et al., 2020). This section asked participants to select an answer which best reflects their level of agreement or disagreement for statements related to distance learning, such as parental involvement, school resources, and communication between home and school.

Human Subject Protection

The American Sociological Association's (ASA) Code of Ethics has set forth six general and aspirational principles that serve as a guide for sociologists to meet the highest ethical course of action in each specific research context. These principles include professional competence, maintaining high levels of competence in work and recognizing the importance of education in order to remain professionally competent; integrity, being honest, fair, and respectful of others in professional activities; professional and scientific responsibility, adhering to the highest scientific and professional standards and accepting responsibility for work; respect for people's rights, dignity, and diversity; social responsibility, being aware of professional and scientific responsibility to the communities and societies in which they live and work; and human rights, promoting the human rights of all people (ASA: Code of Ethics). Even though ASA does not have enforcement obligations when it comes to these general principles, conducting the study within these guidelines was incredibly important to protect the human subjects. Although it is the researcher's responsibility to avoid too personal and intrusive questions, the wide range of participants' reactions is often difficult or impossible to predict due to the different ways they may understand the questions. Thus, prior to choosing to participate in the study, individuals were well-informed about the possibility of arising emotional distress as they answered the questions.

A formal introductory statement including a link to the survey was provided to all parents to clearly state the motivations of the study and provide the information needed to make an informed decision to participate. Prior to taking the survey, participants were required to provide informed consent. The informed consent introduced the purpose of

the study, its procedures, and anticipated benefits. In addition, parents were provided with information of the possible risks and benefits related to participation. The informed consent stated that the study has been reviewed and approved by Arkansas State University's Institutional Review Board (IRB). Thus, the informed consent ensured the IRB had determined the study meets the ethical obligations required by federal law and University policies. In case of any questions and concerns regarding the study, the informed consent requested participants to contact the investigator or advisor. In case of any questions or concerns regarding participants' rights as a research subject, the informed consent requested them to contact the Director of Research Compliance.

Most importantly, informed consent ensured that by agreeing to participate in the study, participants did not waive any rights that they may have regarding access to and disclosure of the records. Participants were ensured that participation in the study is completely voluntary and that if they chose to participate, responses would be held in confidence. Thus, as the results of this study are to be written for publication, no identifying information is used in the publication of this study. The study used Qualtrics, a web-based survey tool, to conduct an online survey which ensures participant safety by storing the informed consent separately from the survey responses, the former of which does not require a signature to maintain anonymity. Finally, the informed consent stated that participants are free to withdraw at any time without penalty. After giving consent to participate, participants proceeded to take the survey.

Sample Selection

The study utilized non-probability sampling methods given the preliminary nature of this study and the need to identify participants quickly in both countries. In a non-probability sample, people are selected to participate in a study based on non-random criteria. Thus, unlike probability sampling, non-probability sampling does not seek to provide an equal chance for each person in the population to be included in the sample. In a non-probability sampling, there is a higher risk of sampling bias which occurs when some individuals in a population are systematically more likely to be selected in a sample than others (Carr et al., 2017). Therefore, the results of this study cannot be used to make valid statistical inferences about the whole population. As previously mentioned, instead of shooting for statistical representation, the goal of the study is to develop an initial understanding of a population, albeit non-generalizable, from a period of time which is still under-researched.

The study applied two different non-probability sampling methods: purposive sampling and snowball sampling. In purposive sampling, interviews are recruited until the sense of completeness and saturation are achieved. Completeness refers to the achievement of the overall sense of meaning of a concept or a process. Saturation refers to being confident about the sufficiency of gathered data. In Finland, the permission to conduct the study in each municipality was applied for in each city separately. After receiving permission to conduct the study from the cities of Helsinki, Vantaa, Espoo, Turku, Tampere, Joensuu, Kuopio, Kokkola, Vaasa, Jyvaskyla, and Oulu, the online Qualtrics link to the Finnish survey was forwarded to parents by principals or a given contact person in those schools who had agreed to participate. A reminder email was

forwarded to parents a week after the initial contact. The survey was provided in Finnish and in English. Participation in the research was based on parents' volunteerism.

For the American sample, several school districts in Arkansas, Missouri, and Tennessee were contacted to apply for the permission to conduct research. Fourteen school districts from Arkansas, 20 school districts from Missouri, and 17 school districts from Tennessee were initially contacted via email. Eleven research permission applications were turned in to each district that returned to the initial email and provided application documents. Because each contacted district turned down the opportunity to participate, snowball sampling was necessary. Participants were contacted via email and the initial contacts were asked to either share the online Qualtrics link with people who they know to fit the research participation criteria or to share any contact information with the researcher so she could directly contact these people. In addition, the online study link was published in a few professional social media accounts so it would be available for as many people as possible.

The sample in both countries consisted of parents with at least one child in a regular public elementary school or middle school setting prior to March 2020 school closure that transitioned from a traditional to remote learning format. The survey provided information about participants' age, gender, race and ethnicity, level of education, marital status, employment status, and income level. Likewise, the survey provided data about the number of children in the family participating in distance learning in 2020, parental perceptions of the functionality of distance learning, family's overall wellbeing during the pandemic, and parents' preparedness with and availability to guide their children in a distance learning setting. The Finnish sample size consisted of

674 individuals, 619 of whom had valid responses. The sample size for the U.S. consisted of 74 individuals, 64 of whom had valid responses.

Analysis Plan

The research utilized parental involvement as measured by amount of time spent with distance learning per child and parent's level of education as the two main variables associated with level of parental satisfaction related to distance learning. Moreover, data contained information regarding participant's gender, marital status, current academic enrollment, employment status, loss of employment income, and telework. Multivariate linear regression was used to analyze the quantitative survey data to estimate the relationship between parental satisfaction (DV) and multiple independent variables (see Appendix C for the analysis plan for future research utilizing the qualitative survey data).

Prior to multivariate analyses, univariate statistics were conducted to provide a sample description. Univariate analysis is the simplest form of analyzing data, as data is analyzed one variable at a time. Instead of focusing on associations among two or more variables, the main purpose of univariate analysis is to describe obtained data and explore patterns of individual variables not related to each other (Schutt, 2015).

Bivariate analysis is a form of quantitative analysis involving the analysis of two variables to determine the level of association between them (Schutt, 2015). In this study, bivariate statistics were performed to test for significant mean differences in parental satisfaction by parents' education (the selected measure for family SES) and parental involvement measured by the average amount of time participants spent per child on distance learning activities. Self-reported parental satisfaction on distance learning based

on parental involvement was treated as a categorical variable. Level of education was measured by the highest level of education completed. Self-reported parental perception of distance learning based on level of education was treated as a categorical variable.

Specifically, ANOVA with post-hoc Tukey tests were utilized since the independent variables were composed of more than two categories and the dependent variable was interval level. Bartlett's test was utilized to identify whether the variance of dependent variable—parental satisfaction—was equal across the three categories for both independent variables—parental involvement and level of education. Comparing categories to each other is used to figure out the statistical significance of each amount of parental involvement or level of education in relation to parental perception. Statistical significance means that an association among two or more variables would likely continue to exist if we took another sample from the population and if we were able to study the whole population (Schutt, 2015).

Multivariate linear regression was utilized in multivariate analysis. Regression is used to describe the relationships between a dependent variable and independent variable(s). Regression allows one to estimate how a dependent variable changes as the independent variable(s) change (Bevans, 2020). Multivariate linear regression was used to estimate the relationship between parental satisfaction (DV) and multiple independent variables, such as parental involvement, level of education, marital status, and employment status.

Dependent Variable

Parental perceptions. Participants were asked whether they agreed or disagreed with a series of eight statements about their opinions regarding distance learning during the school closure. A factor analysis was conducted to identify which items accurately reflected an underlying construct, namely parents' level of satisfaction with their children's learning experience. Factor analysis is used to explain patterns of relationship among a large number of variables enabling the reduction in the number of variables to a smaller number of factors with a minimum loss of information (Sullivan, 2009). One unique factor was identified (with an eigenvalue greater than or equal to 1) and uncorrelated items that did not load strongly onto this factor were removed. The resultant measure consisted of six items asking whether parents were: (a) concerned about their child(ren)'s academic growth during distance learning, (b) concerned about their child(ren) falling behind academically during distance learning, (c) concerned about the level of support their child(ren) received from the school(s), (d) concerned about their ability to handle their responsibilities during their child(ren)'s distance learning, (e) confident in their ability to support their child(ren)'s distance learning, and (f) distance learning required more parental involvement than they could provide. Cronbach's alpha is a statistic used to measure inter-item reliability. The Cronbach's alpha is .74 for the American sample and .88 for the Finnish sample (both above the threshold of .70). The response options were (1) strongly agree, (2) agree, (3) neither agree or disagree, (4) disagree, and (5) strongly disagree. The fifth item (confident in their ability to support their children's distance learning) was reversed coded so that a higher value indicated

more confidence. The six items were added together to create one measure ranging from 6 to 30, with a higher score indicating a higher level of parental satisfaction.

Independent Variables

Parental Involvement was measured by asking participants about the amount of "hours they or another household adult was actively involved in each child's distance learning." The response options were: (1) less than one hour, (2) 1-2 hours, (3) 3-4 hours, (4) more than 4 hours, (5) not sure, or (6) spent no time actively involved in child x's learning. In the Finnish online survey, the sixth response option was "a child spent no time learning on their own" (which was a survey design error). In order to recode parental involvement, the time spent with each child's distance learning was summed and then divided by the number of children participants had in distance learning to get the average number of hours spent with each child. Three dichotomous variables (0-1) were created for 1 hour-1.75 hours on average, 2 hours-2.75 hours on average, and 3 hours or more on average. Other response options were coded as missing in addition to 19 missing cases in the United States and 141 in Finland.

Socioeconomic Status. Parental education is utilized as a measure of SES. In the American online survey, response options to the question about the level of education included the following: (1) less than a high school degree, (2) high school degree or GED, (3) some college but did not earn a degree, (4) 2-year Associate's or trade/technical degree, (5) 4-year Bachelor's degree, (6) Master's degree or equivalent, and (7) Doctor's degree or equivalent. Response options were recoded into three dichotomous variables (0-1) for less than a Bachelor's degree, Bachelor's degree, and Master's or Doctor's degree. Other response options were coded as missing in addition to 10 missing cases.

In the Finnish online survey, response options to the question about the level of education were the following: (1) “kansakoulu” (a former term for an education equivalent to primary school education), (2) basic education (elementary and middle school), (3) vocational education and training (VET), (4) high school graduate, (5) vocational college, (6) university of applied sciences education, (7) university, Bachelor’s degree, or (8) university, Master’s degree or Doctoral degree. Response options were recoded into three dichotomous variables (0-1) for high school or less, vocational degree, and university degree. Other response options were coded as missing in addition to 55 missing cases.

Employment status. Participants were asked about their current employment status, with response options (1) full-time, (2) part-time, and (3) not employed. Three dichotomous variables (0-1) were created for the Finnish data. The variable was recoded into 1 = full-time, part-time, and unemployed. Other response options were coded as missing in addition to 60 missing cases. For the American sample, response options were recoded into one dichotomous variable (0-1) for fulltime and not fulltime. Other response options were coded as missing in addition to 10 missing cases. The cell sizes for other response options were too low to use in the multivariate analyses.

Loss of income. Participants were asked whether “they or anyone in their household had experienced a loss of employment income since the COVID-19 outbreak,” with response options of 1 = yes, 2 = no, and 3 = nobody was employed in the household. In the Finnish online survey, the third option was “prefer not to answer.” The variable was recoded into one dichotomous variable 0 = no and 1 = yes. Other response options

were coded as missing in addition to 59 missing cases in the Finnish data and 10 missing cases in the American data.

Academic enrollment. Participants were asked about their current academic enrollment, with response options of 1 = yes and 2 = no. The variable was recoded into one dichotomous variable 0 = no and 1 = yes. Other response options were coded as missing in addition to 56 missing cases in the Finnish data and 10 missing cases in the American data. The cell size is too low for the American sample to use in the multivariate analyses

Telework. Participants were asked whether "any adults in the household, including themselves, substituted some or all of their typical in-person work for telework because of the COVID-19 pandemic," with response options of 1 = yes, 2 = no, 3 = other, please specify, and 4 = no one was employed in the household, which was not an option in the Finnish online survey (a survey design error). The variable was recoded into 1= yes and 0 = no or other, please specify. Other response options were coded as missing in addition to 70 missing cases in the Finnish data and 10 missing cases in the American data.

Gender. Participants were asked about their gender, with response options of (1) male, (2) female, (3) other, or (4) prefer not to say. In the American survey, the third response option was non-binary/third gender. The variable was recoded into one dichotomous variable 0 = male and 1 = female. Other response options were coded as missing in addition to 56 missing cases in the Finnish data and 10 missing cases in the American data. The cell size is too low for the American sample to use in the multivariate analyses.

Marital status in the American survey, the response options to marital status were (1) married, (2) widowed, (3) divorced, (4) separated, or (5) never married. Response options were recoded into one dichotomous variable (0-1) for married and not married. Other response options were coded as missing in addition to 10 missing cases. In the Finnish survey, the response options were (1) not married, (2) married, (3) cohabitation, (4) separated, (5) divorced, (6) widowed, and (7) other (please specify). Response options were recoded into four dichotomous variables (0-1) for not married, married, cohabiting, and divorced, widowed, or separated. Other response options were coded as missing in addition to 56 missing cases.

RESULTS

Univariate Analysis Results

Tables 1 and 2 provide unweighted means or percentages of all variables among Finnish and American participants facilitating the analysis of the role of each variable and to describe each sample. For the Finnish sample, the mean level of parents' satisfaction with their children's distance learning is 18.93 (s=6.38). The majority of participants are female (about 83%) and about two-thirds have a university degree and are married. About 80% of the participants work full-time and about two-thirds had substituted some or all of their typical in-person work for telework from home in 2020.

Table 1. Unweighted Percentages of All Variables among Finnish Participants, 2021

	Finnish Participants
Dependent Variables	
Satisfaction with Distance Learning (6-30)	18.93 (6.38)
Independent Variables	
Gender:	
Female	82.90 %
Male	17.10 %
Marital Status:	

Married	63.96 %
Cohabiting	16.72 %
Widowed/Separated/Divorced	11.53 %
Not married	7.79 %
Education:	
High School or Less	8.40 %
Vocational Degree	28.76 %
University Degree	62.84 %
Current Academic Enrollment:	
Student	13.75 %
Not a student	86.25%
Employment Status:	
Full-time	79.15 %
Part-time	9.77 %
Unemployed	11.07 %
Loss of Employment Income:	
Yes	30.64 %
No	69.36%
Telework:	
Yes	64.57 %
No	35.43%
Parental Involvement (per child):	
1-1.75 hour	50.28 %
2-2.75 hours	36.21 %
3 or more hours	13.51 %

For the American sample, the mean level of parents' satisfaction with distance learning is 14.97 (s=4.94). The majority of participants are female (about 95%) and 92% of the participants have a university degree. About 80% of the participants are married

and working full-time. The majority of the participants (about 92%) had substituted some or all of their typical in-person work for telework from home in 2020.

Table 2. Unweighted Percentages of All Variables among American Participants, 2021

	American Participants
Dependent Variables	
Satisfaction with Distance Learning (6-30)	14.97 (4.94)
Independent Variables	
Gender:	
Female	95.31%
Male	4.69 %
Marital Status:	
Married	79.69 %
Cohabiting	--
Widowed/Separated/Divorced	--
Never Married	--
Education:	
Less than Bachelor's Degree	7.81 %
Bachelor's Degree	18.75 %
Master's or Doctor's Degree	73.44 %
Current Academic Enrollment:	
Student	--
Not a Student	81.08%
Employment Status:	
Full-time	81.25 %
Part-time	--
Unemployed	--
Loss of Employment Income:	
Yes	25.00 %

No	75.00%
Telework:	
Yes	92.19 %
No	7.81%
Parental Involvement (per child):	
1-1.75 hour	29.09 %
2-2.75 hours	47.27 %
3 or more hours	23.64 %

-- Cell size fewer than 5.

Bivariate Analysis Results

Parental Involvement. In this study, parental involvement was measured by the average amount of time spent per child on distance learning activities. Parental involvement in distance learning scores was divided into three dummy variables including (1) 1 hour-1.75 hours, (2) 2 hours- 2.75 hours, and (3) 3 hours or more hours.

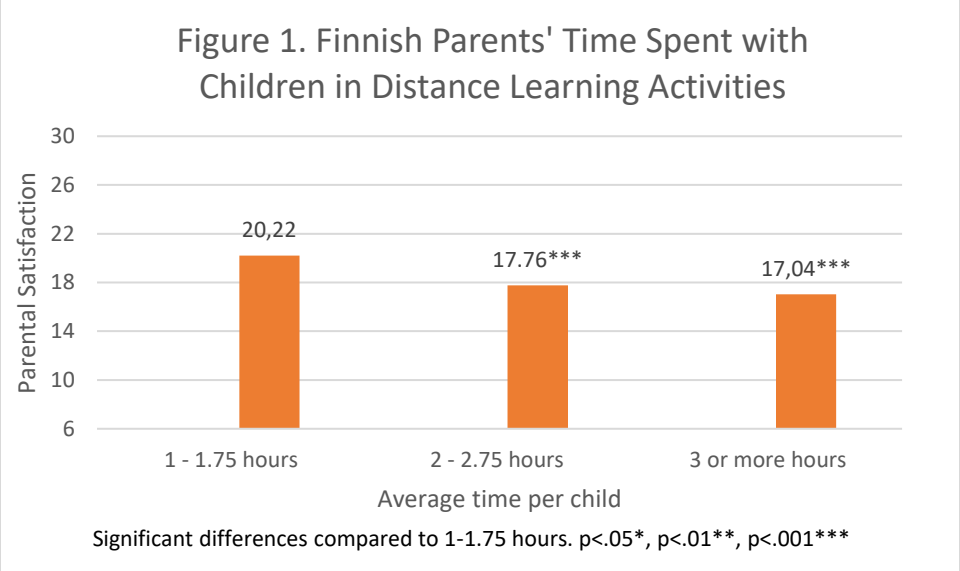

Figure 1. Finnish Parents' Time Spent with Children in Distance Learning Activities

Figure 1 displays the bivariate association between average parental involvement in distance learning and the self-reported parental satisfaction in Finland. Those who reported being actively involved in child(ren)'s distance learning for 1 hour-1.75 hours on average per child scored an average of 20.22 on parental satisfaction related to distance learning. The score is significantly higher than for parents who spent more time on distance learning activities on average per child. Those who reported being actively involved in child(ren)'s distance learning for 2 hours- 2.75 hours on average per child scored an average of 17.76 on parental satisfaction related to distance learning. Those who reported being actively involved in child(ren)'s distance learning for 3 hours or more hours on average per child scored an average of 17.04 on parental satisfaction related to distance learning. Thus, as involvement in child(ren)'s distance learning increases, parental satisfaction appears to decrease.

The bivariate association between the average parental involvement in distance learning and the self-reported parental satisfaction in the United States did not provide statistically significant differences, so figures are not shown. Those who reported being actively involved in child(ren)'s distance learning for 1 hour-1.75 hours on average per child scored an average of 14.56 on parental satisfaction related to distance learning. The score is only slightly higher than the score for parents who reported being actively involved in child(ren)'s distance learning for 2 hours- 2.75 hours on average per child. These parents scored an average of 14.52 on parental satisfaction related to distance learning. Those who reported being actively involved in child(ren)'s distance learning for 3 hours or more on average per child scored an average of 12.75 on parental satisfaction

related to distance learning. The results indicate that as parental involvement increases, satisfaction decreases.

Level of education. In this study, participants' level of education was measured by the highest degree of education they had completed. The measurement categories varied for each country due to some difference in answer options, the significant differences in overall sample sizes, and the number of responses to each response option. Level of education for Finnish participants was divided into three categories including (1) high school or less, (2) vocational degree, and (3) university degree. Level of education for American participants was divided into three categories including (1) less than a Bachelor's degree, (2) Bachelor's degree, and (3) Master's or Doctor's degree.

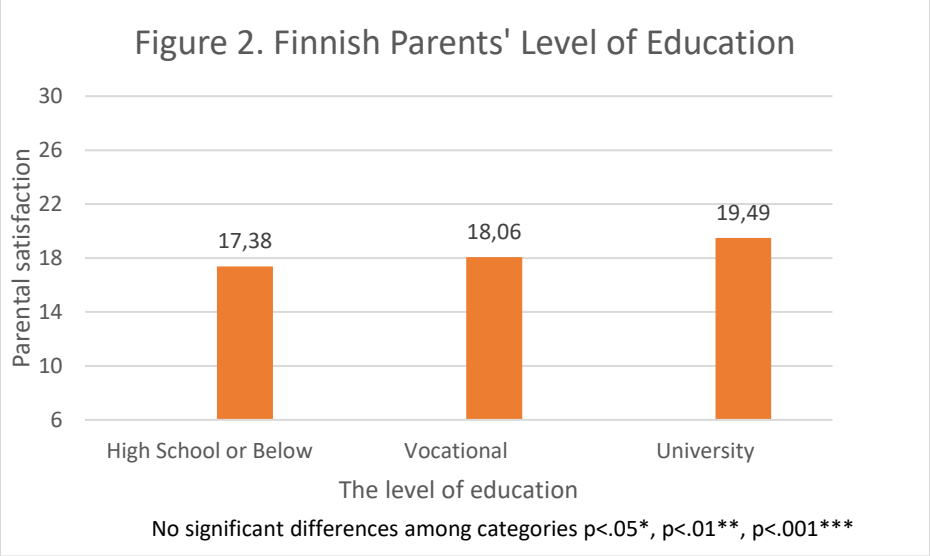

Figure 2. Finnish Parents' Level of Education

Figure 2. displays the bivariate association between parents' average level of education and the self-reported parental satisfaction in Finland. Those who reported to have a university degree scored an average of 19.49 on parental satisfaction related to

distance learning. The score is higher than the score for parents with lower levels of education. Parents who reported having a vocational degree scored an average of 18.06 on parental satisfaction related to distance learning. Parents who reported being high school graduates or lower scored an average of 17.38 on parental satisfaction related to distance learning. The results indicate that as parents' level of education increases, satisfaction with distance learning increases.

The bivariate association between parents' average level of education and the self-reported parental satisfaction in the United States did not provide statistically significant differences so figures are not shown. Those who reported to have a Master's or Doctor's degree scored an average of 14.35 on parental satisfaction related to distance learning. The score is lower than the score for parents in the two other categories. Parents who reported having a Bachelor's degree scored an average of 16.83 on parental satisfaction related to distance learning. Parents who reported having less than a Bachelor's degree scored an average of 15.80 on parental satisfaction related to distance learning. The results indicate that as parents' level of education increases, satisfaction with distance learning decreases.

Multivariate Analysis Results

Table 3. Stepwise Linear Regression of Finnish Parents' Mean Satisfaction of Distance Learning by Parental Involvement, Parental Education, and Control Variables (n = 500)

	(1)		(2)		(3)	
Parental Involvement (per child): *(1 – 1.75 hours reference)*						
2 - 2.75 hours	-2.46 (.59)	***	-2.53 (.59)	***	-2.72 (.61)	***

3 or more hours	-3.17(.83)	***	-3.11 (.83)	***	-3.01 (.86)	***
Level of Education: *(High School or Below reference)*						
Vocational Degree			1.30 (1.17)	--	1.38 (1.21)	--
University Degree			2.32 (1.10)	*	2.22 (1.17)	*
Gender: *(Male reference)*						
Female					-1.24 (.74)	--
Marital Status *(Married reference)*						
Cohabiting					.64 (.74)	--
Widowed/Separated/ Divorced					-1.07 (.93)	--
Not Married					1.17 (1.14)	--
Academic Enrolment: *(Not a student reference)*						
Student					-.36 (.85)	--
Employment Status *(Full-time reference)*						
Part-time					-1.03 (.96)	--
Unemployed					1.04 (.99)	--
Loss of Employment Income *(No loss of income reference)*						
Lost income					0.18 (.62)	--
Telework *(No teleworking reference)*						
Worked from home					1.64 (.63)	**

Notes: Standard errors in parentheses. +p<.10, *p<.05, **p<.01, ***p<.001.

Table 3 provides the linear regression coefficients for the average self-reported parental satisfaction by parental involvement, level of education, gender, marital status, academic attainment, employment status, loss of employment income, and telework. According to the results, parental involvement as measured by the amount of time spent in distance learning per child remained significantly associated with parental satisfaction related to distance learning. The results indicate that as self-reported parental involvement increases, the mean parental satisfaction related to distance learning decreases. According to the results related to the level of education, as the level of education increases, the level of satisfaction related to distance learning increases. Telework was associated with parental satisfaction (1.64, $p<.01$). Gender, marital status, academic enrollment, employment status, or loss of employment income were not statistically significant.

Table 4. Stepwise Linear Regression of American Parents' Mean Satisfaction of Distance Learning by Parental Involvement, Parental Education, and Control Variables (n = 60)

	(1)		(2)		(3)	
Parental Involvement: *(1 – 1.75 hours reference)*						
2 - 2.75 hours	-.04 (1.27)	--	-.36 (1.32)	--	-.28 (1.33)	--
3 or more hours	-1.81(1.51)	--	-1.58 (1.51)	--	-1.17 (1.53)	--
Level of Education: *(Less than Bachelor's degree reference)*						
Bachelor's Degree			1.51 (2.34)	--	.47 (2.38)	--
Master's or Doctor's Degree			-.72 (2.20)	--	-1.23 (2.26)	--
<u>Marital Status:</u> *(Not married reference)*						
Married					2.03 (1.36)	--
<u>Employment Status:</u> *(Not full time reference)*						
Full-time					2.32 (1.64)	--
Loss of Employment Income *(No loss of income reference)*						
Lost income					1.65 (1.44)	--
Telework *(No telework reference)*						
Worked from home					-1.73 (1.99)	--

Notes: Standard errors in parentheses. +p<.10, *p<.05, **p<.01, ***p<.001.

Table 4 provides the linear regression coefficients for the average self-reported parental satisfaction by parental involvement, level of education, gender (female), marital status (married), academic attainment (student), employment status (full-time), loss of employment income (lost income), and telework. According to the results, no variable was statistically significant. Thus, the results show trends but are not reliable to draw further conclusions. The results indicate that parental involvement follows a similar trend as in Finland. The results indicate that as self-reported parental involvement increases, the mean parental satisfaction related to distance learning decreases. According to the results related to the level of education, as the level of education increases, the level of satisfaction related to distance learning decreases.

DISCUSSION

Main Results and Alignment with Literature

The study is part of a larger project, and the focus of this study was on parental involvement measured by the average amount of time parents spent on distance learning activities per child, and parents' level of education measured by the highest level of education completed. Due to the small American sample size, no scientifically reliable comparison about parental satisfaction with distance learning can be made between American and Finnish parents at this point of the project. However, the study results indicate some trends.

In both countries, the study results indicated that when parental involvement increases, parental satisfaction decreases. As challenging as parenting is on its own, the addition of distance learning, teleworking, and financial uncertainties caused by the pandemic make it tough on families. As schools and many workplaces closed down in both countries in order to prevent the spread of infection, many parents had to deal with a new and stressful situation. The pandemic forced many parents to work from home. In the study, about two-thirds (%) of Finnish parents substituted some or all of their typical in-person work for telework in 2020. In the U.S. about 92% of respondents substituted some or all of their typical in-person work for telework. Alongside having to work from

home and run daily household chores, previous research indicated that many parents became involved in their children's distance learning, in some cases more than they desired (Ahtiainen et al., 2020; Finland's Parents' League, 2020). Due to restrictions of social distancing, families were forced to occupy the same space and cut off contact with extended family and friends. Many families also faced financial pressure during the pandemic as one or more adults in the household lost their job or employment income. In the Finnish sample, about one-third (%) of the participants lost employment income. In the American sample, approximately 25% of the participants lost employment income.

What factors might explain dissatisfaction related to increased parental involvement? In context of other family stress caused by the pandemic—food insecurity, spike in depression and alcoholism, job loss, and increase in domestic violence—it is reasonable that many parents might have gotten frustrated if distance learning forced them to take the role of a teacher as well. According to the report released by Finland's Parent' League (2020), parents appreciated sufficient communication between home and school, and teachers' availability to their students in the distance learning environment. However, previous research has also indicated that the support from home became increasingly important during distance learning for students in elementary- and middle school, and disparities in received support from home was a critical factor in creating inequality among students (Goman et al., 2021).

The exceptional conditions during the COVID-19 pandemic emphasize the importance of sufficient communication between home and school. Although exceptional learning conditions may have caused parents to become involved in their children's distance learning more than they desired, education systems must evolve to meet the

challenges of the distance learning format in order to lessen the distance learning arrangements' burden on families. For example, schools must make sure that support is available to each student at all levels of education and students' individual needs are considered when deciding on distance learning arrangements. In addition, operation models reducing students' study related stress must be created. Teachers at all levels of education must have digital and pedagogical competences and equal access to digital devices and software. Teachers also must be familiar with the increasingly common hybrid teaching model which combines in-person and online teaching formats. Finally, in order to promote equality and equity among all students nationwide, a systematic, concrete, and timely national steering of distance learning is necessary.

The level of parental education is associated with the continuity of children's education; the mindset and educational orientation children come to have is influenced by the level of education obtained by their parents. The higher the level of education of parents, the more open parents think about education and how to educate their children (Saril & Maningtyas, 2020). The results of parents' level of education and its association with parental satisfaction related to distance learning did not align between the Finnish and American parents. The results of the Finnish sample indicate that when parental education increases, satisfaction related to distance learning increases as well. However, the results of the American sample indicate that when parental education increases, satisfaction related to distance learning decreases. Satisfaction with distance learning among well-educated parents may be related to the occupations they employ. These jobs likely provide parents with a higher level of autonomy. Having flexibility in one's work schedule and autonomy to decide when to work provides parents with an opportunity to

be available for their children in the distance learning setting when needed. In addition, level of education and an increase in parental satisfaction with distance learning may be associated with comfort with digital learning devices and content. As the use of technology at school has become extremely common, during the pandemic in particular, parents who feel more comfortable with technology are likely better prepared to assist with distance learning and may be more satisfied with distance learning arrangements. Dissatisfaction among well-educated parents might be associated with the higher social and cultural capital they have, which might make them view distance learning more critically. About 92% of the U.S. respondents substituted some or all of their typical in-person work for telework. Although people with higher education often have jobs which allow telework, it cannot be assumed that people like to work from home. Instead, they might find teleworking as a burden. In addition, children's distance learning and need for assistance takes time away from work which might be related to dissatisfaction with distance learning among well-educated parents.

Limitations of the Analysis

Linear regression, a statistical method used to examine the relationship between a dependent variable and independent variables, cannot show causation by itself. Linear regression is limited as it only looks at linear relationships between dependent and independent variables (Schutt, 2015). It cannot be assumed that there is a straight line between parental satisfaction with distance learning (dependent variable) and independent variables, such as parental involvement and family SES, measured by

parents' level of education. Thus, in the study, the linear representation of the parental perception was verified by graphical representation.

The second limitation of linear regression is that it only looks at the mean of the dependent variable and independent variables. For example, in this study, we looked at the relationship between parental satisfaction with distance learning and parental involvement measured by the average amount of time parents spent on distance learning per child. The linear regression looked at the average parental satisfaction among three categories of varying amounts of parental involvement. Because mean is not a complete description of a variable, linear regression is not a complete description of relationships among parental satisfaction and the independent variables. The mean of parental satisfaction may be shaped by outliers. For example, the American sample was disproportionately well-educated; approximately 75% of the participants had a Master's or Doctor's degree. According to the U.S. Census Bureau (2019), about 13.1% of Americans have a Master's degree, Professional degree, or Doctor's degree. In Finland, about 41% of people have an upper academic degree from university or the University of Applied Sciences (Pantsu, 2019). In the Finnish sample, about two-thirds (%) of the participants had an upper academic degree, skewing the distribution of academic attainment among participants from Finland.

Future Research

The online survey distributed to American and Finnish parents collected data which was not utilized for this part of the project. For future research, the study may focus on how parental satisfaction with distance learning is influenced by participants'

race and ethnicity. However, in order to do this, it must be ensured that the American and Finnish samples are diverse and comparable to the characteristics of the general population. Since the majority of American and Finnish samples were White, race and ethnicity could not be utilized to determine parental satisfaction in this study. Previous research indicates that exposure to distance learning in 2020 varied by race and ethnicity, and students of color were more likely to be exposed to distance learning in the U.S. (Smith & Reeves, 2020). Thus, there could be variance in parental satisfaction based on race and ethnicity.

The geographical area participants live in could also be used as an area of interest for future study. As mentioned earlier in the literature review, Parolin and Lee (2021) found the following geographical differences in exposure to distance learning:

> Declines of at least 75% in in-person appearance from 2019 to 2020 were concentrated in the counties of the West Coast including Washington, Oregon, California and Nevada, as well as the counties of the East Coast including Washington, D.C., Maryland, Massachusetts, New York and elsewhere. The counties with the smallest year-over-year declines in in-person were concentrated in states across the Midwest and upper-Midwest, such as South Dakota, North Dakota, Wyoming, Montana, Iowa, Kansas and elsewhere (Parolin and Lee, 2021).

In the U.S., geographical differences in distance learning exposure may be explained by varying population densities across the country. In 2020, large cities with high population density, and often more racially diverse population, had a higher risk of transmitting COVID-19 in their area compared to small, rural communities. Thus, students in large metropolitan areas were more likely to depend on the distance learning format than students in areas with lower population density. In addition, political

differences in the likelihood that a state or local government orders schools to close may also factor into geographic variation in exposure to school closures (Parolin & Lee, 2021). With large countries like the U.S., it is especially important to conduct research which will be generalizable to the whole population. Data which is geographically generalizable would help with tracking possible differences in parental satisfaction in different areas of the country.

The future research may also focus on how the overall wellbeing of families during the COVID-19 pandemic might have influenced parental satisfaction with distance learning. In addition to questions about employment status and loss of income, the survey contained questions regarding reasons for a loss of employment income, the difficulty of paying for usual household expenses during the pandemic, the ways COVID-19 disrupted family welfare, and the overall feelings about the pandemic. Previous studies indicated the disruptive effects COVID-19 had on families' daily lives, welfare, and people's wellbeing. According to the report "How are they faring? Impacts of the COVID-19 Pandemic on the Lives of Families and Young Children in Massachusetts," published by the Harvard Graduate School of Education, "nearly all parents and guardians reported that the COVID-19 pandemic caused major disruptions to their families' routines, including children's in-person attendance at school and their access to public spaces. Beyond these daily lifestyle adjustments, many parents and guardians also reported an absence of educational and economic supports" (Gonzales et al., 2020).

Participants were asked to provide information specific to each child in a distance learning setting. In addition to the question about the average amount of time parents were actively involved in distance learning activities per child, there were questions

related to the type of education children received in the Spring and Fall 2020 semesters, the amount of live-contact children had with their teachers, parental satisfaction with teachers' interaction with children, and the amount of time children spent doing distance learning activities per day. Having data specific to each child is important since it enables tracking exposure to distance learning by age or grade level, and whether children at different levels of education returned to in-contact teaching earlier than others. Previous studies have indicated that parents tend to be more satisfied with distance learning when teachers are present and available to students, albeit digitally. Having information specific to each child enables tracking possible differences and similarities in teacher availability in the distance learning setting based on children's grade level. In addition, active contact between teachers and home was appreciated by many parents. Parental satisfaction with active communication may be related to child(ren)'s age as younger children are more likely to need support in the distance learning setting than older children who are likely to have more previous experience with digital devices and learning environments.

The collected data could also be used to study the availability of distance learning resources and how it is related to parental satisfaction with distance learning. The survey included questions about the availability of digital devices and networks to children for educational purposes, what digital devices were available for children, and who provided the necessary learning tools. Digital inequality during the pandemic is an issue because it may have long-term negative impacts on children's academic development and can burden families as they try to determine the best way to provide the required tools. Thus,

it would be important to measure how the availability, or absence, of distance learning resources shapes parental satisfaction with distance learning.

IMPLICATIONS OF RESEARCH

Education systems worldwide have been significantly impacted by the COVID-19 pandemic. The study had a quantitative analytic approach research design encompassing an online survey to explore parental perceptions of children's distance learning experience during the Spring and Fall 2020 school closure in the U.S. and Finland. In order to prevent the spread of the disease while still providing students with an opportunity to learn, countries have applied different strategies and methods for dealing with changes in the learning system. During the abrupt transition in March 2020, educational systems across the world turned to different distance learning solutions, such as using online applications, and offline methods including printed books and modules. In addition to changes in teaching materials, alterations were made in instructional strategies. Schools were forced to adapt to technological readiness to implement online learning and provide support and motivation to all concerned parties. Although many schools in the U.S. and Finland started the 2020-2021 academic year partially in contact teaching, teaching was still largely delivered in a hybrid virtual/in-class format in many cases.

Although students will have increasingly returned to in-contact teaching by the start of the 2021-2022 academic year, there is no certainty about what the future holds and whether a similar urgent shift to distance learning in the future will be made. Thus, governments, teachers, parents, and schools must collaborate to prepare and increase the

efficacy of teaching and learning in distance learning settings, and make sure that students do not fall behind outside the traditional school setting.

As long as the sample sizes are increased and made more descriptive of the general population of interest, the study can be utilized to make reliable cross-national comparisons between American and Finnish parents. The study can be implemented to detect differences and similarities in parental perceptions based on age, gender, race and ethnicity, and marital status. When the indicators of family socioeconomic status are utilized, the study can provide insight into the education-inequality gap and make possible suggestions about how to narrow the gap.

APPENDICES

APPENDIX A—QUESTIONNAIRE DESIGN

The survey of the study consisted of close-ended and open-ended questions. The decision to include both types of questions was made to benefit from the advantages of each questionnaire type and so they could compensate for each other's shortcomings. Close-ended questions are popular because they are easier and quicker to answer, and data gathered from these questions can be compared and analyzed statistically. Close-ended questions prevent irrelevant and clouded answers, and participants are more likely to answer about sensitive topics (Copeland, 2017). Finally, people who might struggle with providing articulate or literate answers are not at a disadvantage. However, close-ended questions also have some significant disadvantages. Because answering close-ended questions often requires prior knowledge of the topic, participants with no prior knowledge or experience may give a wrong answer or choose not to answer. Participants may also misinterpret survey questions. Close-ended questions may become problematic due to the absence of a desired answer or the availability of too many answer options. Finally, close-ended questions force participants to provide simplistic responses to complex issues, such as distance learning during the pandemic.

The biggest advantage of open-ended questions over close-ended questions is the unlimited number of possible answers. Participants are able to provide detailed and qualified responses, thus, inspiring creativity, self-expression, and richness of detail (Copeland, 2017). Whereas close-ended questions do not offer the possibility to reflect

one's feelings due to the simplicity and limited number of answers, open-ended questions provide an opportunity to explain one's feelings, attitudes, and understanding of the subject. More importantly, open-ended questions provide a possibility to explain if one does not understand the question or does not have an opinion on the issue. Because open-ended questions reveal participants' logic, thinking process, and frame of reference, the data provides insights and sometimes even unanticipated conclusions to complex issues. Since there are no right or wrong answers to open-ended questions, participants may feel more comfortable answering open-ended questions. However, open-ended questions become problematic due to different degrees of detail in participants' answers. Thus, it is harder to compare and analyze the data. Because the open-ended questions are often general, it will take more time and effort to answer these questions and, thus, some people may feel unmotivated to answer them in detail. Finally, some people may feel intimidated by these questions due to their tendency to ask for personal opinions and perceptions. However, open-ended questions avoid two types of response error; participants cannot choose a "wrong answer" in open-ended questions, and open-ended questions prevent participants from just "filling in" the survey with all the same answers (Schutt, 2015).

Regarding quantitative questionnaire design, Likert scales provide a wide variety of strengths for the proposed study. Likert scale is a universal and easily recognizable method for survey collection. This type of survey questions are easy to understand which means people are less likely to get frustrated with them. Instead of asking participants to provide a simple yes/no answer, it allows for degrees of opinion, and even no opinion at all. In the survey, a "don't know" category was provided as an option for respondents, so

they were not forced into a category. Because participants were not forced to take a stand on a particular topic, they were provided with an opportunity to share a degree of agreement which facilitated answering questions. Likert scale obtains quantitative data which can be analyzed with descriptive and multivariate statistics. Likert scale data collection is quick, efficient, and inexpensive. It has high versatility and can be distributed through mail, over the internet, or given in person (LaMarca, 2011). However, the Likert scale has some limitations that the researcher must consider such as categories of response (values in the scale), size of the scale, direction of the scale, the ordinal nature of Likert-derived data, and the appropriate statistical analysis of such data (Jamieson, 2017).

APPENDIX B—STRENGTHS AND LIMITATIONS OF THE SURVEY DESIGN

The research design of the study had a wide variety of strengths. Surveys are easy to complete. A large amount of data can be collected from many respondents at a low cost and quickly. Conducting a cross-country comparison is relatively easy because surveys are simple to distribute to a large number of people who are geographically wide-spread. Due to the wide reach to large populations and large amounts of collected data, a greater statistical power is easily accessible. As long as survey questions are carefully constructed, survey design is likely to elicit more honest and reliable responses about socially undesirable topics, such as socioeconomic status. An electronic survey design can be programmed to move respondents easily through the questionnaire. In this study, the respondents avoided questions that did not apply to them, which saved some time.

However, electronic surveys have some limitations. To start, although the internet

makes it easier to reach people and survey some of them, this method excludes others because they may not have internet access or other required tools to participate. Thus, people in the U.S. and Finland who lack access to the survey are least likely to participate. The survey in the study was provided in English and Finnish. Thus, those people whose native language is something else might have chosen not to participate.

APPENDIX C—QUALITATIVE DATA ANALYSIS FOR FUTURE RESEARCH

This section refers to possible future research and what type of qualitative data analysis could take place. Framework analysis has been used in multiple qualitative research settings, such as in an educational study on student performance (Archer et al., 2005). Although framework analysis is suited for applied policy research which gathers data from participant observation, focus groups or interviews, it is easily adaptable to other research designs characterized by a pre-designed sample, specific questions, and a limited time frame. Framework analysis could be used in the future study's analysis of open-ended questions due to its flexibility in sifting, charting, and sorting of the gathered open-ended survey data in accordance with key issues and themes (Srivastava & Thomson, 2009). This approach includes five steps: familiarization, identifying a thematic framework, indexing, charting, and mapping and interpretation (Ritchie & Spencer, 1994).

Familiarization refers to the process during which the researcher becomes familiarized with the transcripts of the data collected (open-ended answers) and gains an overview of the collected data (Ritchie & Spencer, 1994). Thus, the process helps with becoming aware of the key ideas and prevalent themes recurrent in the gathered data as

participants' answers to open-ended questions are read. The second step is identifying the thematic framework, or thematic analysis. After familiarization, emerging themes and patterns in participants' answers are likely noticeable. The thematic analysis of the future study could use a descriptive approach which is a type of elemental coding method where data analysts determine topics of similar data sets (Garbe et al. 2020; Saldaña, 2016). Therefore, the parental perceptions of the distance learning experience can be analyzed by utilizing descriptive and simultaneous first cycle open coding and second cycle pattern coding. A thematic analysis approach is efficient in research where the goal is to identify people's perceptions, opinions, knowledge, experiences, or values from a set of qualitative data. This analysis allows for rich, detailed, and complex descriptions of data. However, there is a risk of missing nuances in the data because thematic analysis is often quite subjective and relies on the researcher's judgement. A level of objectivity in interpreting the data must be maintained. The interpretation involves making judgments about meaning, about the relevance and importance of issues, and about implicit connections between ideas (Srivastava & Thomson, 2009).

Through indexing, portions or sections of the data are identified that correspond to a particular theme. This process would be applied to all the textual data that has been gathered. In this fourth stage, after the data is indexed, they will be arranged in charts (charting) of the themes. The data is then separated from its original textual context and replaced in charts that consist of the headings and subheadings that were drawn during the thematic framework (Ritchie & Spencer, 1994; Srivastava & Thomson, 2009). Although the data is separated from its context, the data must be identified to the case it came from. The final stage, mapping and interpretation, involves the analysis of the key

characteristics as laid out in the charts. This analysis should be able to provide a schematic diagram of the event/phenomenon guiding the researcher in their interpretation of the data set (Srivastava & Thomson, 2009). It is at this point that the researcher is cognizant of the objectives of qualitative analysis, which are: “defining concepts, mapping the range and nature of phenomena, creating typologies, finding associations, providing explanations, and developing strategies” (Ritchie & Spencer, 1994). Because these concepts, technologies, and associations reflect participants, any strategy or recommendations made by the researcher must reflect the most accurate attitudes, beliefs, and values of the participants.

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