

**Bullying and Student Wellbeing in Finnish Primary
Schools: A Consideration of Gender and Family
Affluence**

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ABSTRACT

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The main purpose of this study is to examine the impact of bullying on student wellbeing. Research has shown devastating consequences of bullying on students' lives, but few studies address how bullying victimization is associated with different dimensions of student wellbeing. The study also explores the effects of gender and family affluence on student wellbeing and bullying victimization. The participants were drawn from a larger ProKoulu study. Participants were from 2nd grade (N=1339) and 6th grade (N=1232). The results indicate that bullying has negative impacts on all six dimensions of student wellbeing (commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school) in both 2nd and 6th grade students. Among the six dimensions, bullying had the strongest impact on student relations in school. In terms of gender, boys are more likely to report frequent bullying victimization, while girls rated more positively in student wellbeing. Family affluence was weakly associated with student-parent relationship and perceived workload in school in 6th grade. The findings of this study can contribute to developing programs to enhance student wellbeing and alleviate the negative impact of bullying in Finland.

Keywords: student wellbeing, bullying, gender, family affluence, Finland

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1 INTRODUCTION

Schools are a large part of students' life. They grow up and fulfill their potential in school through learning, playing, and building relationships. Traditionally, the prime goal of schooling was accomplishing better academic outcomes. For instance, traditional educational effectiveness research emphasized academic achievement as the primary outcome in the assessment of educational processes (Reynolds & Teddlie, 2000). However, this narrow view of the goal of schooling is changing. In recent educational effectiveness research and classroom environment research, multiple ways to measure schooling outcomes are introduced and called for (Petegem, Creemers, Aelterman, & Rosseel, 2008). In other words, schooling should not only concern academic achievement, but also other dimensions that can cultivate students as whole.

From this perspective of educating students as whole, student wellbeing has gained widespread interest. Noddings (2005) criticizes educational systems that placed too much emphasis on cognitive outcomes, claiming schools should do more than educating students to be skilled at reading and mathematics. Happiness is suggested as one of the aims that we associate with educating the whole child. As healthy families do, "schools must be concerned with the total development of children" (Noddings, 2005, p. 11). Schools should focus on developing student wellbeing so that our future citizens can reach their full potential in the healthy, happy and safe environment.

Among the factors that are associated with student wellbeing, the effect of bullying on student wellbeing is especially pernicious. According to Rivara and Le Menestrel (2016), students who are frequently bullied can feel constantly insecure and on guard, causing enormous stresses. The negative impact of bullying has been reported regarding students' sense of belonging, which is one of the indicators of life satisfaction in schools. PISA 2015 results (OECD, 2017) showed that about 42 percent of students who are frequently bullied feel like they are an outsider at school. It is significantly high compared to the 15 percent of students who reported not being frequently bullied.

Although research has shown the association of bullying with student wellbeing, there are few studies that reveal the impact of bullying on different dimensions of student wellbeing in Finland. Contemporary research suggests the multidimensional nature of student wellbeing (Negovan, 2010; OECD, 2017). Bullying may exert its influence differently on different dimensions of student wellbeing. Understanding how bullying is associated with each dimension of wellbeing and which dimension is more vulnerable to bullying can be helpful in reducing the negative impact of bullying on student wellbeing. Thus, the present study aims to explore the impact of bullying on each dimension of student wellbeing in Finnish primary schools, specifically students in grades 2 and 6. Student wellbeing in this study consists of the following six dimensions: commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school.

Gender and family affluence are crucial factors that should be considered. Research has reported that there are noticeable differences in academic performance, wellbeing, health, and social life of students by gender and family affluence (Inchley et al., 2016; OECD, 2017). Even though Finland is renowned as having an educational system in which equality and equity are well maintained, gender and family affluence may have an influence on student wellbeing and bullying in Finnish primary schools. Therefore, this study will assess how gender and family affluence affect the level of student wellbeing and the frequency of bullying victimization in Finnish primary schools.

The present study is structured as followed. Chapter 2 aims to introduce theoretical foundations of the study. Four key concepts of the study, student wellbeing, bullying, gender, and family affluence are defined, and related literature is reviewed. Chapter 3 describes the aims of the study, the data collection process, and data analysis. The results of the study are presented in Chapter 4, and critical findings, contributions, and limitations of this study are discussed in Chapter 5.

2 THEORETICAL FRAMEWORKS

2.1 Student wellbeing

2.1.1 Definition of student wellbeing

Defining wellbeing is a challenging task. Although researchers have made efforts to define wellbeing and its constructs, a consensus has not been reached. Pollard and Lee (2003) pointed out the inconsistency in the definitions of wellbeing in the study of child development. In their systematic review of child wellbeing, they argued that studies on wellbeing conducted across a wide range of fields yield a great variety of definitions of wellbeing, and this, in turn, made it difficult to compare findings between studies. In educational settings, Fraillon (2004) similarly noted a paradoxical situation in defining student wellbeing. He claimed, “there is unequivocal consent that it is essential to consider, monitor and respond to student wellbeing and yet there is little sector-wide consensus on what student wellbeing actually is” (Fraillon, 2004, p. 16). Therefore, it is important to establish a common definition of student wellbeing to allow consistent dialogues on student wellbeing and make it more applicable across contexts.

Out of the longitudinal samples of academic definitions of wellbeing, Fraillon (2004) derived six key elements of wellbeing to draw on an “overarching definition of student wellbeing” (Fraillon, 2004). The six elements presented are *active pursuit, balance, positive affect & life satisfaction, prosocial behaviour, multi-dimensionality, and personal optimisation*. He claimed that as opposed to general wellbeing, student wellbeing should be considered in the context of the school community, which is defined as “the cohesive group with a shared purpose that is centered around a school” (Fraillon, 2004, p. 24). With great consideration on measurability of student wellbeing, Fraillon defined student wellbeing as “the degree to which a student is functioning effectively in the school community” (2004, p. 24). He also added that this definition consists of a set of interrelated but discrete dimensions.

In a study of wellbeing in educational context commissioned by the Australian Department of Education, Employment and Workplace Relations (DEEWR), Noble et al. (2008) found three definitions specifically related to student wellbeing, including Fraillon's definition mentioned earlier. This report drew on Fraillon's definition and expanded on it as follows:

Student wellbeing is defined as a sustainable state of positive mood and attitude, resilience, and satisfaction with self, relationships and experiences at school. (p. 21)

Noble et al. (2008) claimed this definition as a synthesis of the most widely accepted and relevant characteristics that appear repeatedly across available definitions of wellbeing and student wellbeing.

In a recent report on students' wellbeing, wellbeing is being recognized as having a multidimensional nature (OECD, 2017). PISA 2015 results on student wellbeing pointed out that most of the theoretical and measurement work on wellbeing focuses on adult life, and an adaptation of the concept to the PISA population of students aged 15-year-old is required (OECD, 2017). Based on this understanding, student wellbeing is defined as "the psychological, cognitive, social and physical functioning and capabilities that students need to live a happy and fulfilling life" (OECD, 2017, p. 61). This definition is a combination of a "children's rights approach" and a "development approach" (OECD, 2017).

2.1.2 Dimensions of student wellbeing

One of the goals of wellbeing researchers was to define the key constructs of wellbeing (Kafka & Kozma, 2002). One of the issues they focused on has been the dimensions that characterize people's evaluation on what makes their lives better and happier. According to Negovan (2010), contemporary literature seems to share the idea that wellbeing is a multidimensional construct consisting of up to three dimensions: subjective, psychological and social. However, researchers have varied points of view when it comes to the sub-facets of these dimensions.

In a review of the history of subject wellbeing research, Diener, Oishi, & Lucas (2012) referred to subjective wellbeing as "a person's cognitive and affective evaluations of his or her life as a whole" (p. 1). As this definition of subjective

wellbeing suggests, two main components, a cognitive (satisfaction) and an affective (pleasant affect, and low levels of unpleasant affect) component, are generally identified (Bradburn, 1969; E. Diener, Emmons, Larsen, & Griffin, 1985). Additional concepts to understand subjective wellbeing were also suggested by other researchers. Seligman, Parks, and Steens (2005) approached subjective wellbeing with regard to happiness and identified substructures of happiness: pleasure, engagement, and meaning (p. 275). Csikszentmihalyi(1975, 1990) insisted that subjective wellbeing is highly related to being involved in interesting activities. When there is an optimal balance between challenges and skills, one can fully engage in activities, and this engagement or the state of “flow” would lead to satisfaction and happiness (Csikszentmihalyi, 1975, 1990).

However, the perspective that considers wellbeing as happiness has been challenged by other researchers. Ryff (1989) argued that wellbeing contains one’s desire for perfection and realization of true potential, and it is not simply a matter of having more pleasure than pain in life. Ryff and Singer (2005) claimed that the concept of subjective wellbeing does not fully explain the whole idea of wellbeing since it fails to define the basic structure of psychological wellbeing.

Ryff (1989, p. 1071) proposed the concept of psychological wellbeing as a multidimensional construct and summarized earlier research into six distinct dimensions after taking mental health, clinical and lifespan development theories into account. The six dimensions are a) positive attitude toward oneself (self-acceptance); b) satisfying relationships with others (positive relationships with others); c) independence and self-determination (autonomy); d) sense of mastery and competence (environmental mastery); e) sense of goal-directedness in life (purpose in life); f) feeling of personal continued development (personal growth).

Keyes (1998) proposed a more socially-oriented view of wellbeing. From his point of view, social wellbeing captures “individuals’ appraisals of their own circumstances and functioning in society” (Keyes, 1998, p. 122). In Keyes’ (1998) multidimensional model of social wellbeing, he described several social challenges that would make up dimensions of social wellness (p. 122). They are a) social integration (individuals’ appraisal of the quality of their own relation

with society and community); b) social contribution (the feeling of being a vital member of the society, with something important to offer to the world); c) social acceptance (trusting others, and having favorable opinions about human nature); d) social actualization (the evaluation of a society's potential to improve); e) social coherence (the perception that the social world is well-organized). He argued the importance of social wellbeing as an important component of overall wellbeing, along with the emotional and psychological approaches to wellbeing (Keyes, 1998, 2003).

In a comprehensive review of the child wellbeing literature, Pollard and Lee (2003) parsed five domains that represent the constructs of wellbeing. These domains provide wider breadth than previously mentioned subjective, psychological, and social wellbeing dimensions in that Pollard and Lee include physical, economic and cognitive aspects of student wellbeing. The five domains of child wellbeing Pollard and Lee presented (2003) are: 1. Physical 2. Economic 3. Psychological 4. Cognitive 5. Social.

Fraillon (2004) pointed out that these five domains are not so much dimensions of a measurement model as a synthesis of wellbeing research. He argued that for these domains to serve as the foundation for creating measurement constructs for his operational measurement model of student wellbeing in the school community, each of five domains should be evaluated in terms of measurable values (p. 27). After evaluation of each domain, he suggested that the operational measurement model of student wellbeing in the school community should consist of two dimensions, an intrapersonal and an interpersonal dimension. The intrapersonal dimension of student wellbeing includes "aspects of wellbeing primarily manifest in a student's internalized sense of self and capacity to function in their school community" (Fraillon, 2004, p. 31). He presented the nine aspects of the intrapersonal dimension, which are: autonomy, emotional regulation, resilience, self-efficacy, self-esteem, spirituality, curiosity, engagement, and mastery orientation. The interpersonal dimension includes "aspects of wellbeing that are only evident through a person's interactions with, or responses to others" (Fraillon, 2004, p. 35). The four aspects

of the interpersonal dimensions are communicative efficacy, empathy, acceptance, and connectedness.

In PISA 2015 report (OECD, 2017), student wellbeing is considered as the result of interactions among four distinctive domains: psychological, social, cognitive and physical. The psychological dimension includes how students think about themselves, their purpose in life and how emotionally stable and strong they are. Some of the aspects of psychological wellbeing are measured in the report from students' self-report on the motivation for achievement and schoolwork-related anxiety. The social dimension involves the quality of social life and is measured through student's sense of belonging at school, self-report on bullying and teachers' fairness. The cognitive dimension refers to "the cognitive foundations students need to participate fully in today's society, as lifelong learners, effective workers and engaged citizens" (OECD, 2017, p. 63). Performance measured across the PISA domains (science, reading, mathematics, collaborative problem solving, and financial literacy) reveals the students' cognitive wellbeing. Lastly, physical dimension relates to students' health. PISA 2015 includes self-reported information on physical activity and eating habits.

2.1.3 Student wellbeing of Finnish students

As the world becomes globalized and collaboration among nations increases, international comparative studies and research are actively underway to improve the quality of education. The focus of these studies is not merely on the academic achievements of the students. Student wellbeing is gaining more attention in these international studies. The results have shown how satisfied students are with their life, how good their relationship is with peers, teachers and family, and how well are their physical and mental health in comparison with those from other countries.

In PISA 2015 report (OECD, 2017), students in top performing countries in science and mathematics generally reported relatively low satisfaction with life. As one of the top performing countries, Finnish students at the age of 15 showed a higher level of overall life satisfaction than OECD average. The report

specifically highlighted Finland as one of the few countries that seem to manage to “combine good learning outcomes with highly satisfied students” (OECD, 2017, p. 5). Additionally, Finnish students also reported a significantly lower level of schoolwork-related anxiety than the average students across OECD countries.

Health Behaviour in School-aged Children (HBSC) is a WHO collaborative cross-national study, which 44 countries and regions across Europe and North America are participating in. HBSC study conducts a self-report survey every four years for 11-, 13-, 15-year-old boys and girls about their health and wellbeing, social environments and health behaviors (Inchley et al., 2016). The HBSC 2013/2014 (Inchley et al., 2016) results revealed that the proportion of Finnish students who reported liking school a lot was relatively lower than that of students in other countries in all age groups. Only 20 percent of girls and 12 percent of boys at the age of 11 reported liking school a lot while HBSC’s averages were 45 percent and 37 percent, respectively. The study also revealed that 89 percent of girls and 92 percent of boys in Finland reported high life satisfaction at the age of 11 (Inchley et al., 2016). This report especially focuses on inequality issues regarding students’ health and wellbeing. The impact of gender and family affluence on student wellbeing will be discussed in the later part of the present study.

A study in Finnish school context measured student wellbeing in four categories (school conditions, social relationships in school, means for self-fulfillment in school, and health status) and compared student wellbeing by school level, gender, and grades (Konu & Lintonen, 2006). The results suggest that primary school students reported more positively on school conditions, the social relationship in school, and means for self-fulfillment in school than those in lower and upper secondary schools. Within each school level, younger students and girls are more likely to report a higher level of student wellbeing (Konu & Lintonen, 2006).

2.2 Bullying

2.2.1 Definition of bullying

Perhaps, the most commonly accepted definition of bullying is provided by pioneering Norwegian researcher Dan Olweus (1993), stating that “a person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself” (Olweus, 1993, p. 9). The three major components of this definition are unwanted and aggressive actions, repeated behavior over time, and power imbalance.

More recent approach to the definition of bullying is presented by the Centers for Disease Control and Prevention and the U.S. Department of Education (2014). In their effort to create a uniform definition of bullying, they came up with a definition similar to Olweus’s while taking into account some of the current critiques. They state:

Bullying is any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm. (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014, p. 7).

Bullying behavior ‘types’ are often introduced by researchers to help the participants of their studies to understand the concept of bullying. In PISA 2015 survey (OECD, 2017), for example, bullying involves physical (hitting, punching or kicking) and verbal (name calling or mocking) abuse, relational bullying (social exclusion or public humiliation), and cyberbullying as a new form of bullying. Randa and Reyns (2014, p. 257) describe many forms of bullying that include verbal, physical, financial (e.g. demanding money), or psychological. Gladden et al. (2014) add damage to property as a type of bullying that includes theft, alteration, or damage of the property. Taking personal property and refusing to return or deleting personal electronic information also falls into this category.

It is worth mentioning that the concept of bullying can vary greatly across

contexts. In a critical review of classical concepts of bullying, Carrera, DePalma and Lamerias (2011, p. 480) claimed that in conceptualizing the phenomenon of bullying “the choices of terminology, along with the associated meanings, connotations, and implications have varied according to the cultural context of the analysis.” Countries can exhibit varying dynamics and context of bullying. For example, the meaning of *ijime*, the Japanese equivalent to bullying, differs to some extent from the understanding of the English word bullying itself. According to Kanetsuna (2016), students in England consider bullying as more direct physical and verbal behavior whereas Japanese students see *ijime* as a more indirect form related to social relationships with peers. Therefore, it is important to consider specific context of the society in understanding the phenomenon of bullying.

2.2.2 Impact of bullying on student wellbeing

Being a victim of bullying can have devastating effects on one’s life. Bullying is associated with physical, psychological, and social wellbeing of students. Students who were bullied are more likely to report physical symptoms than those who were not bullied. A study of peer victimization among primary school children in England revealed that victimized students are more likely to report having experienced headaches, stomach aches, sleeping problems, and bed wetting than nonvictimized students (Williams, Chambers, Logan, & Robinson, 1996). An international research targeting school-aged children in 28 countries in Europe and North America discovered a significant association between bullying and physical symptoms such as headache, stomach ache, backache, and dizziness in all 28 countries. Students who were bullied are more likely to say they experienced such ailments (Due et al., 2005). Even common health problems, such as repeated sore throats, colds, coughs can be associated with direct bullying (e.g. hitting) (Wolke, Woods, Bloomfield, & Karstadt, 2001).

Low psychological wellbeing is clearly another crucial impact of bullying on bullied students. Research has shown that victims of bullying report a higher level of depression (Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen,

1999; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000; Bond, Carlin, Thomas, Rubin, & Patton, 2001), more frequent ideation of suicide (Kaltiala-Heino et al., 1999; Kim & Leventhal, 2008), a higher level of anxiety and other psychological problems (Swearer & Hymel, 2015).

Research reveals that bullying victimization affects school and social life of students adversely. Frequently bullied students tend to report low satisfaction with life than those who are not frequently bullied (OECD, 2017). Students who were bullied tend to show lower academic achievement than those who were not because the consequences of bullying make it difficult for students to concentrate on their studies (Nakamoto & Schwartz, 2010; OECD, 2017). In addition, bullied students are more likely to feel unaccepted and isolated and have difficulties feeling a sense of belonging (Rivara & Le Menestrel, 2016). PISA 2015 (OECD, 2017) revealed that 42 percent of frequently bullied students reported feeling like an outsider at school whereas only 15 percent of students who are not frequently bullied reported so across OECD countries. It was also reported that frequently bullied students are more likely to skip school than those who were not frequently bullied (OECD, 2017). According to Haynie et al. (2001), victims of bullying often have problems with school adjustment (doing well on schoolwork, following rules, doing homework) and school bonding (desire to do well at school, be happy at school, take school seriously). Victims of bullying feel that friendship making is a very difficult task (Bond et al., 2001) and spend more time alone than nonvictimized students (Forero, McLellan, Rissel, & Bauman, 1999).

2.3 Gender

In PISA 2015 result (OECD, 2017), differences between boys and girls are clearly visible with regard to wellbeing of 15-year-old students. On average across OECD countries, boys reported higher satisfaction with life than girls. In Finland, the gap between boys and girls who reported that they are very satisfied with their life was 16.2 percentage point in favor of boys, much higher than OECD average of 9.7 percentage point. Girls are more likely to report school-related

anxiety, which can negatively affect satisfaction with life. In 28 countries, boys reported a higher sense of belonging at school than girls, and the difference was particularly noticeable in Finland. However, across OECD countries, boys are more likely to report being treated unfairly by their teachers, and the same goes for Finland (OECD, 2017).

In Finnish context, Konu & Lintonen (2006) found that girls tend to rate school wellbeing more positively, with the exception of health status. However, the difference between boys and girls tend to become smaller in upper secondary school.

HBSC 2013/2014 result showed gender differences in several wellbeing related areas. Boys reported higher life satisfaction than girls and the gap increased by age. However, there was a general tendency that more girls than boys reported positively on liking school a lot. The percentage of Finnish students who reported they like school a lot was lower than HSBC average in both genders. 20 percent of girls and 12 percent of boys in age 11 reported liking school a lot, and 13 percent of girls and 9 percent of boys in age 15 reported so. In terms of feeling school-related pressure, gender differences changed with age. Overall, 11-year-old boys reported higher pressure than girls, whereas 13- and 15- years-old girls tend to perceive a higher level of pressure with schoolwork. Finland followed the same trend (Inchley et al., 2016).

Research has shown that boys are more likely to be engaged in bullying (Chapell et al., 2006; Griezel, Finger, Bodkin-Andrews, Craven, & Yeung, 2012; Inchley et al., 2016; OECD, 2017). In addition, there seem to be gender differences in types of bullying that boys and girls exhibit. It is reported that direct, physical bullying is more common among boys and indirect, relational bullying is more frequently reported among girls (Björkqvist, Lagerspetz, & Kaukiainen, 1992; Chapell et al., 2006; Rivers & Smith, 1994).

2.4 Family affluence

The environment surrounding students has a great impact on their lives, and

family affluence is clearly a factor associated with students' school life. Even though school systems around the world are making serious efforts to diminish the impact inequalities in students' life, family affluence seems to affect student wellbeing. In PISA 2015 (OECD, 2017, p.51), it is noted that "family affluence and social status are not only related to academic performance but can also affect adolescents' satisfaction with life, perceptions about themselves and their aspirations for the future." Students with wealthy family backgrounds tend to report satisfaction with life more positively in most countries. Students reported lower satisfaction in life if they are not as wealthy compared to other students in school (OECD, 2017).

HBSC 2013/2014 (Inchley et al., 2016) study focused on inequalities in education, and one main factor considered is family affluence and its impact on students' lives. The study showed that family affluence is positively associated with academic performance, self-rated health, life satisfaction, peer-support, and family support in many countries. In Finland, the tendency that high-affluence backgrounds lead to good or very good perceived school performance was found only for girls. Family affluence was positively associated with perceived peer support and perceived family support only for boys. Finnish boys with high family affluence reported higher pressure for schoolwork (Inchley et al., 2016). Other research suggested that high family affluence might be associated with high depression, anxiety, and substance use because of high expectations and overemphasis on achievement from their parents (Luthar & Latendresse, 2005).

Research suggests family affluence is linked with bullying. Adolescents with low family affluence backgrounds were more likely to be victims of bullying (Due et al., 2009; Tippett and Wolke, 2014), and HBSC 2013/2014 study supported this finding by stating "in some countries and regions, a tendency can be seen that bullying victimization decreases as family affluence increases" (Inchley et al., 2016, p. 200), but significant trend was found only for boys in Finland. In PISA 2015 report, it is noted that "across OECD countries, the difference in the likelihood of being frequently bullied that is related to socio-economic status is not very large" (OECD, 2017, p. 138). Although it is small,

there was a statistically significant difference between socioeconomically advantaged and disadvantaged students in Finland, and the difference was 3.1 percentage point. With regards to the types of bullying associated with family affluence, spreading nasty rumors was the only type of bullying where the difference between advantaged and disadvantaged groups was found. (OECD, 2017).

3 METHODOLOGY

3.1 Research aims

The aims of this study are to explore the associations between student wellbeing, bullying, gender, and family affluence. As PISA 2015 results pointed out, frequently bullied students reported relatively low life satisfaction than students who are not bullied (OECD, 2017). In this study, the relationship between bullying and student wellbeing will be examined in Finnish context. Studies in student wellbeing suggest that student wellbeing is a multi-dimensional concept as presented in Section 2.1 (e.g. Fraillon, 2004). In this study, student wellbeing was measured based on 6 dimensions: commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school. The association between bullying experience and each of these dimensions will be identified.

Gender is another important aspect of educational research. PISA 2015 (OECD, 2017) revealed that gender has an impact on adolescents' life satisfaction. On average across OECD countries, more boys than girls reported higher satisfaction with their life. On the other hand, more girls reported low life satisfaction than boys. The gap between boys and girls who are satisfied with their lives was wider in Finland than OECD average. HSBC survey 2013/2014 (Inchley et al., 2016) showed that gender affects bullying, reporting more bullying behaviors for boys. In this study, the gender difference in student wellbeing and bullying in Finland will be analyzed.

Socioeconomic status of students can have an impact on student wellbeing and bullying. High family affluence is likely to be positively associated with higher satisfaction with life (OECD, 2017) and lower victimization of bullying (Inchley et al., 2016). In this study, the impact of family affluence on student wellbeing and bullying will also be examined.

Lastly, interactions between variables and their impacts on student wellbeing will be analyzed.

Based on those aims, this research will address the following questions:

- 1) How does victimization of bullying affect each dimension of student well-being?
- 2) How does gender affect student wellbeing and the frequency of bullying victimization?
- 3) How is family affluence (socioeconomic status) of students associated with student well-being and bullying?
- 4) What are the significant interactions among variables that affect student wellbeing?

3.2 Participants

The participants of the study were drawn from a larger ProKoulu study. ProKoulu study was a large scale experimental study on a Finnish model of School Wide Positive behavior support between 2013-2016. The data used in this study was taken from the baseline measurement in autumn 2013 and students belonging later to both the experimental and waitlist-controlled group were included. Intervention had thus no effect within this data. Participants of this study were from 2nd grade (N=1339) and 6th grade (N=1232).

3.3 Ethical issues

All data was collected in accordance with the guidelines of Finnish National Board of Research Integrity (TENK). As schoolchildren were included in the study permission based on informed consent was received from their parent in addition to students' personal consent. Positive statement on the ethics of the study was received from the Committee on Research Ethics of University of Eastern Finland.

3.4 Research instruments

The data for the present study was obtained from ProKoulu study. Student wellbeing measures for the study were adopted from HBSC questionnaire (Currie et al., 2009). 17 variables describing school experiences were grouped by 6 student wellbeing dimensions (commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school) based on a factor analysis by Kämppi et al. (2012). In the present study, the mean value of variables under each student wellbeing dimension was used as an index ranging from 1 to 5. A higher value in each index describes the more positive attitude toward each student wellbeing dimension, except for workload in school where a higher value represents a higher level of perceived workload.

The question item regarding the frequency of being a victim of bullying was adopted from School Health Promotion study questionnaire by Finnish National Institute for Health and Welfare (Terveyden ja hyvinvoinnin laitos, 2013). Participants were asked to answer how often they had been bullied at school during the given semester. Participants responded by choosing one out of four options: never, rarely, about once a week, and several times a week. In the present study, “about once a week” and “several times a week” were combined into “once a week and more” because the number of responses for several times a week was significantly small.

Family affluence was measured by Family Affluence Scale (FAS) used in HBSC study (Currie et al., 2009). In the present study, family affluence index was provided by ProKoulu study based on FAS. Participants were grouped into low, middle, and high family affluence groups based on the index. Roughly top and bottom 30 percent of participants were assigned to high and low family affluence groups, respectively, and the rest 40 percent were assigned to the middle group.

Reliabilities of the well-being measures were all adequate. Reliability of bullying instrument was not tested as bullying was asked with two single questions. While this is a limitation with regard to measurement, the study included relatively young students and the length of their questionnaire was kept

to the minimum.

Table 1
Reliabilities of the wellbeing measures

	2 nd	6 th
commitment to school	.79	.86
feeling of justice in school (2 items)	.53	.70
student-parent relationship	.57	.70
student relations in school	.62	.74
student-teacher relationship in school	.63	.73
workload in school	.60	.66

As can be seen in Table 1, some of the reliabilities of scales answered by 2nd grade students are low. This means their responses have to be interpreted with caution. One reason for the low reliabilities was that the wellbeing scales included 2-3 items only. It is likely that with addition of 2-3 items the reliabilities would have been larger.

3.5 Data analysis

Data was analyzed using SPSS software version 24. In order to analyze the relationship between bullying victimization and student wellbeing, participants were divided into three groups according to the self-reported frequency of bullying victimization in a given semester: never, rarely, and once a week and more. The mean scores of each dimension of well-being in the three groups were analyzed by performing one-way analysis of variance (1-ANOVA). When the assumption of homogeneity of variance was violated, Welch *F*-ratio was reported. Post hoc tests, Turkey HSD (homogeneity of variance assumed) or Games-Howell (homogeneity of variance not assumed), were conducted for pairwise comparisons between groups. To calculate effect sizes, eta squared (η^2) was used for ANOVA, and Cohen's *d* was used for the pairwise comparisons.

To assess differences in the frequency of bullying victimization by gender, chi-square test for independence was conducted. T-tests were run to identify differences in student wellbeing by gender. The association between family affluence and student wellbeing was analyzed by conducting one-way ANOVA. Furthermore, 2-way ANOVA was conducted to assess interaction effects

between variables on student wellbeing.

4 RESULTS

4.1 Impact of bullying on student wellbeing

A one-way Analysis of Variance (ANOVA) was conducted to explore the impact of bullying on each dimension of student wellbeing (commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school). Participants were divided into three groups according to the frequency of being a victim of bullying in a given semester (Group 1: Never; Group 2: Rarely; Group 3: Once a week and more).

4.1.1 Commitment to school

Being a victim of bullying might affect how much students are willing to commit themselves to school work. A One-way Analysis of Variance (ANOVA) was conducted to examine the effect of bullying on student's commitment to school. See Table 2 for the means and standard deviations for each of the three groups.

Table 2
The Effect of Bullying on Commitment to School

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	4.01 (0.87)	[3.95, 4.07]	891	3.57 (0.76)	[3.52, 3.62]
2. Rarely	385	3.81 (0.93)	[3.71, 3.90]	258	3.31 (0.83)	[3.22, 3.42]
3. Once a week and more	151	3.72 (1.05)	[3.55, 3.59]	83	3.10 (0.92)	[2.91, 3.31]
Total	1339	3.92 (0.92)	[3.87, 3.97]	1232	3.48 (0.80)	[3.44, 3.52]

Note. CI = confidence interval

For 2nd graders, the assumption of homogeneity of variance was violated; therefore, Welch *F*-ratio is reported. There was a statistically significant effect of bullying on commitment to school, *Welch's F* (2, 373.558) = 10.242, $p < .001$. The effect size, calculated using eta squared, was .016, showing that the actual difference between groups in mean scores of commitment to school was small. Post hoc comparisons using Games-Howell were conducted to determine which

pairs of the three groups differed. Students who were never bullied reported higher commitment to school than both those who were rarely bullied and those who were bullied once a week and more at $p < .01$ level. The effect sizes, calculated using Cohen's d , were 0.23 and 0.30, respectively. There is no statistically significant difference in the mean scores of commitment to school between Groups 2 and 3.

For 6th grade, there was a statistically significant difference in overall commitment to school scores in the three groups ($F(2, 1229) = 20.05, p < .001$). However, the effect size, calculated using eta squared, revealed that the actual difference between the groups in mean scores was small ($\eta^2 = .032$). Post hoc comparisons using Turkey were conducted to determine which pairs of the three groups differed. The results indicated that Group 1 reported a higher level of commitment to school than Group 2 and Group 3 at $p < .001$ level. The effect sizes, calculated using Cohen's d , were 0.31 between Group 1 and Group 2, and 0.54 between Group 1 and Group 3. No statistically significant difference was found between Group 2 and Group 3.

4.1.2 Feeling justice in school

A one-way Analysis of Variance (ANOVA) was conducted to examine the impact of bullying on feeling of justice in school. Table 3 provides the means and standard deviations of the three groups.

Table 3
The Effect of Bullying on Feeling of Justice in School

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	4.32 (0.76)	[4.27, 4.37]	891	4.01 (0.76)	[3.96, 4.06]
2. Rarely	385	4.20 (0.79)	[4.12, 4.27]	258	3.73 (0.84)	[3.63, 3.84]
3. Once a week and more	151	3.91 (0.99)	[3.75, 4.07]	83	3.62 (0.98)	[3.40, 3.83]
Total	1339	4.24 (0.81)	[4.19, 4.28]	1232	3.93 (0.81)	[3.88, 3.97]

For 2nd grade, the assumption of homogeneity of variance was violated and the Welch F -ratio was reported. There was a statistically significant difference

between groups in mean scores of feeling of justice in school, *Welch's F* (2, 368.666) = 13.176, $p < .001$. The effect size, calculated using eta squared, was .026. Post hoc comparisons using Games-Howell were conducted, and results indicated that there were statistically significant differences between all comparisons. Group 1 reported a higher level of feeling of justice than Group 2 ($p < .05$) and Group 3 ($p < .001$), and the effect sizes, calculated by Cohen's *d*, were 0.16 and 0.46, respectively. In addition, there was a significant difference between Group 2 and Group 3 ($p < .01$), with an effect size of 0.32. This suggests that as the frequency of bullying victimization increases, the level of justice in school that students perceive decreases.

For 6th grade, there was a statistically significant difference between groups in mean scores of feeling of justice in school, *Welch's F* (2, 193.202) = 16.370, $p < .001$. The effect size, calculated by eta squared, was .03. Post hoc comparisons using Games-Howell revealed that Group 1 reported a higher level of feeling of justice in school than Group 2 ($p < .001$) and Group 3 ($p < .01$) with the effect sizes, calculated by Cohen's *d*, of 0.35 and 0.45 respectively. There was no statistically significant difference between Group 2 and Group 3.

4.1.3 Student-parent relationship

A one-way Analysis of Variance (ANOVA) was conducted to examine the impact of bullying on student-parent relationship. Table 4 presents the means and standard deviations of the three groups.

Table 4
The Effect of Bullying on Student-Parent Relationship

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	4.30 (0.72)	[4.26, 4.36]	891	4.32 (0.60)	[4.29, 4.37]
2. Rarely	385	4.13 (0.75)	[4.06, 4.22]	258	4.11 (0.68)	[4.03, 4.20]
3. Once a week and more	151	4.16 (0.81)	[4.04, 4.30]	83	4.08 (0.64)	[3.95, 4.22]
Total	1339	4.24 (0.74)	[4.20, 4.28]	1232	4.27 (0.62)	[4.23, 4.30]

For 2nd grade, there was a statistically significant difference in mean scores in

student-parent relationship of the three groups ($F(2, 1336) = 7.632, p = .001$) even though the effect size, calculated using eta squared, was small ($\eta^2 = .011$). Post hoc comparisons using Turkey HSD revealed that students who were never bullied had better relationship with parents than students who were rarely bullied did at $p < .01$ level with the effect size of 0.23. There was no statistically significant difference between other comparisons.

For 6th grade, there was a statistically significant difference in student-parent relationship in the three groups ($F(2, 1229) = 16.220, p < .001$). However, the effect size was small ($\eta^2 = .026$). Post-hoc comparisons using Tukey test indicated that Group 1 reported better relationship with their parents than Group 2 ($p < .001$) and Group 3 ($p < .01$). The effect sizes for these comparisons were .34 and .40, respectively. Group 2 and Group 3 did not differ significantly.

4.1.4 Student relations in school

A one-way Analysis of Variance (ANOVA) was conducted to examine the impact of bullying on student relations in school. For 2nd grade, there was a statistically significant difference among groups in mean scores of student relations in school (*Welch's F* ($F(2, 367.670) = 25.407, p < .001$), even though the actual difference was small ($\eta^2 = .04$). Games-Howell post hoc comparison revealed that Group 1 reported better student relations in school than Group 2 and Group 3 at $p < .001$ level, and the effect sizes using Cohen's *d* were .33 and .54, respectively. There was no statistically significant difference between Group 2 and Group 3.

Table 5
The Effect of Bullying on Student Relations in School

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	4.26 (0.73)	[4.21, 4.31]	891	4.11 (0.60)	[4.07, 4.15]
2. Rarely	385	4.01 (0.78)	[3.93, 4.09]	258	3.60 (0.73)	[3.52, 3.69]
3. Once a week and more	151	3.81 (0.93)	[3.66, 3.96]	83	3.16 (0.81)	[2.98, 3.34]
Total	1339	4.14 (0.79)	[4.10, 4.18]	1232	3.94 (0.71)	[3.90, 3.98]

For 6th grade, the result revealed that there was a statistically significant

difference among groups in mean scores of student relations in school (*Welch's F* (2, 1229) = 14.394, $p < .001$), and the effect size was large. ($\eta^2 = 0.17$). Post hoc comparison using Games-Howell indicated that there were statistically significant differences in all comparisons at $p < .001$ level. Students who were never bullied reported having better relationship with peers than those who were bullied rarely and once a week and more. The effect size for the pairwise comparisons between Group 1 and Group 2 was 0.76, and 1.33 between Group 1 and Group 3. The mean score in student relations in school of students who were bullied once a week and more was lower than that of students who were rarely bullied with the effect size of 0.57.

4.1.5 Student-teacher relationship

A One-way Analysis of Variance (ANOVA) was conducted to examine the impact of bullying on student-teacher relationship. Table 6 provides the means and standard deviations of the three groups.

Table 6
The Effect of Bullying on Student-teacher Relationship

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	3.91 (0.81)	[3.86, 3.97]	891	3.72 (0.72)	[3.67, 3.77]
2. Rarely	385	3.78 (0.80)	[3.70, 3.86]	258	3.51 (0.73)	[3.42, 3.60]
3. Once a week and more	151	3.81 (0.86)	[3.68, 3.95]	83	3.34 (0.90)	[3.14, 3.54]
Total	1339	3.86 (0.82)	[3.82, 3.91]	1232	3.65 (0.74)	[3.61, 3.69]

For 2nd grade, the result revealed that there was a statistically significant difference among the three groups on the mean scores of student-teacher relationship (*Welch's F* (2, 386.343) = 3.962, $p = .02$). However, the actual difference was small considering the effect size ($\eta^2 = 0.006$). Post hoc results indicated that students who were never bullied reported having better relationship with their teachers than did students who were rarely bullied at $p < .05$ level. However, the effect size, calculated using Cohen's *d*, was 0.17 and indicated a small actual difference between the two groups. No statistically significant difference was

found in other comparisons.

The statistically significant difference in mean scores of student-teacher relationship among the three groups was found in 6th grade (*Welch's F* (2, 195.377) = 13.377, $p < .001$). The effect size was calculated using eta squared, and it was small ($\eta^2 = 0.025$). Post hoc test indicated that Group 1 reported better relationship with their teachers than the other groups at $p < .001$ level. The effect size for the pairwise comparisons between Group 1 and Group 2 was 0.28 and 0.46 between Group 1 and Group 3. No statistically significant difference was found between Group 2 and Group 3.

4.1.6 Perceived workload in school

A One-way Analysis of Variance (ANOVA) was conducted to examine the impact of bullying on students' perceived workload in school. The means and standard deviations for each of the three groups are presented in Table 7.

Table 7
The Effect of Bullying on Student's Perception on Workload in School

Group	2 nd Grade			6 th Grade		
	<i>n</i>	<i>M (SD)</i>	95% CI	<i>n</i>	<i>M (SD)</i>	95% CI
1. Never	803	2.30 (0.98)	[2.34, 2.38]	891	2.62 (0.74)	[2.58, 2.67]
2. Rarely	385	2.52 (0.97)	[2.43, 2.63]	258	2.82 (0.77)	[2.73, 2.92]
3. Once a week and more	151	2.78 (1.06)	[2.61, 2.95]	83	3.04 (0.87)	[2.86, 3.24]
Total	1339	2.42 (1.00)	[2.37, 2.48]	1232	2.70 (0.77)	[2.65, 2.74]

For 2nd grade, there was a statistically significant difference among the three groups ($F(2, 1336) = 17.168, p < .001$). However, the effect size, calculated by eta squared, was small ($\eta^2 = 0.026$). Post hoc test using Turkey HSD indicated that higher frequency of bullying victimization led to a higher level of perceived workload in school. Students bullied once a week and more reported a higher level of perceived workload than students who were never bullied ($p < .001$) and rarely bullied ($p < .01$). The effect sizes, calculated using Cohen's *d*, were 0.46 and 0.28, respectively. Group 3 perceived higher workload in school than Group 2 at $p < .05$ level with the effect size of 0.25.

There was a statistically significant difference among the three groups in 6th grade ($F(2, 1229) = 16.680, p < .001$). Despite the statistical significance, the effect size, $\eta^2 = 0.026$, indicated that the actual difference was small. Group 3 perceived a higher level of workload in school than Group 1 and Group 2 at $p < .001$ level, and the effect sizes using Cohen's d were 0.52 and 0.27 respectively. There was no statistically significant difference between Group 2 and Group 3.

4.2 The impact of gender on bullying and student wellbeing

4.2.1 Gender on bullying

A chi-square test for independence was conducted to assess whether gender affects the frequency of being bullied. For 2nd grade, the result identified that there was a statistically significant difference between girls and boys in the frequency of being bullied, $X^2(2, n = 1341) = 8.29, p = .016$. See Table 8 for percentages and adjusted residuals. The result indicated that boys were more frequently bullied than girls in 2nd grade. The proportion of boys who were bullied once a week and more was significantly higher than that of girls because the adjusted residual is greater than 1.96. A greater percentage of girls did not experience bullying than boys at a statistically significant level.

Table 8
Results of Chi-square Test for gender effect on bullying (2nd Grade)

Gender	Being Bullied		
	Never	Rarely	Once a week and more
Girls			
n (%)	439 (62.9%)	195 (27.9%)	64 (9.2%)
Adjusted Residual	2.3	-0.8	-2.5
Boys			
n (%)	364 (56.6%)	192 (29.9%)	87 (13.5%)
Adjusted Residual	-2.3	0.8	2.5

For 6th grade, a chi-square test of independence identified that there was a statistically significant difference between girls and boys in bullying victimization, $X^2(2, n=1233) = 14.011, p < .001$. A higher percentage of girls

reported that they were never bullied in the given semester than boys did. On the other hand, the proportion of boys who reported they were rarely bullied and bullied once a week and more was significantly greater than that of girls.

Table 9
Results of Chi-square Test for gender effect on bullying (6th Grade)

Gender	Being Bullied		
	Never	Rarely	Once a week and more
Girls			
n (%)	497 (76.8%)	116 (17.9%)	34 (5.3%)
Adjusted Residual	3.7	-2.7	-2.2
Boys			
n (%)	395 (67.4%)	142 (24.2%)	49 (8.4%)
Adjusted Residual	-3.7	2.7	2.2

4.2.2 Gender on student wellbeing

An independent samples t-test was conducted to assess the difference between girls and boys in mean scores of six dimensions of student wellbeing. See Table 10 for the results of t-test and the effect sizes for 2nd grade students.

Table 10
Results of t-test and Descriptive Statistics for Student Wellbeing by Gender (2nd Grade)

	Gender				95% CI for Mean Difference	t	df	ES
	Girls (N=705)		Boys (N=661)					
	M	SD	M	SD				
Commitment to school	4.08	0.79	3.75	1.01	[0.23, 0.42]	6.600***	1251.70	0.36
Feeling of justice in school	4.39	0.68	4.08	0.90	[0.26, 0.40]	7.145***	1231.07	0.39
Student-parent relationship	4.35	0.65	4.13	0.82	[0.14, 0.30]	5.410***	1255.96	0.29
Student relations in school	4.18	0.75	4.10	0.82	[0.00, 0.17]	1.958	1331.12	
Student-teacher relationship	3.98	0.75	3.72	0.87	[0.17, 0.35]	5.919***	1301.05	0.32
Workload in school	2.27	0.93	2.60	1.05	[-0.43, -0.22]	-6.092***	1321.12	-0.33

*** $p < .001$

The results indicated that there was a statistically significant difference between

girls and boys in all student wellbeing dimensions except student relations in school. However, the effect sizes, calculated using Cohen's *d*, suggest that the actual differences between girls and boys in all dimensions are small. The results suggest that girls reported higher commitment to school and feeling of justice in school, a better relationship with their parents and teachers, and perceived less workload in school than boys.

A statistically significant difference was found between girls and boys in commitment to school, feeling of justice in school, student-teacher relationship, and workload in school for 6th grade. The results are given in Table 11. There was no statistically significant difference in student-parent relationship and student relations in school. Although the effect sizes are small, the results show that girls reported higher commitment to school and feeling of justice in school, and better relationship with teachers. In addition, the boys perceived a higher level of workload in school than the girls did.

Table 11
Results of t-test and Descriptive Statistics for Student Wellbeing by Gender (6th Grade)

	Gender				95% CI for Mean Difference	t	df	ES
	Girls (N=650)		Boys (N=586)					
	M	SD	M	SD				
Commitment to school	3.62	0.71	3.34	0.87	[0.19, 0.37]	6.130***	1132.73	0.35
Feeling of justice in school	4.05	0.73	3.80	0.87	[0.16, 0.34]	5.519***	1146.73	0.32
Student-parent relationship	4.30	0.62	4.24	0.63	[-0.01, 0.13]	1.681	1234	
Student relations in school	3.94	0.69	3.94	0.72	[-0.08, 0.08]	-0.085	1234	
Student-teacher relationship	3.70	0.74	3.60	0.75	[0.02, 0.18]	2.377*	1234	0.14
Workload in school	2.62	0.73	2.78	0.80	[-0.25, -0.08]	-3.692***	1182.64	-0.21

* $p < .05$, *** $p < .001$

4.3 Impact of family affluence on bullying and student wellbeing

4.3.1 Family affluence on bullying

A chi-square test for independence was conducted to evaluate whether family affluence affects the perceived frequency of being bullied. Participants were divided into 3 groups based on their family affluence: Low, Middle, and High. For 2nd grade, the results revealed a statistically significant relationship between family affluence and bullying, $X^2(4, n=1250) = 19.831, p < .001$. For 2nd grade, the results suggest that students with higher family affluence were more likely to be a victim of bullying. However, no statistically significant relationship between family affluence and bullying was found in 6th grade.

Table 12

Results of Chi-square Test for the Effect of Family Affluence on bullying (2nd Grade)

Family Affluence	Being Bullied			Total
	Never	Rarely	Once a week and more	
Low				
n (%)	217 (64.2%)	102 (30.2%)	19 (5.6%)	338 (100%)
Adjusted Residual	1.7	0.6	-3.6	
Middle				
n (%)	316 (62.7%)	130 (25.8%)	58 (11.5%)	504 (100%)
Adjusted Residual	1.4	-2.0	0.7	
High				
n (%)	221 (54.2%)	129 (31.6%)	58 (14.2%)	408 (100%)
Adjusted Residual	-3.1	1.5	2.7	

4.3.2 Family affluence on student wellbeing

A one-way Analysis of Variance (ANOVA) was used to explore whether family affluence affects each dimension of student wellbeing. Participants were divided into three groups according to their family affluence (Low, Middle, and High). For 2nd grade, no statistically significant difference was found between the three groups in all dimensions of student wellbeing. This result suggests that family affluence does not affect student wellbeing significantly in 2nd grade. However, a statistically significant difference was found in 6th grade in student-parent

relationship ($F(2, 1114) = 8.78, p < .001$) and workload in school ($F(2, 1114) = 3.67, p = .025$). However, the effect sizes calculated using eta squared were 0.016 and 0.007 respectively and suggest that the actual differences in both dimensions of wellbeing were small. See Table 13 for means and standard deviations.

Table 13
The Effect of Family Affluence on Student Wellbeing (6th grade)

Family affluence	N	Student-parent relationship		Workload in school	
		M (SD)	95% CI	M (SD)	95% CI
1. Low	237	4.15 (0.62)	[4.07, 4.23]	2.76 (0.82)	[2.65, 2.86]
2. Middle	475	4.25 (0.64)	[4.20, 4.31]	2.71 (0.76)	[2.64, 2.78]
3. High	405	4.36 (0.63)	[4.30, 4.42]	2.60 (0.73)	[2.53, 2.67]
Total	1117	4.27 (0.63)	[4.23, 4.30]	2.68 (0.77)	[2.64, 2.74]

Post hoc tests using Turkey HSD revealed that participants with high family affluence reported a better relationship with their parent than those with low family affluence at $p < .001$ level. The effect size for this comparison, calculated using Cohen's d , was 0.34. Additionally, the high family affluence group perceived a lower level of workload in school than the low family affluence group did at $p < .05$ level. The effect size was 0.2.

4.4 Interaction effect between variables on student wellbeing

4.4.1 Interaction between bullying and gender on student wellbeing

Earlier analyses revealed that bullying affects student wellbeing, but that effect might differ between girls and boys. A two-way Analysis of Variance (2×3) was conducted to evaluate the interaction effect between bullying and gender on student wellbeing. The two independent variables in this analysis are gender and the frequency of being bullied (never, rarely, and once a week and more). The dependent variable is the mean scores of the 6 dimensions of student wellbeing (commitment to school, feeling of justice in school, student-parent relationship, student relations in school, student-teacher relationship in school, and workload in school). The results suggest that there was one dimension of student wellbeing,

feeling of justice in school, that the interaction between gender and bullying was found to be statistically significant in 2nd grade ($F(2, 1333) = 7.776, p < .001$). The means and standard deviations for mean scores of feeling of justice in school as a function of the two factors are presented in Table 14. The result suggests that boys were more significantly affected by frequent bullying than girls in feeling of justice. The gap between boys and girls in feeling of justice was wider when they were bullied once a week and more. No statistically significant interaction was found in 6th grade.

Table 14

*Means and Standard Deviations of Feeling of Justice in School (2nd grade)**

	Never	Rarely	Once a week and more	Total
Girls	4.44 (.68)	4.28 (.69)	4.34 (.64)	4.39 (.68)
Boys	4.17 (.83)	4.11 (.88)	3.59 (1.09)	4.08 (.90)
Total	4.32 (.76)	4.20 (.79)	3.91 (.99)	4.24 (.81)

* Standard Deviations shown in parentheses

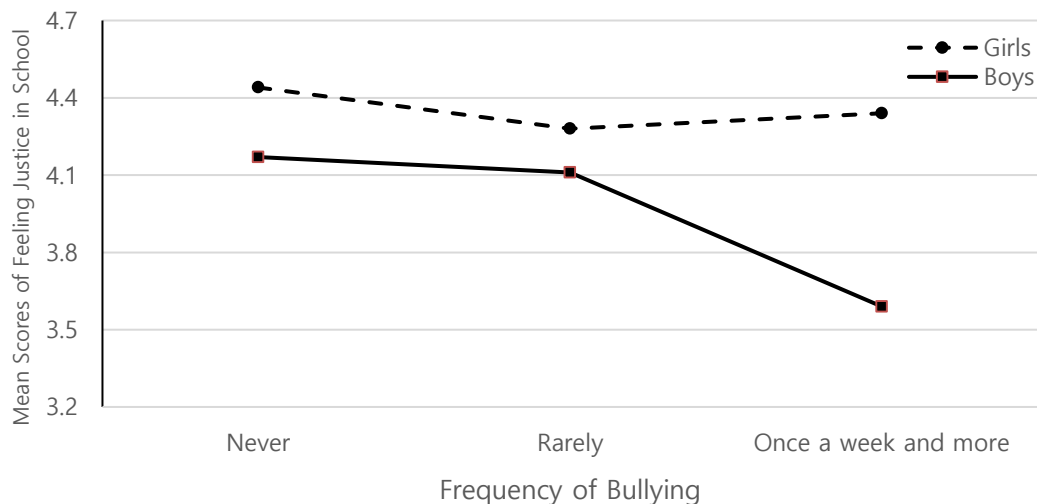


Figure 1
Feeling of Justice (2nd Grade)

4.4.2 Interaction effect between pupil's grade and bullying on student wellbeing

The effect of bullying on student wellbeing might be manifested differently in different grades of students. In the earlier analysis on the associations of bullying with student wellbeing, there was a tendency that effect sizes are greater in 6th grade in all wellbeing dimensions except perceived workload in school. A two-way Analysis of Variance (2 x 3) was conducted to identify whether this tendency is statistically significant. The independent variables are student's grade (2nd grade and 6th grade) and the frequency of bullying (Never, Rarely, and Once a week and more in the given semester). The dependent variable is the mean scores of each dimension of student wellbeing. The results showed that a statistically significant interaction between pupil's grade and bullying was found in two dimensions of student wellbeing.

First, there was a statistically significant interaction between pupil's grade and bullying on student relations in school ($F(2, 2565) = 8.235, p < .001, \eta^2 = 0.013$). The results suggest that as the frequency of bullying increased, student relations deteriorated much greatly in 6th grade than 2nd grade (see figure 2). The 6th graders were highly affected by bullying when it comes to the relationship with peers.

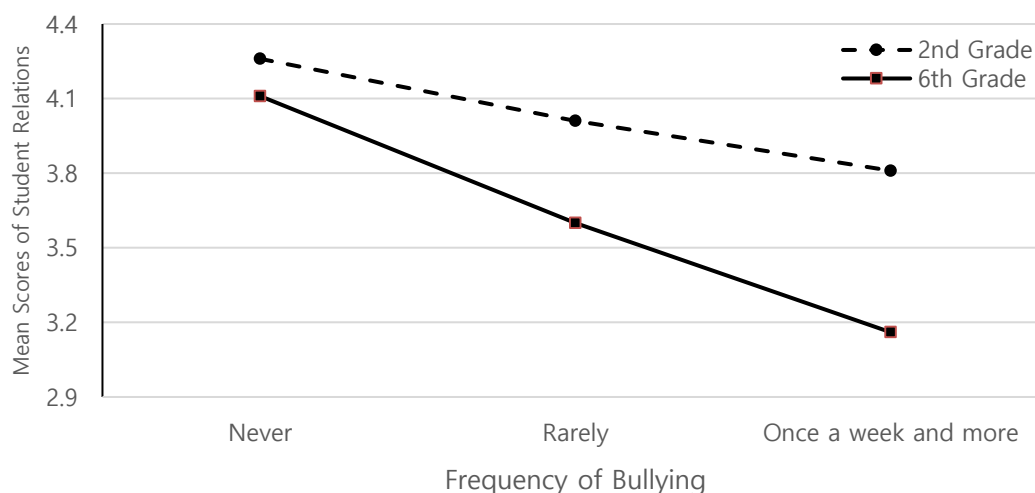


Figure 2
Student Relations in School

Another statistically significant interaction between pupil's grade and bullying was found in student-teacher relationship, $F(2, 2564) = 3.232, p < .05$. Despite reaching a statistical significance, the effect size, calculated using eta square, suggests that the actual interaction effect is very small, $\eta^2 = 0.003$. However, the results suggest that 6th grade students are more likely to be influenced by bullying than 2nd grade students regarding their relationship with teachers (see Figure 3).

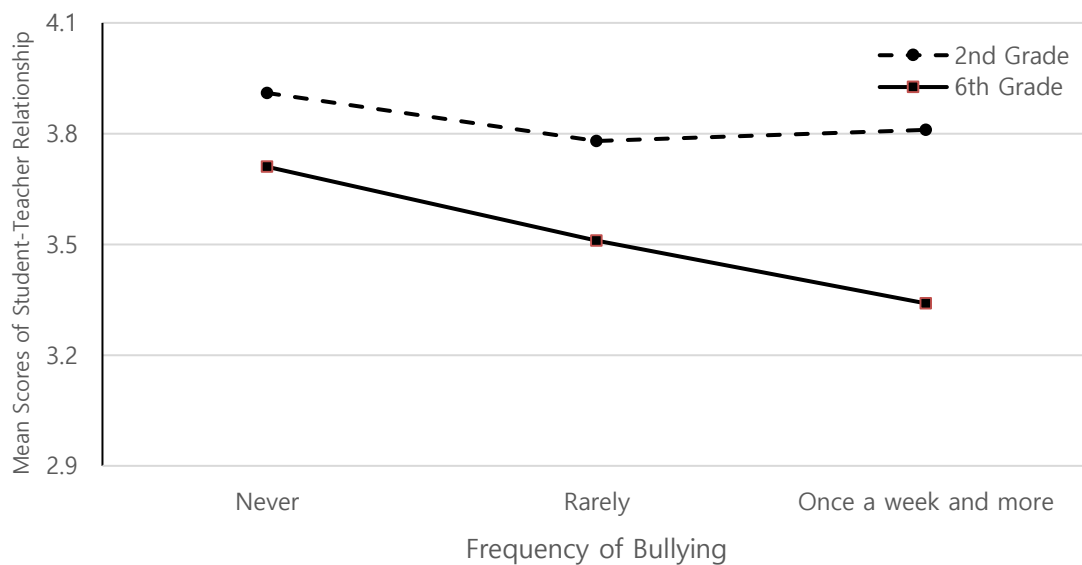


Figure 3
Student-Teacher Relationship

5 DISCUSSION

The main aim of this study was to explore the impact of bullying victimization on student wellbeing. In addition, this study focused on whether student wellbeing and bullying victimization are affected by gender and family affluence.

The results reveal that bullying has negative impacts on all six dimensions of student wellbeing for both 2nd and 6th grade. However, effect sizes were small by Cohen's (1988) standard except for student relations in 6th grade. There were several wellbeing dimensions where the differences between rarely bullied students and those who reported being bullied once a week and more were not statistically significant. The cases were commitment to school and student relations for 2nd grade, and commitment to school, feeling of justice, student-parent relationship, student-teacher relationship, and perceived workload in school for 6th grade. These results could possibly suggest that even bullying with low frequency can be negatively associated with these areas of student wellbeing.

In other wellbeing dimensions, feeling of justice and perceive workload in school for 2nd grade and student relations for 6th grade, the results showed that student wellbeing tends to suffer as the frequency of victimization increases. More attention and support are required in these dimensions of student wellbeing for students who reported a high frequency of victimization.

This study reveals the devastating impacts of bullying on relationship with peers. Among 6 dimensions of student wellbeing in this study, student relations was affected the most by bullying victimization. This finding is alarming because having a good relationship with peers plays a crucial role in students' lives. Students with supportive friends are more likely to report better subjective wellbeing and social skills and fewer emotional and behavioral problems (Colarossi & Eccles, 2003; Lenzi et al., 2012). In addition, supportive relationships with friends are positively associated with a higher level of self-esteem, psychological wellbeing, academic achievement, and social adjustment to school. (Danielsen, Samdal, Hetland, & Wold, 2009; Wilkinson, 2004). It is therefore important to understand how bullying can influence students' relationship with

peers and identify factors that can mitigate the negative association between bullying and peer relationship.

On the other hand, peer support can play a crucial role in preventing bullying. Rodkin (2012, p. 8) emphasized the roles that peers play in bullying by stating that “the problem of bullying is also a problem of the unresponsive bystander, whether that bystander is a classmate who finds harassment to be funny or a peer who sits on the sidelines afraid to get involved.” Similarly, Salimvalli et al. (1996) consider bullying as a group phenomenon, where various participants with different roles (i.e. assistants of bullies, reinforcers of bullies, outsiders, and defenders of the victim) are involved. One of the significant findings by Konu and Lintonen (2006) was that only a third of participants in Finnish context reported they intervene when others are being bullied. This suggests students need education on how to respond when they witness incidents of bullying. In Finland, a national anti-bullying program named KiVa (an acronym for *Kiusaamista Vastaan*, “against bullying”) has been proven to be effective in bullying prevention (Kärnä et al., 2011). However, care needs to be taken when dealing with peer influences with bullying as research also points out that bullying intervention programs explicitly dealing with peers may increase the frequency of victimization (Ttofi & Farrington, 2011).

Weak associations of bullying with student-parent relationship and student-teacher relationship were found in this study. Even though only weak associations were found in this study, victimized students should have all the possible support family and teachers. Information and training should be provided for parents and teachers on how to deal with the phenomenon of bullying.

Bullied students reported higher levels of perceived workload in school. This finding is alarming in that feeling pressured by school work can cause health problems (e.g. headache, stomach ache, back pain and dizziness) and psychological symptoms such as sadness and anxiety (Ottová-Jordan et al., 2015; Torsheim, Aaroe, & Wold, 2003). High levels of school pressure can be also negatively associated with self-rated health, life satisfaction and student

wellbeing (Inchley et al., 2016). Thus, factors related to increased pressures on schoolwork for victims of bullying need to be identified. There are not many studies conducted to find out how bullying is associated with higher level of workload students can perceive. Various factors, such as support from peers, teachers and parents and classroom or school environment, may be closely associated with perceived workload in school. Regardless of the factors, it is clear that students who are bullied and feeling pressure by schoolwork need additional supports to alleviate the pressure. Support from teachers and better student-teacher relationships can motivate students and make them confident in schoolwork (den Brok, Brekelmans, & Wubbels, 2004). A good relationship with parents can also help students deal with stressful events in school and manage school work related anxiety (Wills & Cohen, 1985). Thus, care should be taken for students suffering from bullying not to be overwhelmed by the pressure related to school work.

A clear difference between girls and boys was found regarding the frequency of bullying victimization. Boys are more likely to report that they were bullied than girls. This finding is in line with findings from other research (Chapell et al., 2006; Griezel, Finger, Bodkin-Andrews, Craven, & Yeung, 2012; Inchley et al., 2016; OECD, 2017). This suggests that gender difference should be taken into consideration when implementing intervention programs. Prevalence in different types of bullying by gender have been identified (Björkqvist et al., 1992; Chapell et al., 2006; Rivers & Smith, 1994). Research on types of bullying shown by gender in Finnish context is called for to deal with gender differences involved in bullying properly.

Girls reported higher levels of student wellbeing in both 2nd and 6th grade, except for student-parent relationship (6th grade) and student relations in school (2nd and 6th grade), where no difference was found by gender. These findings accord with the study in Finnish context by Konu and Lintonen (2006), where girls rated school wellbeing more positively. However, the findings seem to be contradictory to other studies that report higher life satisfaction for boys (see Inchley et al., 2016; OECD, 2017). There seem to be discrepancies between

students' life satisfaction in general and wellbeing in school.

These seemingly contradictory findings can be explained in terms of the school environment and developmental stages students go through. First, the school environment may be favorable for girls. Girls are better performers in all subjects (science, math, and reading) of PISA (OECD, 2016), and better academic performance can be recognized by peers, teachers and parents. This recognition and positive encouragements can give girls more satisfaction with their achievements as shown in the stronger association between academic performance and life satisfaction for girls (OECD, 2017). On the other hand, school environment may not be as appealing to boys. According to PISA 2015 results (OECD, 2017), more boys reported that teachers treat them unfairly. In HBSC 2013/2014 study (Inchley et al., 2016), boys reported they dislike school more than girls did. Peer culture valuing masculinity among boys seems to discourage their commitments to school. Legewie and DiPrete (2012) argued that in some contexts, boys' disruptive behaviors and resistance to school are reinforced by gaining status in peer groups, and making efforts for academic achievement is considered as feminine and discouraged. Girls, however, tend to view commitment to schoolwork as acceptable and sometimes even desirable. This view is supported by the work of Epstein (1998, p. 106) arguing that "the main demand on boys from within their peer culture . . . is to appear to do little or no work" while for girls "it seems as if working hard at school is not only accepted, but is, in fact, wholly desirable."

Secondly, school-aged girls may experience more stress than boys in their developmental stages. Adolescents undergo dramatic physical changes around puberty, and this can be more stressful for girls combined with societal standards for ideal appearances. Inchley et al. (2016, p. 223) state that "boys' bodies change in the desired direction, becoming more muscular and strong, while girls lose their so-called ideal appearance through gaining body fat." In addition, girls turning into adolescence are more likely to have interpersonal stressors than boys and react more sensitively to these stressors than boys, leading to negative mood (Flook, 2011). This view is supported by other research that found lower self-

esteem, higher levels of negative self-efficacy, greater unhappiness, and more frequent past worries (Bergman & Scott, 2001) and depression (Dyer & Wade, 2012) in adolescent girls than boys. Thus, dramatic physical changes and higher sensitivity to stressors for girls seem to make girls' life satisfaction in general lower than boys.

Family affluence was associated with the frequency of being a victim of bullying in 2nd grade. Students with higher family affluence reported more frequent victimization. This finding does not accord with other studies (Due et al., 2009; Tippett and Wolke, 2014) that suggest an association between low family affluence and high bullying victimization. More specific research is required to assess how family affluence can be related to bullying victimization in Finland.

With regard to the impact of family affluence on student wellbeing dimensions, only weak associations were found in student-parent relationship and perceived workload in school in 6th grade. Finland's income inequality is one of the lowest among OECD countries (OECD, 2018). Nevertheless, it is a meaningful finding showing student wellbeing was not compromised much by low family affluence, because that means equality regarding financial backgrounds of students in Finnish primary schools is well maintained.

The effect sizes in analysis on the impacts of bullying on student wellbeing tend to be greater in 6th grade for all wellbeing dimensions except perceived workload in school. Subsequent analyses revealed that 6th graders' relationship with peers and teachers are more negatively affected by bullying than 2nd graders. This finding suggests students' grades need to be taken into account, and different approaches may be required when dealing with bullying and student wellbeing according to student's grade.

The findings contribute to some areas of research. Firstly, dimensions of student wellbeing highly associated with bullying victimization were revealed. The negative impacts of bullying on students' physical and psychological health has been discussed in literature, but what area of student wellbeing is more likely to be affected by bullying was not fully studied. This study shows that bullying

negatively affects all dimensions of student wellbeing in general, and student relationship is most likely to be aggravated by bullying victimization. In addition, being a victim of bullying is associated with higher perceived workload in school. Further research is required to identify why bullying leads to higher pressure by schoolwork.

Secondly, this study raised a question regarding seemingly contradictory results between the level of life satisfaction and student wellbeing by gender. In some research, Finnish boys reported higher satisfaction with life than girls (Inchley et al., 2016; OECD, 2017), but the present study and another study by Konu and Lintonen (2006) found girls report higher wellbeing in school. The present study suggests that the favorable school environment for girls and more stressors for girls in their developmental stages may explain this seemingly contradictory result. Further research is necessary to identify factors behind this result.

This study is limited in some regards. Firstly, the study only targeted 2nd and 6th grade students in primary schools. Student wellbeing and bullying victimization may manifest themselves differently in lower and upper secondary school levels. Especially, changes students experience during puberty may cause even more differences by gender. Future studies should target this age group to assess the influence of puberty on different gender regarding student wellbeing and bullying. Secondly, some associations found in this study are not clearly causal. One of the findings was that bullying victimization has negative impacts on relationships with parents and teachers. However, it is not clear that whether being a victim of bullying aggravated the relationships with parents and teachers, or insufficient supports from parents and teachers due to relatively bad relationships resulted in more frequency of being bullied. Thirdly, some of the reliabilities on the 2nd grade data were relatively low, probably resultant from the small number of items per scale (2-3) and difficulty of 2nd graders to understand all wellbeing dimensions in particular feeling of justice. Finally, the data was limited in terms of types of bullying. There can be differences in types of bullying by gender, family affluence and grade. Future studies on types of bullying shown

in Finnish students are highly suggested.

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