

Children's Coping Methods:
A Study Conducted with the PsyMate App

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Abstract

Aim: The purpose of this thesis was to examine results from Folkhälsan's project "Strength, Happiness and Compassion" investigating changes in the participants' coping methods.

Method: An app called "PsyMate" was used to collect both the baseline (T1) and the follow-up (T2) data. Data were collected in six schools and the sample consisted of 140 participants (T1 girls 72, T1 boys 51 and T2 girls 67, T2 boys 54) with the mean age 11 years ($SD = .467$). The participants were divided into an intervention group, who received training based on positive psychology, and a control group who received no training.

Results: A tendency ($p = .085$) towards a significant change from T1 to T2 could be noticed as a result of the intervention. It was mostly girls who benefitted from the intervention. A comparison between the girls in the intervention and control groups at T2 showed significantly better coping strategies among the girls from the intervention group.

Conclusion: The results indicate that the girls may benefit more from an intervention of this sort than boys. A challenge for future studies is how to activate boys more in the intervention group, and how to assure long-term effects from studies.

Keywords: coping, coping methods, mental health, positive psychology, sex differences

Abstrakt

Syfte: Syftet med tesen var att undersöka resultat från Folkhälsans projekt Styrka, glädje och medkänsla gällande hur deltagarnas copingmetoder förändrades under projektet.

Metod: Appen "PsyMate" användes för att samla in både "baseline"- (T1) och "follow-up" (T2) data. Data samlades in i sex skolor och samplet bestod av 140 deltagare (T1 flickor 72, T1 pojkar 51 och T2 flickor 67, T2 pojkar 54) och respondenternas medelålder var 11 år (SD = .467). Deltagarna var indelade i en testgrupp, som fick undervisning baserad på positiv psykologi, och en kontrollgrupp som inte fick någon undervisning.

Resultat: En tendens ($p = .085$) för en signifikant skillnad mellan T1 och T2 kunde observeras som resultat från interventionen. Det var mest flickorna som drog nytta av att delta i interventionen. En jämförelse mellan flickorna i test- och kontrollgruppen i T2 visade signifikant bättre copingstrategier bland flickorna i testgruppen.

Konklusion: Resultaten tyder på att flickor kan dra mera nytta av den här sortens intervention än pojkar. En utmaning för framtida studier är hur pojkar kan aktiveras mer i interventionsgruppen, samt hur långsiktiga effekter från den här sortens studier kan garanteras.

Sökord: coping, copingmetoder, mental hälsa, positiv psykologi, könsskillnader

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1 Introduction

1.1 Aim

The overall aim of the thesis was to analyse results from a study conducted by Folkhälsan in Finland regarding children's coping methods. This was accomplished by comparing children's coping methods before and after they participated in Folkhälsan's project "Strength, Happiness and Compassion". By comparing data gathered before and after the project, can different aspects considering the participants coping methods be investigated. One aspect which was studied is differences between the test and control group's use of coping methods. Sex difference in regard to coping methods were also investigated. A third aspect that was included in the study was with whom and where the participants were when they used various coping methods.

1.2 Background

1.2.1 Mental Illness among Children and Youth in Finland and the World

According to a report from the Finnish Institute for Health and Welfare (Terveyden ja hyvinvoinnin laitos, 2017), the number of children between the ages 5 and 12 who receive specialised healthcare has increased significantly during the 21st century. For example, in 1989, only 1% of all girls and 4% of all boys in the Turku region in Finland received professional mental healthcare, whereas in 2013, 6% of all girls and 15% of all boys in the same region received professional mental healthcare. Between 2011 and 2015, the number of children referred to specialised healthcare increased nationally with 22%. The number of children who were referred to specialised mental healthcare varied between regions in the country. The main diagnoses of children in the age group 5 – 12 who receive treatment are in order of frequency (1) Depression, (2) Emotional disturbance, (3) Anxiety, (4) Behavioral disorder, (5) Impaired social functioning, and (6) Attention deficit disorder. Among adolescents, aged 15 and above, self-harming behaviors and suicide attempts have increased. According to a report by the Nordic Centre for Welfare and Social Issues (Nordic Centre For Welfare and Social Issues, 2017), 1/10 of all suicides in Finland are carried out by individuals younger than 25 years old. The report also states that 1/3 of all deaths among adolescents and young adults aged 15 – 24 are caused by suicide (Ibid). Since 2006, the number of outpatients in child psychiatry has increased by

37% and the number of inpatients and outpatients have increased (Nordic Centre For Welfare and Social Issues, 2017).

Globally, mental illness and suicide also occur among youth, and are observed at increasingly younger ages. Hong, Jung and Roh (2017) report that globally speaking, suicide is the second largest cause of death among youth. Suicide among pre-pubertal teens is quite rare but it is much more common among older teens. The number of suicide attempts and completed suicides among youth vary between countries, but the mean global suicide frequency among teens aged 15 – 19 is 6.9/100 000 (Hong et al., 2017). Approximately 10-20% of all 10-19-year-olds suffer from different psychological issues. Due to the taboo connected with mental illness and the misinformation about mental disorders in many countries, the wait for adequate help can become long. This fact may with time also increase the risk of suicide attempts and suicide among adolescents (WHO, 2018).

1.2.2 Positive Education

Geelong Grammar School is a boarding and day school in the port city of Geelong in Australia. One important part of the school's philosophy and curriculum is positive psychology, and the school has its own Institute of Positive Education (Institute of Positive Education, 2019). Through its institute, the school provides positive education to both students and staff, and researchers perform studies at the institute. The mission is to increase wellbeing both locally and globally through positive psychology (Institute of Positive Education, 2019). The institute also has its own web page, where those who are interested in positive psychology may read about the ideas behind the psychological orientation and the school's own positive education (Geelong Grammar School, 2019). The web page contains articles about specific areas of positive psychology, e.g. the orientation's view on the term flow (Geelong Grammar School, 2011). Positive education is based on a specific "positive education model". The model consists of six parts: (1) Positive emotions, (2) Positive relationships, (3) Positive purpose, (4) Positive health, (5) Positive engagement, and finally (6) Positive accomplishment (Norrish, 2015). All parts are included in both teaching and exercises. Positive education also consists of four key processes: (1) Learn it, (2) Live it, (3) Teach it, and (4) Embed it (Bott, Hoare & Robinson, 2017), and through these processes may the model be utilised in everyday life by students, staff, and others.

Chin, Rickard and Vella-Brodrick (University of Melbourne & Monash University, 2014) conducted a study with the goal of measuring the effect of the positive education carried out by

the Institute of Positive Education. Participants in the study were students from Geelong Grammar School (Years 9 – 11) and the total number of participants were 383 (165 girls and 218 boys). The study was carried out during 2013. All six parts of the positive education model were assessed, and further components measured were for example mental health, wellbeing and academic performance (University of Melbourne & Monash University, 2014). Two of the research questions in the study were (1) “What levels of wellbeing are reported by Year 9, 10 and 11 GGS students” and (2) “Are wellbeing levels of GGS students higher than wellbeing levels of other students with similar socioeconomic demographics?” (Ibid). Results concerning first research question showed that Year 9 students reported an improved mental health during the year they participated in the positive education lessons. The students also showed a reduction in mental illness, for example decreased depression and anxiety (Ibid). The Year 9 students also report higher usage of problem-focused coping after they had participated in the positive education lessons. These kinds of improvements were not detected among participants in the control group. Scores for wellbeing and mental health were generally higher for the Geelong Grammar School students than for the students in the control group, which consisted of students from partially matched private schools. Year 10 students at Geelong Grammar School did not report either positive or negative effects from participating in the positive education lessons. Year 11 students had in contrast to the Year 9 students an increase in both depression and anxiety during the year (University of Melbourne & Monash University, 2014). Results concerning the second research question revealed that Year 9 students showed substantial improvements regarding all measures of mental health (e.g. general mental health and satisfaction with life) (ibid). They also showed greater improvement on all measures compared to the control group. Year 9 students also reported improvements on measures such as optimism, meaning and personal growth, which the control group did not report to the same extent. Two explanations suggested by the scientists why Year 9 students’ results were better than results from the Year 10 and Year 11 students were that: (1) Year 11 students do not go through explicit training in positive education during Year 11 and (2) The pressure on students to perform well in their studies increase when they get older. The results suggest that Year 9 students by receiving positive education report better mental health, less mental illness and improved coping methods. Results also indicate that especially Year 11 students could benefit from more positive education during Year 11. Finally, the results indicate that students who had lower levels of wellbeing before partaking in the positive education, and who used mental strategies of poorer quality for dealing with problems in their life, benefitted more from positive

education than students with higher levels of wellbeing (University of Melbourne & Monash University, 2014).

1.2.3 Strength, Happiness and Compassion

Strength, Happiness and Compassion (in Swedish: *Styrka, glädje och medkänsla*) is a project conducted by the non-governmental organisation Folkhälsan in Finland. The main aim of the project is to enhance the psychological wellbeing and mental resources among Finnish children in primary schools. Folkhälsan defines wellbeing by using the PERMA model by Seligman (2018). PERMA consists of five parts: (1) Positive emotions, (2) Engagement, (3) Relationships, (4) Meaning, and (5) Achievement. According to Seligman, the components of the model is the construction of wellbeing (Seligman, 2018). The aim of the project is accomplished by a broad intervention programme for the benefit of pupils', school staff's, and parents' wellbeing (Folkhälsan, 2019). The project is divided into two parts. The first part consists of a pilot study encompassing different components connected with psychological wellbeing and involving pupils, school staff and parents in these components (Folkhälsan, 2019). The second part consists of summarising the results from the first part, and on the basis of these findings establishing a comprehensive programme with the aim of creating a school with higher levels of wellbeing among pupils, staff, parents, and others (Folkhälsan, 2019).

The aim of the project fits well in with the Finnish national curriculum of 2016. In the curriculum, the pupils' own responsibility for their own development, self-regulation and problem-solving are highlighted as important. The school's responsibility is to create good conditions for the enhancement of the pupils' mental and academic growth, and to always keep pupils' wellbeing as a first priority (Opetushallitus, 2016). The project aims at adding new components to the learning process in school, and to give pupils psychological resources to be able to deal with challenges both in school and in other parts of their lives (Folkhälsan, 2019). Pupils ability to use creative problem-solving and the ability to create meaningful goals in their lives are also essential elements in the project (Folkhälsan, 2019). Through the project, Folkhälsan tries to provide pupils with psychological resources, increase their wellbeing and help the pupils to experience a feeling of meaningfulness and engagement. The enhancement of the pupils' ability to use creative problem-solving and the ability to establish meaningful goals in their lives are also essential elements in the project (Folkhälsan, 2019).

Beside pupils, also staff members and parents should learn methods, that can be used to increase their wellbeing. These methods may then be implemented in their lives. The aim is

accomplished by not only educating pupils but also staff members and parents in the project. The education of both parents and staff will increase their own wellbeing and, furthermore, improve the environment, which the children live in (Folkhälsan, 2016).

The project is based on a broad spectrum of studies performed by psychologists in positive psychology. Methods from both positive psychology and cognitive behavioral therapy (CBT) were used in the project. Folkhälsan found inspiration for the project in a study, conducted by Boniwell, Martinez and Osin (2016), and also in the research conducted at the Institute of Positive Education at Geelong Grammar School. Boniwell, Martinez and Osin's study examined a school programme intended to promote the happiness and wellbeing of adolescents. The school programme consisted of 18 wellbeing lessons, which were given at two primary schools in London (Boniwell, Martinez, & Osin, 2016). The participants ($N = 164$) were divided into an intervention and a control group. The participants completed both a pre-test and post-test. Results showed that the children learned strategies (e.g. mindfulness) during the lessons, which they later could benefit from in their everyday life (Boniwell, Martinez, & Osin, 2016). The participants' self-awareness and awareness of others also improved during the lessons. The results indicate that students can benefit from attending wellbeing lessons (Boniwell, Martinez, & Osin, 2016).

1.3 Definitions

1.3.1 Coping

Lazarus and Folkman (1984) defined coping as the method humans use when they need to overcome different external and internal demands. Lazarus and Folkman saw coping as a response that humans use towards stress. According to them, the reaction humans show to stress is divided into four parts. First, humans feel a threat to themselves (called primary appraisal); second, they try to figure out a response to the threat (called secondary appraisal); third, they execute a response to the threat, which is called coping (Carver & Scheier, 1989). The final part is the reappraisal period. In the reappraisal period, a change in the evaluation of the situation, in which the perceived threat occurred, happens. The reappraisal period can happen when new information has been acquired (Lazarus & Folkman, 1984). Cognitive and behavioral components constantly change in people's minds according to the needs they have. When situations become too demanding, the cognitive and behavioral components must change in order for the coping methods to change (Lazarus & Folkman, 1984). Coping is in other words used for problem solving, but coping is used for other reasons as well. The results of coping

may also differ, but the main purpose behind it is to make individuals able to function in their private life (Lazarus & Folkman, 1984). Two crucial concepts are coping functions (the purpose with coping in a specific situation) and coping outcomes (the results of the coping functions). The main purpose of coping is to lessen the amount of stress in a situation, for example in situations that the individual has no previous experience of. Another purpose with coping can be to restore the homeostasis in the body. Cannon (1932) defined homeostasis as the inner system that humans have, the purpose of which is to regulate the inner balance in the body. Coping may also be used in more specific situations, for example the coping mechanisms used during an illness or when partaking in an exam in school (Lazarus & Folkman, 1984). Coping mechanisms are categorised into two different styles, problem-focused coping and emotion-focused coping. Problem-focused coping is cognitive in its nature and can be used for example when people try to identify what lies behind a problem and try to think of different solutions for it. When emotion-focused coping is used, the individual tries to decrease the emotional anxiety that arises when faced with a problem. This may be accomplished by for example avoiding the problem, trying to calm down, lessening the meaning of the problem (for example by not seeing it as a problem but a challenge), or trying to see a positive outcome of the problem (Lazarus & Folkman, 1984). People often use both emotion-focused and problem-focused coping simultaneously, although some individuals may favour either one of the styles.

Coping is often a long-term process requiring considerable time and effort. This is for example the case when coping with grief (Lazarus & Folkman, 1984). Coping is often divided into different stages; Shontz (1975) categorise coping into four stages, starting with (1) Shock, which happens when a crisis occurs without warning, followed by (2) The encounter phase, when feelings of helplessness, panic and disorganisation occur; then follows (3) A stage of retreat, in which feelings of numbness and denial can appear. Finally, (4) There is a stage called reality-testing, in which recovery may begin and personal growth takes place (Lazarus & Folkman, 1984). According to Shontz (1975) the coping process is a continual shifting process, where people move between the different phases until the recovery is complete (see also Lazarus & Folkman, 1984). As mentioned, coping is a process which changes according to varying needs. People may use coping methods with the aim of changing something in the surroundings which hurt their wellbeing (Lazarus & Folkman, 1984). People may also use coping mechanisms for changing their minds, for example by trying to change their interpretation of a certain situation. The choice of coping method is affected by people's personal beliefs and commitments, and also by cultural norms (Lazarus & Folkman, 1984).

People's mental and physical health may also affect how they evaluate a situation and their choice of coping method. Other aspects that have an impact on coping are positive beliefs (especially connected with viewing oneself positively), problem-solving skills, social support, and material resources, such as money, goods and services (Ibid). There are also aspects that impact coping negatively, such as how high the level of threat the individuals are faced with. Other examples are personal constraints (e.g. internalised cultural values that impact thoughts and behaviour negatively) and environmental constraints (e.g. competition and competition for resources). Two terms associated with coping are coping traits and coping styles. Coping traits make humans react in a specific way in specific situations. Coping styles are used more broadly in varying situations and they include different ways of relating to other people (for example by categorising others into different groups) (Lazarus & Folkman, 1984). Coping methods may also become automatic behaviours, if individuals are exposed to similar situations on several occasions, and therefore use the same coping methods in all of them. Coping methods which have become automatic behaviours do not require as much mental effort (Lazarus & Folkman, 1984).

1.3.2 Children and Coping

Children use the same or similar coping methods as adults, but the situations in which they use coping mechanism and how they use them may differ. Children's coping methods may become better and more constructive by receiving help from adults, for example through support from their families. By helping children confront their fears and challenges, supportive families can help children to improve coping with challenges in their lives (Blechman & Hetherington, 1996). It has been reported that the type of events which trigger stress in humans change when they become older (Chylinska & Wresniewski, 2007). Chylinska and Wresniewski (2007) examined children's coping and reactions to stress in different ages. They made a comparison between children in the age span of 8 to 12. The study showed that 8-year-olds often chose social support as a coping method, while 9-year-olds more often used verbal aggression and avoidance. 11-year-olds coped through physical activities while 12-year-olds coped by relaxing and partaking in cognitive activities (Ibid). Younger children used more emotion-focused than problem-focused coping when they were faced with events that they could not control (Ibid). One difference between adults and children is that children often need to use coping methods regarding school-related stress of various kinds. Especially adolescents report that school-related matters are the most common cause of stress (Ibid). Learning might be a cause for school-related stress for some children (Firth, Frydenberg, & Greaves, 2010) and learning

difficulties can e.g. be another reason why children need to use coping methods. Different individuals also have different views on learning and performance in school. D'Ailly's (2004) study compared sex differences considering children's learning. Participants in the study were fifth- and sixth graders from Canada and Taiwan. 130 participants came from Canada and 153 participants from Taiwan. Distributions in terms of sex were 47 boys and 82 girls in the sample from Canada and 84 boys and 68 girls in the sample from Taiwan (D'Ailly, 2004). Most of the participants were 11 years old. Results from the study indicate that boys' performance in school is more correlated with their interest level in the subjects they learn than girls' performance in school. Girls' performance in school is more correlated with their general interest in learning, regardless of their interest in the subjects. In other words, girls tend to be more conformist than boys regarding learning (D'Ailly, 2004).

Except coping with school-related stress, there are other common scenarios where children must use different coping methods. Two examples are when children are bullied, and when children have a sibling with some form of illness or disorder. Children or adults who have been victims of bullying can suffer from various psychological problems (e.g. anxiety, depression or suicidal ideation) (Cohen, Klomek, & Shahar, 2019). Meyers, Parris, Varjas and Tenenbaum (2011) define bullying as aggression towards individuals, and that there is an imbalance of power between the bully and victim. In a study by Murray-Harvey, Pereira, Skrzypiec and Slee (2011), coping methods used by children when they are bullied in one or many ways were studied. One finding was that children who were bullied in more than one way (for example both physically and psychologically) more seldom used any kind of coping methods. It is less likely that these children will ask for help from parents or other adults (Murray-Harvey et al., 2011). A second finding was differences between boys and girls regarding the choice of coping methods used when being bullied. Girls used a broader spectrum of coping methods than boys, and girls more often tried to receive help from adults to stop the bullying (Murray-Harvey et al., 2011). Sex differences in regard to coping may be observed in varying situations for both children and adults. Orfus (2008) investigated which coping methods children use when they have a sibling with some form of disability. One study outcome was that coping methods used by children were related to both sex and age. One coping method used by all children was wishful thinking. They wished for their sibling to be healthy and that the sibling would not have to live with the disability (Orfus, 2008). Younger children used coping methods more frequently, in which they tried to cure their sibling from his or her disability. Older children preferred coping methods in which they tried to ignore their sibling's disorder. There were noticeable sex differences in the

study regarding how they coped with their sibling's disabilities. Girls used more problem-focused coping methods, for instance when they tried to help the sibling at home, while boys more often rather wanted to spend time with friends and family to try to deal with feelings related to their sibling's disability.

Children's coping methods also differ depending on what context they are in. Inglés, Morales-Rodríguez, Páez and Trianes-Torres (2016) conducted a study with a large sample of 7,058 children in the age ranges 8 – 13. The purpose of the study was to investigate which coping methods children used in various contexts. The contexts were: (1) The school context and being together with peers, (2) The family context, and (3) A health context i.e., how children coped when being ill. The study showed that children more often used active solutions and emotions than passivity and avoiding behaviours. The coping methods were used in equal measure in all three contexts (Inglés et al., 2016).

1.3.3 Positive Psychology

Positive psychology may be defined as a psychological orientation which focuses on studying processes and relationships contributing to wellbeing among humans, in societies, and institutions (Gable, 2005). Positive psychology may also be defined as a dynamic orientation with different elements, such as flow, resilience, optimism, and spirituality. Borovay, Caccese, Hua, Shore and Yang (2019) defined flow by using Csikszentmihalyi's (1988) flow construct, according to which flow is seen as an ultimate state of mind or an optimal experience which humans may feel for example when completing a task. Hancock and Hoffman (2017) defined resilience as a term describing how well humans respond to stress or a traumatic event. Both flow and resilience, together with optimism and spirituality, are central aspects of human psychological wellbeing. Through its different elements, positive psychology covers not one but several theoretical perspectives (Gable, 2005; Hoy & Tarter, 2011).

Positive psychology is an orientation which focuses on what works instead of what does not work in an individual's life. For example, when someone suffers from an illness, positive psychologists focus on the recovery process and what is improving instead of what is getting worse (Hoy & Tarter, 2011). Positive psychologists also assume that the traits of goodness and excellence are equally often occurring in humans as illnesses, anxiety and other forms of problems. In other words, positive psychology points out that positive aspects of human life occur as much as negative ones (Hoy & Tarter, 2011). There are three parts of positive psychology, which Csikszentmihalyi and Seligman (2000) thought were essential to describe

the orientation. First and foremost, there are the components that make one moment or situation better for an individual, and second, the term positive psychology in itself and its components of wellbeing, optimism, happiness and self-determination (Csikszentmihályi & Seligman, 2000). The third part is the understanding that humans and human experiences exist in a social context. With this part, Csikszentmihályi and Seligman wanted to underline that scientists within positive psychology need to take a person's social context (for example family, groups and the society he or she lives in) into consideration in research (Csikszentmihályi & Seligman, 2000).

From a historical point of view, positive psychology may be traced back to William James's studies at the beginning of the 20th century (Gable, 2005). The term healthy mindedness is a related concept, although it is far from what positive psychology stands for today (Pawelski, 2003). A connection to positive psychology can be found in James's thought that humans become happy and satisfied with life when they try to decrease the impact of evil in their lives (Pawelski, 2003). Seligman is a front figure for positive psychology, and through his activities, the term positive psychology was officially launched in 1990. He and Csikszentmihályi wrote the groundbreaking article "Positive psychology: An introduction" (Csikszentmihályi & Seligman, 2000), in which they described their own relationship with positive psychology, and what the main ideas of the orientation were. During the history of psychology psychologists have focused their attention on phenomena such as depression, aggression, anger and pathology, i.e. negative aspects of human life (Hoy & Tarter, 2011). Seligman and Csikszentmihályi's mission were inter alia to increase the research interest in positive aspects of the human mind.

1.3.4 Humanistic Psychology

Humanistic psychology is an orientation within psychology which emerged and became larger during the middle part of the 20th century. The orientation grew and gained followers to a large extent due to influence by psychologists such as Rogers and Maslow (Aanstoos, 2003). Kelly is a third central figure within the orientation. Through inter alia Kelly's studies about how humans create their own personality through active decisions, humanistic psychology formed some of its characteristics as a distinct psychological orientation. The psychological schools before humanistic psychology had more mechanistic and pessimistic views on the human mind and personality (Winter, 2012).

The roots of positive psychology can be traced back to the psychological orientation of humanistic psychology. Both orientations have similar purposes (Hoy & Tarter, 2011), and

similar views on the human mind (Waterman, 2013). Both orientations share a positive view of the human mind, and both orientations study positive aspects in human psychology (e.g. optimism) (Hoy & Tarter, 2011). Scientists in humanistic psychology and positive psychology have also conducted research with similar topics. For instance, Maslow (1962) conducted studies of positive motivations and positive emotions. Maslow's studies show similarities with studies that have been carried out within positive psychology (Waterman, 2013).

The orientations have different views on to what extent humanistic psychology has impacted on the creation of positive psychology (Waterman, 2013). These different views stem partly from actual differences between the orientations. One main difference concerns the views on whether humans are fundamentally good or bad (Hoy & Tarter, 2011). Humanistic psychology perceives humans as fundamentally good, while positive psychology emphasise that humans have both good and bad sides (Hoy & Tarter, 2011). Another difference lies in their views on science and research. Positive psychology has a more positive view on scientific methods than humanistic psychology (Hoy & Tarter, 2011). Positive psychology has a wish to highlight the differences between the orientations, while humanistic psychologists tend to downplay the differences. The standpoint of the present author is that there are distinctions between humanistic and positive psychology, and the orientations are separate psychological orientations (Waterman, 2013).

1.4. Previous research

1.4.1 Research within Positive Psychology

One topic that has been studied in positive psychology, is the correlation between wellbeing and education. An example is Ben-Shahar and Russo-Netzer's study (2011). Ben-Shahar and Russo-Netzer examined a positive psychology course at Harvard University. The course was available for students at Harvard between the years 2004 and 2008. The main purposes of the course were to give students an insight into positive psychology, and to give them tools, which they could use to help other students, society and themselves to become happier (Ben-Shahar & Russo-Netzer, 2011). The teachers' roll was not merely to inform students about happiness and positive psychology but to help the students transform the way they see the world (Ben-Shahar & Russo-Netzer, 2011). Many of the students reported that they felt happier with their lives and that the course had changed their lives for the better. One core message that students learned from the course was to strive for a happier and more balanced life in their lives. Happiness is in other words not only a goal to achieve in the future (Ben-Shahar & Russo-

Netzer, 2011). The same course has later been taught at the School of Psychology in Israel and students in this school have reported similar positive results from partaking in the course.

A second study with similar topic is by Kanat-Maymon, Shoshani, and Steinmetz's (2016); it investigated a school-based positive psychology programme. The main purpose was to examine how the programme affected students' wellbeing (e.g. their life satisfaction, peer relations and emotions). The effect of the programme on students' academic achievements and school engagement were also investigated. 2517 middle school students participated in the programme. The students came from six similar middle schools in Israel. Participants were divided into an intervention and a control group and the groups' results were compared during the study. Students in the intervention group participated in 15 intervention sessions, which were based on the PERMA model by Seligman. The control group did not participate in the intervention sessions. The first part of the study was carried out from 2011 to 2012 and the second part from 2012 to 2013. The results revealed that participants from the intervention group showed increased wellbeing and, emotional and cognitive engagement. The intervention group also reported better GPA scores and peer relations after the programme. Life satisfaction was one of the measurements of wellbeing that did not increase after the intervention sessions. The positive results from the intervention sessions could still be noticed in the one-year checkup, which indicated that the participants had internalised what they had learned during the sessions. The participants in the control group showed a decrease in both positive emotions and cognitive engagement. Participants did not show changes in peer relations or emotional engagement and their GPA scores did not improve. The control group also showed a decline in emotional wellbeing (Kanat-Maymon et al., 2016).

1.4.2 Coping Research

Three questions that have been studied in coping research are: (1) How coping evolves across humans' lifespan, (2) How effective coping methods are and (3) How new coping methods are acquired (Compas, 1998). Study topics considering children's and adolescents' coping are for example: (1) Coping with mental illness, (2) Resilience, and (3) Methods developed to help children and adolescents to improve their coping methods (Ansel et al., 1996; Eschenbeck, Klein- Heßling, Kohlmann & Lohaus, 2006; Johnston & Johnston, 1999).

Studies have investigated how children cope with mental health problems (such as anxiety and stress). School-related stress is a common cause of stress for children and is something that

children often have to cope with (Chylinska & Wresniewski, 2007). Resilience is a central concept in this respect.

Resilience may be defined as the ability to cope with adversity (Hunter, Mason, & Newton-John, 2014), and the ability to overcome different circumstances in life (Ansell et al., 1996). Ansel et al. (1996) studied how family member's resilience may help them to cope with mental illness in the family. The results showed that resilient children showed a higher tendency to cope with adversity, and had the ability to seek support from others as a coping method. Results from the study also indicate that family members, no matter if they are children or adults, develop specific coping methods to cope with mental illness. The results also indicated that professionals could help families to cope with a family member's mental illness by supporting the family members' resilience. Help could include both information about the mental illness and suitable treatments for the illness in question (Ansel et al., 1996).

One part of coping research is to develop methods and tools that can be used to measure different aspects of coping, for instance coping questionnaires. Questionnaires may be helpful for professionals when they try to help patients to change their coping methods to better ones (Johnston & Johnston, 1999). Folkman and Lazarus's coping questionnaire (1980) is an example of a questionnaire that has been frequently used to measure coping (Johnston & Johnston, 1999). A more recent coping questionnaire, which was developed to measure how often children and adolescents use coping methods in specific contexts, is Eschenbeck, Klein-Heßling, Kohlmann and Lohau's (2006) questionnaire. 2000 children with the mean age of 11 completed the questionnaire in the pilot study, and coping was measured with five subscales: (1) Seeking social support, (2) Problem solving, (3) Avoidant coping, (4) Soothing emotion regulation, and (5) Anger-related emotion regulation. The results indicated that the questionnaire is a reliable and valid method to measure coping methods used by children and adolescents in the age range 7–16 (Eschenbeck et al., 2006).

1.5 Hypotheses and Research Questions

Based on previous research and in line with the aim of the thesis, three hypotheses were formulated:

1. Girls will gain more from participating in the study than boys (D'Ailly, 2004).
2. Both girls and boys in the intervention group will report less aggressive and negative coping methods after they have participated in the project (Chin, Rickard, & Vella-Brodick, 2014).

3. The intervention group will report using more positive coping methods after participating in the study compared to the control group (Chin, Rickard, & Vella-Brodrick, 2014).

2 Method

2.1 Sample

The children participating in the project were recruited from six different schools in three cities (Helsinki, Espoo and Vaasa). The study design followed a clustered randomised protocol (RCT), that divided the participating classes into either intervention or control groups. A total of 140 children, in the age range of 11-12 years of age, participated in the project. Results from 123 participants were collected in the baseline (T1) data and results from 121 participants in the follow-up (T2) data. The gender distribution in the intervention and control groups in the baseline and follow-up data are showed in Table 1.

Table 1
Numbers of Girls and Boys in the Different Groups

	T1		T2	
	Girls	Boys	Girls	Boys
Intervention	35	27	38	29
Control	37	24	33	21

2.2 Instrument

2.2.1 Folkhälsan's instrument

The app “PsyMate” was used to collect data. The data collection consisted of two parts: 1) A day questionnaire (eight questions) and 2) An evening questionnaire (four questions). The data collection gathered information about e.g. the children’s coping, flow and emotions. The questions pertaining to the day questionnaire appeared on the app eight times for a six days period and the participants received the instructions to answer the questions directly when the app beeped. The app was programmed to emit beeps during the children’s waking hours (7:30 am – 7:30 pm) and the beeps were emitted semi-randomly in 90 minutes intervals. The participants had 15 minutes after the beep to answer the questions. The evening questionnaire began at 8:30 pm and the participants could answer to the questions until 11:00 pm. There were both multiple-choice and single-choice questions in both questionnaires.

2.2.2 Experience Sampling Method (ESM)

Folkhälsan gathered data for the project with the experience sampling method (ESM). ESM is a collection of methods that scientists use to collect data for studies. ESM allows participants to report frequently on real-time experiences. The participants are in real-world settings when they report their experiences and they often report their experiences over a longer period of time. Since ESM methods collect data in real-world settings can data also be collected across several different contexts (Hufford, Shiffman & Stone, 2008). By collecting frequent assessments by the participants ESM methods can be used to observe e.g. how the participants’ behaviour change over time and across varying contexts. Since the participants report the experiences individually individual differences can be observed. The ESM methods can be used to study processes connected with adjustment, such as for example coping and self-esteem (Hufford et al., 2008).

For the purpose of the thesis, Question 8 on coping and Question 7 concerning with whom and where the participants were when they used coping methods were analysed. Items belonging to Question 7 are presented in Table 2, and items belonging to Question 8 in Table 3.

Table 2.

Day Data Question 7. Reactions 1–5 were Analysed in the Thesis

“What happened was...”	1. With family
	2. With friends
	3. With classmate(s), peer(s)
	4. In school
	5. Outside school/Non-school activities
	6. Something with my health or body
	7. Something else

Table 3.

Day Data Question 8

“How did you react? Select any that apply. I...”	1. Had fun
	2. Relaxed and calmed down

	3. Did something else in order to take my mind off the situation
	4. Asked for help or discussed with someone about situation
	5. Tried to think positively
	6. Tried to imagine the situation from someone else's perspective
	7. Was kind
	8. Did nothing
	9. Got angry or moody or lost my temper
	10. Tried to do the right thing
	11. Did something else, describe

2.3 Procedure

The project “Strength, Happiness and Compassion” was carried out from Spring 2016 to Spring 2017. The participants answered to baseline questions during Spring 2016 and they participated in the project lessons in school during Autumn 2016. The participants answered to the follow-up questions during Spring 2017. The project lessons were carried out in six schools in Finland: (1) Haga, (2) Munksnäs, (3), Gerby, (4) Vasa Övningsskola, (5) Zacharias Topeliuskolan and, (6) Vindängen. The schools were located in three cities: (1) Helsinki, (2) Vaasa, and (3) Espoo.

2.4 Ethical Considerations

Personal information collected about the participants were their names, gender and age. Participants were given a personal code which was used in all data gathering, thus their names were not visible in the data files. This created confidentiality for the participants.

Both participants and their legal guardians gave informed consent, in writing, to participate in the project.

The data files were only accessible to the researchers at Folkhälsan, the writer of this thesis and the supervisor.

3 Results

3.1 Differences Due to Sex and Intervention/Control at T1

3.1.1 Sex Differences at T1

A multivariate analysis of variance (MANOVA) was performed with sex and intervention/control at T1 as independent variables, and the eleven reactions to Question 8 as dependent variables. The multivariate analysis of the effect of sex was significant (Table 4). The univariate analysis showed that girls in general had higher scores on their reactions to the situations they were in compared to boys. Boys had higher scores on the reaction “Had fun”. There were also items on which neither girls nor boys had higher scores. The univariate analyses showed significant results to eight of the responses in effect of sex. The responses “Did nothing”, “Got angry or moody or lost my temper” and “Did something else” did not differentiate between the sexes.

3.1.2 Effect of Intervention/Control at T1

The multivariate analysis of the effect of group was significant (Table 4). The univariate analyses for the effect of intervention/control showed that some of analyses were significant. The intervention group had higher scores on the reaction “Relaxing and calming down”, while the control group had higher scores on the reactions “Did nothing” and “Tried to do the right thing”. The intervention and the control group did not differ from each other on the other items.

3.1.3 Interaction between sex and intervention/control at T1

The multivariate analysis of the interaction between sex and intervention/control was not significant (Table 4). The univariate analyses for the interaction between sex and intervention/control were for the most part not significant. Two exceptions were the reactions “Tried to think positively” and “Tried to do the right thing”. The girls in the control group had higher scores on the reaction “Tried to think positively” while the girls in the intervention group had higher scores on the reaction “Tried to do the right thing”.

Table 4.

Results of a Multivariate Analysis of Variance (MANOVA) with Sex and Intervention/Control at T1 as Independent Variables, and Eleven Reactions as Dependent Variables (N = 2,460). The N value Indicates the Number of Answers Given by the Participants in the Baseline Data, not the Number of Participants.

		<i>F</i>	<i>df</i>	<i>p</i> <	η^2	Group with higher mean
Effect of Sex						
Multivariate Analysis		11.47	11, 2446	.001	.049	
Univariate Analyses						
	Had fun	27.30	1, 2456	.001	.011	Boys
	Relaxing and calming down	16.91	“	.001	.007	Girls
	Did something else in order to take my mind off the situation	31.00	“	.001	.012	Girls
	Asked for help or discussed with someone about situation	5.39	“	.020	.002	Girls
	Tried to think positively	31.37	“	.001	.013	Girls
	Tried to imagine the situation from someone else’s perspective	17.16	“	.001	.007	Girls
	Was kind	42.80	“	.001	.017	Girls
	Did nothing	1.93	“	<i>ns</i>	.001	-
	Got angry or moody or lost my temper	.01	“	<i>ns</i>	.000	-
	Tried to do the right thing	48.11	“	.001	.019	Girls
	Did something else	1.48	“	<i>ns</i>	.001	-
Effect of Intervention/Control at T1						
Multivariate Analysis		4.02	11,2446	.001	.018	
Univariate Analyses						
	Had fun	2.40	1, 2456	<i>ns</i>	.001	-
	Relaxing and calming down	3.80	“	.052	.002	Intervention
	Did something else in order to take my mind off the situation	1.40	“	<i>ns</i>	.001	-
	Asked for help or discussed with someone about situation	.40	“	<i>ns</i>	.001	-
	Tried to think positively	.41	“	<i>ns</i>	.001	-
	Tried to imagine the situation from someone else’s perspective	.50	“	<i>ns</i>	.001	-
	Was kind	.35	“	<i>ns</i>	.001	-
	Did nothing	31.13	“	.001	.013	Control
	Got angry or moody or lost temper	.80	“	<i>ns</i>	.001	-

	Tried to do the right thing	4.10	“	,044	.002	Control
	Did something else	.01	“	<i>ns</i>	.001	-
Interaction between Sex and Intervention/Control at T1						
Multivariate Analysis		1.27	11,2446	<i>ns</i>	.006	
Univariate Analyses						
	Had fun	.070	1, 2456	<i>ns</i>	.001	-
	Relaxing and calming down	.60	“	<i>ns</i>	.001	-
	Did something else in order to take my mind off the situation	1.40	“	<i>ns</i>	.001	-
	Asked for help or discussed with someone about situation	2.70	“	<i>ns</i>	.001	-
	Tried to think positively	3.60	“	.058	.001	Girls Control
	Tried to imagine the situation from someone else’s perspective	.09	“	<i>ns</i>	.001	-
	Was kind	2.70	“	<i>ns</i>	.001	-
	Did nothing	1.10	“	<i>ns</i>	.001	-
	Got angry or moody or loosed temper	.60	“	<i>ns</i>	.001	-
	Tried to do the right thing	3.90	“	.049	.002	Girls Intervention
	Did something else	.30	“	<i>ns</i>	.001	-

3.2 Differences Due to Sex and Intervention/Control at T2

3.2.1 Effect of Sex at T2

A multivariate analysis of variance (MANOVA) was performed with sex and intervention/control at T2 as independent variables and the eleven reactions as dependent variables. The multivariate analysis of sex was significant (Table 5). The univariate analyses showed similar results as in the baseline data. In general, the girls had higher scores on the reactions to the question, while the boys only had higher scores on the reaction “Had fun”. There were also reactions in the follow-up data where neither girls nor boys had higher scores. The univariate analyses showed significant results to eight of the response as an effect of sex. The reactions “Did something else in order to take my mind off the situation”, “Asked for help or discussed with someone about situation” and “Did something else” did not differentiate between the sexes.

3.2.2 *Effect of intervention/control at T2*

The multivariate analysis of the effect of group was significant (Table 5). The univariate analyses for the effect of belonging to either the intervention or the control group showed mixed results. The intervention group had higher scores on the reactions “Tried to think positively” and “Had fun”, while the control group had higher scores on the reactions “Did nothing” and “Relaxing and calming down”. The other reactions did not differentiate between the intervention and control group.

3.2.3 *Interaction between sex and intervention/control at T2*

The multivariate analysis of the interaction between sex and intervention/control showed only a tendency to be significant (Table 5). The univariate effect for the interaction between sex and intervention/control were for the most part not significant. Two exceptions were the reactions “Did something else in order to take my mind off the situation” and “Did nothing”. The girls in the intervention group had higher scores on “Did something else in order to take my mind off the situation”. Girls in the control group had higher scores on the reaction “Did nothing”.

Table 5.

Results of a Multivariate Analysis of Variance (MANOVA) with Sex and Intervention/Control at T2 as Independent Variables, and Eleven Reactions as Dependent Variables (N = 1,806). The N value Indicates the Number of Answers Given by the Participants in the Follow-up Data, not the Number of Participants.

		<i>F</i>	<i>df</i>	<i>p</i> <	η_p^2	Group with higher mean
Effect of Sex						
Multivariate Analysis		6.30	11, 1792	.001	.037	
Univariate Analyses						
	Had fun	35.64	1, 1802	.001	.019	Boys
	Relaxing and calming down	4.48	“	.034	.002	Girls
	Did something else in order to take my mind off the situation	.006	“	<i>ns</i>	.001	-
	Asked for help or discussed with someone about situation	.30	“	<i>ns</i>	.001	-
	Tried to think positively	17.80	“	.001	.010	Girls

	Tried to imagine the situation from someone else's perspective	5.42	“	.020	.003	Girls
	Was kind	8.90	“	.003	.005	Girls
	Did nothing	16.90.	“	.001	.009	Girls
	Got angry or moody or lost temper	9.92	“	.002	.005	Girls
	Tried to do the right thing	4.33	“	.038	.002	Girls
	Did something else	.90	“	<i>ns</i>	.001	-
Effect of Intervention/Control at T2						
Multivariate Analysis		3.21	11, 1792	.001	.019	
Univariate Analyses						
	Had fun	1.95	1, 1802	.004	.005	Intervention
	Relaxing and calming down	1.20	“	.010	.004	Control
	Did something else in order to take my mind off the situation	2.26	“	<i>ns</i>	.001	-
	Asked for help or discussed with someone about situation	.003	“	<i>ns</i>	.002	-
	Tried to think positively	.37	“	.036	.001	Intervention
	Tried to imagine the situation from someone else's perspective	.02	“	<i>ns</i>	.001	-
	Was kind	.04	“	<i>ns</i>	.001	-
	Did nothing	1.09	“	.001	.002	Control
	Got angry or moody or lost temper	.06	“	<i>ns</i>	.001	-
	Tried to do the right thing	.13	“	<i>ns</i>	.001	-
	Did something else	.005	“	<i>ns</i>	.001	-
Interaction between Sex and Intervention/Control at T2						
Multivariate Analysis		1.65	11, 1792	.078	.010	
Univariate Analyses						
	Had fun	.46	1, 1802	<i>ns</i>	.001	-
	Relaxing and calming down	.05	“	<i>ns</i>	.001	-
	Did something else in order to take my mind off the situation	.09	“	.099	.002	Girls Intervention and Boys control

Asked for help or discussed with someone about situation	.005	“	ns	.001	-
Tried to think positively	.07	“	ns	.001	-
Tried to imagine the situation from someone else’s perspective	.02	“	ns	.001	-
Was kind	.16	“	ns	.001	-
Did nothing	.28	“	.071	.002	Girls control
Got angry or moody or lost temper	.02	“	ns	.001	-
Tried to do the right thing	.01	“	ns	.001	-
Did something else	6.59	“	ns	.001	-

3.3 Means and Standard Deviation

Means and standard deviation were calculated for the different groups’ answers to the reactions to Question 8. Means and standard deviation at T1 are shown in Table 6 and means and standard deviation at T2 in Table 7.

Table 6.

Means and Standard Deviations for Boys and Girls in the Intervention and Control Groups of Their Reactions at T1

Frequency	Boys Intervention		Boys Control		Girls Intervention		Girls Control	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Had fun	.74	.441	.70	.458	.63	.484	.60	.490
Relaxing and calming down	.23	.422	.18	.386	.29	.455	.27	.445
Did something else in order to take my mind off the situation	.02	.124	.02	.124	.05	.227	.08	.264
Asked for help or discussed with someone about situation	.01	.116	.01	.088	.02	.132	.03	.172
Tried to think positively	.06	.246	.03	.181	.11	.313	.13	.331
Tried to imagine the situation from someone else’s perspective	.00	.044	.01	.088	.03	.166	.03	.172

Was kind	.04	.203	.02	.134	.10	.298	.11	.313
Did nothing	.05	.228	.14	.348	.09	.281	.14	.352
Got angry or moody or lost my temper	.03	.169	.03	.167	.04	.185	.02	.152
Tried to do the right thing	.03	.158	.03	.159	.08	.270	.12	.328
Did something else	.03	.164	.03	.159	.02	.136	.02	.138

Table 7.

Means and Standard Deviations for Boys and Girls in the Intervention and Control Groups of Their Reactions at T2

Frequency	Boys Intervention		Boys Control		Girls Intervention		Girls Control	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Had fun	.78	.418	.67	.473	.59	.492	.55	.498
Relaxing and calming down	.18	.388	.23	.421	.22	.413	.29	.453
Did something else in order to take my mind off the situation	.03	.161	.04	.203	.04	.204	.03	.164
Asked for help or discussed with someone about situation	.02	.143	.01	.119	.02	.143	.02	.147
Tried to think positively	.06	.231	.04	.192	.13	.341	.09	.284
Tried to imagine the situation from someone else's perspective	.01	.077	.00	.069	.01	.112	.03	.164
Was kind	.07	.252	.06	.233	.09	.290	.12	.329
Did nothing	.04	.206	.07	.258	.08	.271	.16	.369
Got angry or moody or lost my temper	.01	.077	.01	.097	.02	.152	.04	.202
Tried to do the right thing	.03	.170	.05	.223	.06	.235	.07	.261
Did something else	.01	.121	.02	.137	.02	.148	.03	.159

3.4 Comparison between T1 and T2

A within-subject multivariate analysis of variance (WSMANOVA) was performed to compare responses to Question 7 at T1 and T2 in the day data with each other. Five of the reactions to the question were included as dependent variables in the analysis. The responses by the two sexes, and responses by the intervention and control group, were tested for significant differences between T1 and T2. The multivariate test showed that the effect of time was significant [$F_{(9, 1405)} = 45.52, p < .001, \eta_p^2 = .226$]. This indicated that there were overall significant differences between reactions at T1 and T2. The multivariate test of time x gender was significant [$F_{(9, 1405)} = 3.03, p = .002, \eta_p^2 = .019$], which indicated that the two sexes gave different responses at T1 and T2. The multivariate analysis of time x group showed only a tendency towards a significant difference between groups regarding changes from T1 to T2 [$F_{(9, 1405)} = 1.70, p = .085, \eta_p^2 = .011$]. Because there only was a tendency towards significance, it is not possible to claim with certainty that there was a significant difference between the intervention and control group at T1 and T2. A three-way interaction time x gender x group was also performed, but the interaction was not significant.

4 Discussion

4.1 Summary of the Results

4.1.1 Hypotheses

The aim of this study was to examine the results from the project “Strength, Happiness and Compassion” regarding changes in the participants’ coping methods from T1 to T2. Three hypotheses were formulated.

The first hypothesis, which suggested that girls will gain more from participating in the project than boys, was corroborated to some extent. The interaction effect between sex and intervention/control group at T2 revealed that the girls in the intervention group had higher scores on the reaction “Did something else in order to take my mind off the situation”. On the other hand, the girls in the control group had higher scores on the reaction “Did nothing”. These two findings suggest that the girls in the intervention group had benefitted to some extent from the project, while the girls in the control group showed no improvement.

The second hypothesis, stating that both girls and boys in the intervention group will report less aggressive and negative coping methods after they have participated in the project, did not gain support. At T2, there was no significant difference between the intervention and control group regarding the use of aggressive and negative coping methods.

The third hypothesis suggested that the intervention group will report using more positive coping methods after participating in the study compared to the control group. This hypothesis was to some extent corroborated, but the results were mixed. At T2, the intervention group had higher scores on the reactions “Tried to think positively” and “Had fun”, while the control group had higher scores on the reaction “Did nothing”. However, the control group also had higher scores on the reaction “Relaxing and calming down”, which is the opposite to what was expected. When the differences between T1 and T2 were compared with each other with a within-subjects (repeated measures) analysis, the multivariate analysis showed only a tendency ($p = .085$) towards a significant difference between intervention and control group. This means that it is not possible to claim with certainty that the intervention was a success. However, it appears that at least the participating girls benefitted from the project.

4.2 Implications

The results from the study were inconclusive regarding the effect of the intervention programme, although there was a tendency towards a positive effect, and some positive changes could be noticed in the intervention group at T2. However, it appears clear that these positive changes mainly concerned the participating girls. It seems justified to claim that the project had some effect, but the intervention sessions did not improve the children’s coping methods drastically. It is likely that in order to receive more visible effects, the number of intervention sessions should be increased. Changing and improving peoples’ coping methods is probably not an easy task, and a challenge seems especially to be how to get boys more activated in a project of this sort.

4.3 Limitations

The current study had some limitations. The first limitation was the lack of questions in the questionnaire about negative coping methods used by the participants. The possibility to compare negative and positive coping methods became limited due to this reason. Chin, Rickard and Vella-Brodrick’s study (University of Melbourne & Monash University, 2014) about the positive education at Geelong Grammar School included both the components mental wellbeing and mental health, which gave the participants a possibility to report both improvement and decline in their mental wellbeing and health. Another limitation concerns how the questions were formulated. The formulations might have affected how the participants interpreted and answered to the questions. A study by De Leeuw (1995) about children and how they understand research questions indicates that the complexity of a question may influence the

quality of data. Children might have problems to interpret a complex question and hence give answers that do not represent what they actually think (De Leeuw, 1995). An example from the day data questionnaire is the alternative “did nothing” in Question 8. A child might have interpreted to do nothing in a situation, for example a bullying situation, differently. Third, the small sample could be a limitation. A small sample produces less data and will make it more difficult to draw conclusions from the results. Finally, the lack of follow ups after the project could be a limitation. Follow ups after a study may increase the possibility to notice improvements that the participants have achieved, and how long-term the improvements are.

4.4 Recommendations for Future Studies

The results of this thesis give an indication that educating children in positive thinking and positive coping might increase the likelihood that the participating children begin to use more adequate coping methods. However, since there was only a tendency towards a significant difference between the intervention and control group, the intervention did not seem to effective enough to make a greater difference considering the participants’ coping methods. It appears that the pupils could benefit from more training sessions, and that the training could be improved.

Further studies could add more questions regarding negative coping methods. With a larger number of questions, regarding both negative and positive coping methods, a change in coping methods might be easier to notice. Future studies would further benefit from having a larger sample of participants, since it might be easier to notice changes in coping methods with a larger sample. Future studies could finally add more follow ups, for example a one-year follow-up to see if positive effects from the intervention are long-lasting.

Summary in Swedish

Barns copingmetoder: En studie utförd med PsyMate-appen

1 Inledning

Enligt en rapport från Institutet för hälsa och välfärd (Terveyden ja hyvinvoinnin laitos, 2017) har antalet barn i åldern 5–12, som får specialiserad sjukvård till exempel inom barnpsykiatri, ökat signifikant under 2000-talet. Mellan år 2011 och 2015 ökade antalet barn som hänvisades till specialiserad sjukvård nationellt med 22 % (Terveyden ja hyvinvoinnin laitos, 2017).

Huvuddiagnoserna för barn i åldrarna 5–12 och som får vård inom den specialiserade sjukvården är: (1) Depression, (2) Emotionella störningar, (3) Ångest, (4) Beteendestörningar, (5) Nedsatt social funktion och (6) Aktivitets- och uppmärksamhetsstörningar (Terveiden ja hyvinvoinnin laitos, 2017). Även antalet självmord bland yngre har ökat i Finland. Enligt en rapport av Nordens välfärdscenter (2017) begås en tiondel av alla självmord i landet av personer som är yngre än 25. I rapporten framkommer också att en tredjedel av alla dödsfall bland 15–24-åringar beror på självmord (Nordens välfärdscenter, 2017). Globalt sett syns också mental ohälsa och självmord bland allt yngre personer. Enligt Hong, Jung och Roh (2017) lider 10–20 % av alla 10–19-åringar i världen av någon form av psykiska problem och självmord är globalt sett den näst största orsaken bakom mortaliteten bland yngre personer (Hong, Jung & Roh, 2017). Den globala självmordsfrekvensen för tonåringar i åldern 15–19 är 6,9/100 000.

1.1 Definitioner

1.1.1 Coping

Coping kan definieras som en metod som människan använder för att lösa externa och interna problem och klara av krav i livet (Lazarus och Folkman, 1984). Enligt Lazarus och Folkman är coping i grunden människans sätt att kunna hantera stress. Genom copingmetoder kan människan hantera utmaningar och problem i vardagen och således fungera både på arbetet och i privatlivet. Copingmetoder kan användas i olika situationer och av olika orsaker. En människa kan både använda coping mer generellt, till exempel genom att minska på stress i livet, och mer specifikt, till exempel för att hantera en sjukdom eller under ett prov i skolan (Lazarus och Folkman, 1984). Coping delas in i två primära delar: (1) Problemfokuserad coping och (2) Emotionellt fokuserad coping. Problemfokuserad coping används för att lösa problem och är baserad på kognition. Genom problemfokuserad coping kan människan reflektera över problem och hur problem kan lösas (Lazarus och Folkman, 1984). Emotionellt fokuserad coping används av människan för att minska på känslor som kan uppkomma då hon råkar ut för problem. Människan använder ofta både problem- och emotionellt fokuserad coping då hon använder copingmetoder.

1.1.2 Barn och coping

Både barn och vuxna använder copingmetoder, men vilka copingmetoder som används och i vilka situationer de används kan variera beroende på ålder. Till exempel använder åttaåringar ofta socialt stöd som en copingmetod medan elvaåringar ofta använder fysisk aktivitet vid coping. Yngre barn använder också mer emotionellt fokuserad än problemfokuserad coping då

de reagerar på en händelse som de inte kan kontrollera (Chylinska & Wresniewski, 2007). Beroende på en persons ålder utlöser också olika sorts händelser olika grader av stress (Chylinska & Wresniewski, 2007). En skillnad mellan i vilka situationer vuxna och barn använder copingmetoder är att barn oftare måste använda coping för att hantera skolrelaterad stress (Chylinska & Wresniewski, 2007). Barn kan även behöva använda copingmetoder i olika slags scenarier, till exempel om de blir utsatta för mobbning (Murray-Harvey, Pereira, Skrzypiec & Slee, 2011) eller om de har syskon som lider av en sjukdom (Orfus, 2008). Barns copingmetoder kan också utvecklas och bli bättre med hjälp från vuxna i deras näromgivning (Blechman & Hetherington, 1996).

1.1.3 Positiv psykologi

Positiv psykologi kan definieras som en psykologisk inriktning som undersöker processer och förhållanden som bidrar till välmående hos människor, institutioner och samhällen (Gable, 2005). Psykologer och forskare inom den psykologiska inriktningen riktar sitt fokus på vad som fungerar och inte på vad som inte fungerar i en människas liv. Till exempel fokuserar positiv psykologi på vad som blir bättre och inte på vad som blir sämre hos en människa som lider av en psykisk sjukdom (Hoy & Tarter, 2011). Teman som studeras inom inriktningen är till exempel ”flow”, välmående, glädje och optimism (Csikszentmihályi & Seligman, 2000). Början till positiv psykologi kan hittas redan i psykologen James studier från början av 1900-talet om bland annat människans tillfredsställelse med livet (Pawelski, 2003). Rötterna till inriktningen kan dock hittas inom den psykologiska inriktningen humanistisk psykologi. Inriktningarna har liknande syner på människans sinne och psykologi samt liknande mål med sin forskning (Waterman, 2013). Dock finns det även skillnader mellan de psykologiska inriktningarna, till exempel gällande tanken om människan är fundamentalt god eller ond (Rich, 2017).

1.2 Bakgrund

1.2.1 Positiv pedagogik

Geelong Grammar School är en internat- och dagskola i hamnstaden Geelong i Australien. En viktig del av skolans filosofi och läroplan är positiv psykologi och skolan har ett eget ”Institute of Positive Psychology” (sve: *Institut för positiv utbildning*) (Institute of positive education, 2019). Huvudsyftet med institutet är att genom undervisning i positiv psykologi öka välmående både lokalt på skolan och globalt. Institutet kan bidra till att öka välmående globalt speciellt genom forskning som utförs om positiv psykologi (Institute of positive education, 2019). Både

yngre och äldre elever kan delta i utbildningen och utbildningen baseras på en modell som utvecklats specifikt för skolan. Modellen består av sex delar: (1) Positiva emotioner, (2) Positiva förhållanden, (3) Positiva ändamål, (4) Positiv hälsa, (5) Positivt engagemang och (6) Positiv prestation (Norrish, 2015). Alla delar av modellen används inom utbildningen och eleverna lär sig om positiv psykologi genom undervisning och övningar. Modellen består även av fyra grundprocesser, som på svenska ungefär kan översättas till: (1) Lära, (2) Leva, (3) Undervisa och (4) Förankra (eng. *Learn it, Live it, Teach it, Embed it*). Speciellt den sista delen syftar till att hjälpa elever och personal på skolan att förankra det som de lärt sig om positiv psykologi i vardagen. Genom att använda de olika delarna av modellen i utbildningen får eleverna en bred bild av positiv psykologi (Bott, Hoare & Robinson, 2017).

1.2.2 Styrka, glädje och medkänsla

Projektet ”Styrka, glädje och medkänsla” genomförs av den icke-statliga organisationen Folkhälsan i Finland. Huvudmålet med projektet är att öka det psykologiska välmåendet hos barn i lågstadieålder och samtidigt ge dem olika psykologiska resurser. Målet uppnås genom ett brett interventionsprogram för barn, skolpersonal och föräldrar i Finland (Folkhälsan, 2019). Projektet är indelat i två delar: (1) En pilotstudie utförs bland elever, skolpersonal och föräldrar gällande olika delar av deras psykiska välmående och (2) Insamlad data från del 1 analyseras och baserat på resultaten från projektet etableras ett heltäckande program för skolor i Finland. Genom programmet ska elevers, skolpersonals och föräldrars välmående öka (Folkhälsan, 2019). Detta bland annat genom att undervisa de olika parterna i hur de kan värna om sin egen psykiska hälsa. Skolpersonal och föräldrar undervisas i positiv psykologi både eftersom de själva kan lära sig nytt om välmående och för att öka välmåendet i barnens näromgivning (Folkhälsan, 2019). Folkhälsans projekt är baserat på dels den finländska nationella läroplanen från 2016, dels en studie av Boniwell, Martinez and Osin (2016) och slutligen idéer från institutet för positiv utbildning på Geelong Grammar School. Den finländska läroplanen poängterar bland annat elevens ansvar för sin egen utveckling och förmåga till problemlösande men också skolans ansvar att skapa bra förhållanden för att möjliggöra elevens utveckling. Elevens välmående ska också alltid prioriteras (Opetushallitus, 2016).

1.3 Tidigare forskning

1.3.1 Forskning om positiv psykologi

Ett forskningstema som har undersökts av psykologer inom positiv psykologi är sambandet mellan välmående och undervisning. Ett exempel på en studie som undersökt detta tema är Ben-

Shahar and Russo-Netzers studie (2011). Ben-Shahar and Russo-Netzer undersökte effekterna av en kurs om positiv psykologi på Harvard University. Kursen var tillgänglig för studerande på universitetet mellan åren 2004 och 2008. Huvudmålet med kursen var att ge studerande en inblick i vad positiv psykologi är och ge exempel på hur en individ kan hjälpa andra, samhället och sig själv att bli lyckligare (Ben-Shahar & Russo-Netzer. 2011). Ett annat huvudmål med kursen var att ge en insikt i hur glädje är något som människor kan uppleva i nuet. Med andra ord är glädje inte bara ett mål att sträva efter i framtiden. Lärarnas roll var inte bara att undervisa studerande om ämnet utan även att hjälpa dem att ändra på hur de ser på världen (Ben-Shahar & Russo-Netzer. 2011). Många som deltog i kursen rapporterade efteråt att de kände sig nöjdare med sina liv och att kursen hade ändrat deras liv på ett positivt sätt. Samma kurs har även hållits på School of Psychology i Israel och även studerande på denna skola rapporterade liknande resultat som på Harvard University.

1.3.2 Forskning om coping

Tre forskningsteman som undersökts i forskning om coping är: (1) Hur coping utvecklas under människors livslängd, (2) Hur effektiva olika copingmetoder är och (3) Hur människor förvärvar nya copingmetoder (Compas 1998). Gällande forskning om barn och tonåringars coping har bland annat följande forskningsteman varit i fokus: (1) Coping för att hantera psykisk sjukdom, (2) Coping och resiliens och (3) Metoder som utvecklats för att hjälpa barn och tonåringar att förbättra sina copingmetoder (Ansel et al., 1996; Hunter, Mason & Newton-John, 2014; Johnston & Johnston, 1999). Ett exempel på en metod som används för att mäta coping är frågeformulär och ett frågeformulär som används ofta är Lazarus & Folkmans coping frågeformulär (Ansel et al., 1996).

1.4 Syfte

Syftet med studien är att undersöka resultat från projektet ”Styrka, glädje och medkänsla” gällande copingmetoder hos barn i femte och sjätte klass i sex olika skolor i Finland. Detta görs genom att jämföra deltagarnas svar på Folkhälsans frågeformulär innan de deltog i projektet (”baseline” -data) med svaren de gav efter att de deltagit i projektet (”follow-up” data). Genom att jämföra svaren kan både skillnader mellan test- och kontrollgrupp och könsskillnader analyseras.

1.5 Hypoteser och forskningsfrågor

Tre hypoteser formulerades för avhandlingen: (1) Flickor kommer att dra mer nytta av projektet än pojkar, (2) Både flickor och pojkar i testgruppen kommer att rapportera mindre aggressiva och negativa copingmetoder efter att de deltagit i projektet och (3) Testgruppen kommer efter projektet att använda positiva copingmetoder i större utsträckning än kontrollgruppen.

2 Metod

2.1 Sampel

Deltagarna rekryterades från sex olika skolor i tre städer (Helsingfors, Esbo och Vasa). Studiedesignen som användes var randomiserad kontrollerad studie (RCT) och deltagarna och deras skolklasser delades in i antingen test- eller kontrollgrupper. Sammanlagt 140 barn deltog i projektet och de var i åldersgruppen 11–12. Resultat från 123 deltagare samlades in i ”baseline”-data (T1) och resultat från 121 deltagare i ”follow-up” data (T2). Könsfördelningen i test- och kontrollgruppen i ”baseline”- och ”follow-up” data presenteras i Tabell 1.

Tabell 1

Antal flickor och pojkar i de olika grupperna

	T1		T2	
	Flickor	Pojkar	Flickor	Pojkar
Testgrupp	35	27	38	29
Kontrollgrupp	37	24	33	21

2.2 Instrument

2.2.1 Folkhälsans instrument

Applikationen ”PsyMate” användes av Folkhälsan för att samla in data. Datainsamlingen bestod av två delar: 1) Frågeformuläret Dagsdata (8 frågor) och 2) Frågeformuläret Kvällsdata (4 frågor). Datainsamlingen samlade bland annat in information om barnens copingmetoder, ”flow” och emotioner. Frågorna från Dagsdata dök upp åtta gånger om dagen på applikationen under en sex dagars period och deltagarna fick instruktioner om att svara på frågorna direkt då applikationen pep till i deras telefoner. Applikationen var programmerad att ge ifrån sig pip under barnens vakna timmar (klockan. 7.30 – 19.30.) och pipen kom relativt slumpmässigt under 90 minuters intervaller. Deltagarna hade 15 minuter på sig att svara på frågorna efter pipet. Kvällsdata följde också en sex dagars period och började klockan 19.30 varje kväll.

Deltagarna kunde svara på frågorna fram tills klockan 23.00. Det fanns både flervals- och envälsfrågor i båda frågeformulären.

2.2.2 Experience Sampling Method

Folkhälsan använde *Experience sampling*-metoden (ESM) för att samla in data till projektet. Inom ESM finns flera sorts metoder som används för att samla in data till olika sorts studier. Deltagarna i ESM studier rapporterar om deras upplevelser i vardagen och deras rapportering pågår ofta under en lägre period (Hufford, Shiffman & Stone, 2008). Eftersom ESM metoder samlar in data under realtid kan metoderna även användas för att samla in information av deltagarna när de befinner sig i olika sociala situationer. Eftersom ESM metoder samlar in deltagarnas svar och värderingar under en längre tidsperiod kan ESM användas för att observera till exempel hur deltagarnas beteende ändras över tid och i olika kontexter (Hufford, Shiffman & Stone, 2008). Eftersom deltagarna rapporterar sina svar individuellt kan ESM metoderna även användas för att observera individuella skillnader. ESM kan användas för att studera olika processer i människans psyke som är sammankopplade med bland annat anpassning och utveckling, till exempel coping och självkänsla (Hufford, Shiffman & Stone, 2008)

För tesen analyserades fråga åtta, som handlade om coping, och fråga sju, som handlade om vem och var barnen befann sig då de använde copingmetoder. Svarsalternativ till fråga sju presenteras i Tabell 2 och svarsalternativ till fråga åtta i Tabell 3.

Tabell 2. *Fråga sju och dess svarsalternativ. Svartsalternativ 1–5 analyserades i avhandlingen*

"Det som hände var..."	1. Med familj
	2. Med vänner
	3. Med klasskompisar, jämnåriga
	4. I skolan
	5. Utanför skolan

Tabell 3. *Fråga åtta och dess svartsalternativ*

"Hur reagerade du? Välj alla alternativ som passar. Jag..."	1. Hade roligt
	2. Slappnade av och lugnade mig
	3. Gjorde något annat för att inte tänka på saken

	4. Bad om hjälp eller talade om saken med någon
	5. Försökte tänka positivt
	6. Försökte se situationen från någon annans håll
	7. Var vänlig eller snäll
	8. Gjorde ingenting
	9. Blev arg eller sur eller tappade humöret
	10. Försökte göra det jag tycker är rätt
	11. Gjorde något annat, beskriv kort

2.3 Procedur

Projektet ”Styrka, glädje och medkänsla” genomfördes från våren 2016 till våren 2017. Deltagarna svarade på ”baseline” frågeformuläret under våren 2016 och de deltog i lektioner som ingick i projektet under hösten 2016. Deltagarna svarade på ”follow-up” frågeformuläret under våren 2017. Projektets lektioner genomfördes i sex skolor i Finland: (1) Haga, (2) Munksnäs, (3) Gerby, (4) Vasa Övningsskola, (5) Zacharias Topeliusskolan och (6) Vindängen.

2.4 Etiska aspekter

Personlig information som samlades in om deltagarna var deras namn, ålder och kön. Deltagarna fick personliga koder som användes vid datainsamlingen och deltagarna kodades in i data genom koderna. Detta gav dem sekretess eftersom deras namn inte syntes i datafilerna. Både deltagarna och deras vårdnadshavare gav skriftligt tillstånd för att delta i projektet. Datafilerna var endast tillgängliga för forskare på Folkhälsan, avhandlingens skribent och skribentens handledare.

3 Resultat

3.1 Könsskillnader och skillnader mellan test- och kontrollgrupp i ”baseline”- (T1) data

3.1.1 Könsskillnader

En multivariat variansanalys (MANOVA) utfördes med kön och test- och kontrollgrupp i ”baseline”-data som oberoende variabler och de elva reaktionerna på fråga åtta som beroende variabler. Den multivariata analysen för kön gav signifikanta resultat. De univariata analyserna visade att flickorna generellt hade högre resultat på reaktionerna jämfört med pojkarna. Pojkarna hade högre resultat på reaktionen ”Hade roligt”. Det fanns också reaktioner som ingen av könen hade högre resultat på. De univariata analyserna gav signifikanta resultat på åtta av

reaktionerna gällande effekten av kön. Reaktionen ”Gjorde ingenting”, ”Blev arg eller sur eller tappade humöret” och ”Gjorde något annat” skilde sig inte åt mellan könen i resultatet.

3.1.2 Effekt av grupp

En multivariat analys för grupp gav signifikanta resultat. De univariata analyserna för effekt av grupp visade att vissa av analyserna gav signifikanta resultat. Testgruppen hade bättre resultat på reaktionen ”Slappnade av och lugnade ned mig” medan kontrollgruppen hade högre resultat på reaktionerna ”Gjorde ingenting” och ”Försökte att göra det jag tycker är rätt”. Test- och kontrollgruppen skilde sig inte åt på fler reaktioner i resultatet.

3.1.3 Interaktion mellan kön och test- och kontrollgrupp

Den multivariata analysen för en interaktion mellan kön och test- och kontrollgrupp var inte signifikant. De univariata analyserna för interaktion mellan kön och grupp var till största delen inte signifikant. Två undantag var reaktionerna ”Försökte tänka positivt” och ”Försökte att göra det jag tycker är rätt”. Flickorna i kontrollgruppen hade bättre resultat på reaktionen ”Försökte tänka positivt” medan flickorna i testgruppen hade högre resultat på reaktionen ”Försökte att göra det jag tycker är rätt”.

Tabell 3.

Resultat från en Multivariat Variansanalys (MANOVA) med kön och intervention/kontroll i T1 som oberoende variabler och de elva reaktionerna som beroende variabler (N = 2460). N värdet står för antal givna svar av deltagarna i ”baseline”-data och inte antal deltagare.

		<i>F</i>	<i>df</i>	<i>p</i> <	η_p^2	Grupp med högre medelvärde
Effekt av kön						
Multivariat Analys		11.47	11, 2446	.001	.049	
Univariata Analyser						
	Hade roligt	27.30	1, 2456	.001	.011	Pojkar
	Slappnade av och lugnade mig	16.91	“	.001	.007	Flickor
	Gjorde något annat för att inte tänka på saken	31.00	“	.001	.012	Flickor
	Bad om hjälp eller talade om saken med någon	5.39	“	.020	.002	Flickor
	Försökte tänka positivt	31.37	“	.001	.013	Flickor

	Försökte se situationen från någon annans håll	17.16	“	.001	.007	Flickor
	Var snäll	42.80	“	.001	.017	Flickor
	Gjorde ingenting	1.93	“	<i>ns</i>	.001	-
	Blev arg eller sur eller tappade humöret	.01	“	<i>ns</i>	.000	-
	Försökte göra det jag tyckte var rätt	48.11	“	.001	.019	Flickor
	Gjorde något annat	1.48	“	<i>ns</i>	.001	-
Effekt av Intervention/Kontroll i T1						
Multivariat Analys		4.02	11,2446	.001	.018	
Univariata Analyser						
	Hade roligt	2.40	1, 2456	<i>ns</i>	.001	-
	Slappnade av och lugnade mig	3.80	“	.052	.002	Intervention
	Gjorde något annat för att inte tänka på saken	1.40	“	<i>ns</i>	.001	-
	Bad om hjälp eller talade om saken med någon	.40	“	<i>ns</i>	.001	-
	Försökte tänka positivt	.41	“	<i>ns</i>	.001	-
	Försökte se situationen från någon annans håll	.50	“	<i>ns</i>	.001	-
	Var snäll	.35	“	<i>ns</i>	.001	-
	Gjorde ingenting	31.13	“	.001	.013	Kontroll
	Blev arg eller sur eller tappade humöret	.80	“	<i>ns</i>	.001	-
	Försökte göra det jag tyckte var rätt	4.10	“	.044	.002	Kontroll
	Gjorde något annat	.01	“	<i>ns</i>	.001	-
Interaktion mellan Kön och Intervention/Kontroll i T1						
Multivariat Analys		1.27	11,2446	<i>ns</i>	.006	
Univariata Analyser						
	Hade roligt	.070	1, 2456	<i>ns</i>	.001	-
	Slappnade av och lugnade mig	.60	“	<i>ns</i>	.001	-
	Gjorde något annat för att inte tänka på saken	1.40	“	<i>ns</i>	.001	-
	Bad om hjälp eller talade om saken med någon	2.70	“	<i>ns</i>	.001	-
	Försökte tänka positivt	3.60	“	.058	.001	Flickor Kontroll
	Försökte se situationen från någon annans håll	.09	“	<i>ns</i>	.001	-
	Var snäll	2.70	“	<i>ns</i>	.001	-
	Gjorde ingenting	1.10	“	<i>ns</i>	.001	-
	Blev arg eller sur eller tappade humöret	.60	“	<i>ns</i>	.001	-

	Försökte göra det jag tyckte var rätt	3.90	“	.049	.002	Flickor Kontroll
	Gjorde något annat	.30	“	ns	.001	-

3.2 Könsskillnader och skillnader mellan test- och kontrollgrupp i ”follow-up” (T2) data

3.2.1 Effekt av kön

En multivariat variansanalys (MANOVA) utfördes med kön och test- och kontrollgrupp i ”follow-up” data som oberoende variabler och de elva reaktionerna på fråga åtta som beroende variabler. Den multivariata analysen för kön gav signifikanta resultat. De univariata analyserna gav liknande resultat som i ”baseline”-data. Generellt hade flickorna även i ”follow-up” data bättre resultat på reaktionerna medan pojkarna bara hade bättre resultat på reaktionen ”Hade roligt”. Det fanns även reaktioner i ”follow-up” data som ingendera av könen hade bättre resultat på. De univariata analyserna gav signifikanta resultat på åtta av reaktionerna gällande effekt av kön. Reaktionerna ”Gjorde något annat för att inte tänka på saken”, ”Bad om hjälp eller talade med saken om någon” och ”Gjorde något annat” skilde sig inte mellan könen i resultatet.

3.2.2 Effekt av grupp

En multivariat analys för grupp gav signifikanta resultat. De univariata analyserna för grupp gav blandade resultat. Testgruppen hade bättre resultat på reaktionerna ”Försökte att tänka positivt” och ”Hade roligt” medan kontrollgruppen hade bättre resultat på reaktionerna ”Gjorde ingenting” och ”Slappnade av och lugnade mig”. De andra reaktionerna skilde sig inte åt mellan grupperna i resultatet.

3.2.3 Interaktion mellan kön och test- och kontrollgrupp

En multivariat analys för en interaktion mellan kön och test- och kontrollgrupp gav endast en tendens till signifikanta resultat. Resultat från de univariata analyserna var till största delen inte signifikant. Två undantag var reaktionerna ”Gjorde något annat för att inte tänka på saken” och ”Gjorde ingenting”. Flickorna i testgruppen hade bättre resultat på reaktionen ”Gjorde något annat för att inte tänka på saken” medan flickorna i kontrollgruppen hade bättre resultat på reaktionen ”Gjorde ingenting”.

Tabell 4.

Resultat från en Multivariat Variansanalys (MANOVA) med kön och intervention/kontroll i T2 som oberoende variabler och de elva reaktionerna som

beroende variabler ($N = 1806$). N värdet står för antal givna svar av deltagarna i "baseline"-data och inte antal deltagare.

		F	df	$p <$	η_p^2	Grupp med högre medelvärde
Effekt av kön						
Multivariat Analys		6.30	11, 1792	.001	.037	
Univariata Analyser						
	Hade roligt	35.64	1, 1802	.001	.019	Pojkar
	Slappnade av och lugnade mig	4.48	"	.034	.002	Flickor
	Gjorde något annat för att inte tänka på saken	.006	"	<i>ns</i>	.001	-
	Bad om hjälp eller talade om saken med någon	.30	"	<i>ns</i>	.001	-
	Försökte tänka positivt	17.80	"	.001	.010	Flickor
	Försökte se situationen från någon annans håll	5.42	"	.020	.003	Flickor
	Var snäll	8.90	"	.003	.005	Flickor
	Gjorde ingenting	16.90	"	.001	.009	Flickor
	Blev arg eller sur eller tappade humöret	9.92	"	.002	.005	Flickor
	Försökte göra det jag tyckte var rätt	4.33	"	.038	.002	Flickor
	Gjorde något annat	.90	"	<i>ns</i>	.001	-
Effekt av Intervention/Kontroll i T2						
Multivariat Analys		3.21	11, 1792	.001	.019	
Univariata Analyser						
	Hade roligt	1.95	1, 1802	.004	.005	Intervention
	Slappnade av och lugnade mig	1.20	"	.010	.004	Kontroll
	Gjorde något annat för att inte tänka på saken	2.26	"	<i>ns</i>	.001	-
	Bad om hjälp eller talade om saken med någon	.003	"	<i>ns</i>	.002	-
	Försökte tänka positivt	.37	"	.036	.001	Intervention
	Försökte se situationen från någon annans håll	.02	"	<i>ns</i>	.001	-
	Var snäll	.04	"	<i>ns</i>	.001	-
	Gjorde ingenting	1.09	"	.001	.002	Kontroll
	Blev arg eller sur eller tappade humöret	.06	"	<i>ns</i>	.001	-
	Försökte göra det jag tyckte var rätt	.13	"	<i>ns</i>	.001	-
	Gjorde något annat	.005	"	<i>ns</i>	.001	-

Interaktion mellan Kön och Intervention/Kontroll i T2			“			
Multivariat Analys		1.65	11, 1792	.078	.010	
Univariata Analyser						
	Hade roligt	.46	1, 1802	<i>ns</i>	.001	-
	Slappnade av och lugnade mig	.05	“	<i>ns</i>	.001	-
	Gjorde något annat för att inte tänka på saken	.09	“	.099	.002	Flickor Intervention och Pojkar Kontroll
	Bad om hjälp eller talade om saken med någon	.005	“	<i>ns</i>	.001	-
	Försökte tänka positivt	.07	“	<i>ns</i>	.001	-
	Försökte se situationen från någon annans håll	.02	“	<i>ns</i>	.001	-
	Var snäll	.16	“	<i>ns</i>	.001	-
	Gjorde ingenting	.28	“	.071	.002	Flickor Kontroll
	Blev arg eller sur eller tappade humöret	.02	“	<i>ns</i>	.001	-
	Försökte göra det jag tyckte var rätt	.01	“	<i>ns</i>	.001	-
	Gjorde något annat	6.59	“	<i>ns</i>	.001	-

3.3 Jämförelse mellan T1 och T2

En ”within-subject multivariate analysis of variance” (WSMANOVA) utfördes för att jämföra reaktionerna på fråga sju i T1 och T2 med varandra. Fem av reaktionerna på fråga sju inkluderades i analysen. I analysen undersöktes effekten av kön och effekten av grupp samt inverkan av variabeln tid, med andra ord hur variablerna kön och grupp påverkats av variabeln tid. Ett multivariat test gav signifikanta resultat för variabeln tid [$F_{(9, 1405)} = 45.52, p < .001, \eta_p^2 = .226$]. Det här indikerar att det fanns övergripande signifikanta skillnader mellan reaktionerna i T1 och T2. Ett multivariat test för tid x kön gav signifikanta resultat [$F_{(9, 1405)} = 3.03, p = .002, \eta_p^2 = .019$]. Detta indikerar att köns svar på reaktionerna skiljer sig mellan T1 och T2. Ett multivariat test för tid x grupp gav endast en tendens till signifikant resultat gällande grupperna och skillnader mellan gruppernas svar på reaktionerna i T1 och T2 [$F_{(9, 1405)} = 1.70, p = .085, \eta_p^2 = .011$]. Eftersom det endast fanns en tendens till signifikans är det inte möjligt att hävda att det med säkerhet fanns en signifikant skillnad mellan test- och kontrollgruppens svar i T1

och T2. En trevägs variansanalys utfördes gällande interaktionen mellan tid x kön x grupp men trevägs variansanalysen var inte signifikant.

4 Diskussion

4.1 Sammanfattning av resultaten

4.1.1 Hypoteser

Syftet med tesen var att undersöka resultat från projektet ”Styrka, glädje och medkänsla” gällande förändringar i deltagarnas copingmetoder i en jämförelse mellan ”baseline”- (T1) och ”follow-up” (T2) data. Tre hypoteser formulerades för avhandlingen.

Den första hypotesen (Flickor kommer att dra mer nytta av projektet än pojkar) bekräftades till viss del. Interaktionseffekten mellan kön och test- och kontrollgrupp i T2 visade att flickorna i testgruppen hade bättre resultat på reaktionen ”Gjorde något annat för att inte tänka på saken”. Dock hade flickorna i kontrollgruppen bättre resultat på reaktionen ”Gjorde ingenting”. De här två fynden indikerar att flickor i testgruppen till viss del drog nytta av interventionen och således visade tecken på att deras copingmetoder förbättrats. Flickorna i kontrollgruppen visade inga tecken på förbättring gällande copingmetoder.

Den andra hypotesen (Både flickor och pojkar i testgruppen kommer att rapportera mindre aggressiva och negativa copingmetoder efter att de deltagit i projektet) stöddes inte av resultaten. I T2 fanns ingen signifikant skillnad mellan test- och kontrollgrupp gällande användandet av aggressiva eller negativa copingmetoder.

Den tredje hypotesen (Testgruppen kommer efter projektet att använda positiva copingmetoder i större utsträckning än kontrollgruppen) bekräftades delvis men resultaten var inte helt tydliga. I T2 hade testgruppen högre resultat på reaktionerna ”Försökte tänka positivt” och ”Hade roligt” medan kontrollgruppen hade högre resultat på reaktionen ”Gjorde ingenting”. Dock hade även kontrollgruppen högre resultat på reaktionen ”Slappnade av och lugnade mig”, vilket var motsatsen till vad som förväntades utgående ifrån hypotesen. Skillnader mellan T1 och T2 jämfördes genom en ”within-subjects repeated measures analysis” och den multivariata delen av analysen gav endast en tendens till signifikans ($p = .085$) mellan test- och kontrollgrupp. Detta innebär att det inte är möjligt att med säkerhet hävda att interventionen i projektet lyckades. Dock verkar det utgående ifrån resultaten som att åtminstone flickorna drog nytta av att delta i projektet.

4.1.2 Studiens implikationer

Resultaten från studien var ofullständiga beträffande hur effektiv interventionen var, även om resultaten visade att det fanns en tendens till en positiv effekt av interventionen. Vissa positiva förändringar kunde även observeras för testgruppen i T2. Dock indikerar resultaten att de positiva förändringarna till största delen gällde för flickorna och inte för pojkarna. Genom resultaten går det att hävda att projektet hade någon slags effekt på deltagarna, speciellt på deltagarna i testgruppen, men interventionen för testgruppen förbättrade inte barnens copingmetoder på ett drastiskt sätt. I framtida studier kunde det vara en fördel om deltagarna fick gå igenom fler interventions sessioner. Detta eftersom fler interventions sessioner kunde göra det möjligt att observera tydligare resultat från studierna. En utmaning för framtida studier är även att få pojkar att bli mer aktiva i den här sortens projekt.

4.1.3 Studiens begränsningar

Studien hade vissa begränsningar. Den första begränsningen var bristen på frågor om negativa copingmetoder som användes av deltagarna i projektet. Möjligheten att jämföra negativa och positiva copingmetoder blev begränsad på grund av att det fanns få frågor som behandlade negativa copingmetoder. Chin, Rickard och Vella-Brodricks studie om undervisningen av positiv psykologi på Geelong Grammar School inkluderade till exempel komponenterna mentalt välmående och mental hälsa. Detta gav deltagarna en möjlighet att rapportera både förbättringar och försämringar i deras mentala välmående och hälsa (University of Melbourne & Monash University, 2014). En annan begränsning är hur frågorna var formulerade. Hur frågorna var formulerade kan ha påverkat hur deltagarna tolkade och svarade på frågorna. En studie av De Leeuw (1995) som studerade hur barn tolkar forskningsfrågor indikerade att forskningsfrågor som är mer komplicerade kan påverka kvaliteten på data som samlas in under en studie. Barn kan ha svårt att tolka en komplicerad fråga och således svara på frågan på ett sätt som inte representerar det som de verkligen tycker (De Leeuw, 1995). Ett exempel från frågeformuläret Dagsdata är svarsalternativet "Gjorde ingenting" i fråga åtta. Barn i projektet kan ha tolkat "Gjorde ingenting" i en situation på olika sätt. En tredje begränsning kunde vara att det var ett litet sampel som undersöktes i projektet. Ett mindre sampel producerar mindre data och det kan således vara svårare att analysera data från ett mindre sampel. Slutligen kan bristen på uppföljningstillfällen vara en begränsning. Uppföljningstillfällen kan öka möjligheten att observera till exempel förbättringar som deltagare gjort under projektet samt skapa en möjlighet att observera mer långsiktiga förändringar.

4.1.4 Rekommendationer för framtida studier

Resultaten från studien ger en indikation på att deltagarna i projektet kunde utveckla mer adekvata copingmetoder genom den undervisning de fått om positiv psykologi och positiva copingmetoder. Eftersom det endast fanns en tendens till en signifikant skillnad mellan test- och kontrollgruppen verkar det som att interventionen inte var tillräckligt effektiv för att skapa en större förändring hos barnens copingmetoder. Det verkar som att deltagare i framtida studier kunde behöva fler interventions sessioner och att upplägget på interventions sessionerna kunde förbättras.

Framtida studier kunde ha med fler frågor som behandlar negativa och positiva copingmetoder. Med ett större antal frågor kunde det vara enklare att observera förändringar i copingmetoder. Framtida studier kunde även dra nytta av att ha med större sampel i studierna, eftersom det kan vara enklare att observera förändringar i copingmetoder i större sampel. Slutligen kunde framtida studier ha med fler uppföljningstillfällen i studierna, till exempel ett uppföljningstillfälle ett år efter att studierna är färdiga. Uppföljningstillfällen skapar bättre möjligheter att observera mer långsiktiga effekter från studier.

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