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**Count Your Blessings:
Gratitude and subjective well-being in adolescent boys.**

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Abstract

The enhancement of well-being in schools using evidence-based interventions from the field of positive psychology is a growing field of interest. These interventions are based on the theory that sustainable changes in well-being can be achieved through regular engagement in simple and intentional activities. This study examines the effectiveness of a school-based gratitude diary intervention to promote subjective well-being in adolescent boys (age range 16 to 18 years). The gratitude intervention took place in a Catholic secondary school for boys for two weeks and involved two groups. One group of participants wrote in a diary about things that they were grateful for in the recent past, and a control group wrote in a diary about neutral events in the recent past. Participants who undertook the gratitude intervention did not demonstrate enhanced subjective well-being or gratitude relative to their pre-intervention measures or to those of the control group. Both the medians and means of the well-being measures of the boys in the gratitude condition were found to be lower post-intervention than pre-intervention, but the mean reduction in well-being was not statistically significant. The current study also examined the correlation between measures of gratitude and well-being and found that the correlations were positive and statistically significant. The findings extend the evidence base concerning the use of gratitude diaries with youth and signify that this intervention may not be effective at increasing well-being in adolescent boys. Possible reasons for not finding a gratitude-based effect and limitations of the study are discussed. Recommendations for future research and implications for practice are noted.

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If the only prayer you ever say in your entire life is "Thank you," it will be enough.

-Meister Eckhardt

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Introduction

Gratitude is not only the greatest of virtues, but the parent of all others.

- Cicero

The concept of gratitude has been reflected upon throughout the ages. More recently, gratitude has become a focus in popular psychology books, where it is perceived as an antidote to an increasingly materialistic world. Not only a focus in popular psychology writing, gratitude is the subject of a growing body of scientific work. The construct of gratitude is garnering attention in the discipline of positive psychology, a field of research aiming to understand how character traits and positive emotions can influence well-being, (Seligman, Steen, Park, & Peterson, 2005). Supporters of positive psychology maintain that if simple but intentional actions are regularly engaged in, sustainable changes in well-being can be made.

The field of positive psychology has generated various subfields. Positive education, one such subfield, is concerned with the potential of educational organisations to promote resilience and well-being together with achievement-related outcomes. Positive education has been characterised as education which promotes both traditional skills and happiness (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Positive youth psychology, another subfield of positive psychology, is an emerging area of scientific inquiry. Sometimes known as ‘resilience studies’ or ‘strength-based approaches’, researchers from a variety of disciplines and backgrounds, (for example, developmental psychology, educational psychology, child-clinical psychology, and education) contribute to this field of research. There is a growing base of literature seeking to examine and enhance the positive functioning of young people across both developmental periods (for example, early childhood, middle childhood, and adolescence), and contexts (for example, community, school, and home). An area of

growing interest in the fields of both positive education and positive youth psychology, is the construct of gratitude and the role it has to play in the positive functioning and subjective well-being of both adults and youth.

Definition of Gratitude

For all that has been written and said about gratitude, there is little agreement as to the nature of the construct (Wood, Froh, & Geraghty, 2010; Gulliford, Morgan & Kristjansson, 2013). Gratitude has been considered a positive emotion, a moral virtue, an attitude, a personality trait, or an orientation towards the positive in life (Gulliford et al. 2013; McCullough, Kilpatrick, Emmons, & Larson, 2001; McCullough, Emmons, & Tsang, 2002; Wood et al. 2010). Definitions of gratitude in the literature include: Emmons, (2004, p. 554), who defines gratitude as “a sense of thankfulness and joy in response to receiving a gift, whether the gift be a tangible benefit from a specific other or a moment of peaceful bliss evoked by natural beauty”. From a psychological perspective, gratitude is sometimes thought of as one of several affective traits that exhibit tendencies to show certain types of emotional responding (Rosenberg, 1998). Wood, Froh, and Geraghty (2010), undertook a theoretical evaluation of the construct of gratitude, and presented a new model of gratitude incorporating “gratitude that arises following help from others, but also [is] a habitual focusing on and appreciating the positive aspects of life" (p. 890). Wood et al.’s construct is adopted as the conceptual definition of gratitude in this thesis.

Definition of Subjective Well-Being

It is perhaps not surprising that there is some disagreement among experts about what subjective well-being is and how it should be defined (Dolan & White, 2007). In general, a distinction has been drawn between definitions that specify subjective well-being as meaning an evaluation of life as a whole (for example, Kashdan, 2004), and

those who emphasise its reference to affective reactions or feelings about specific events at specific times (for example, Watson, Clark, & Tellegen, 1998). A definition of the first kind, which is the conceptual definition adopted in this thesis, is provided by Kashdan (2004) who defined subjective well-being as “an individual’s affective and cognitive evaluation of their life” (p. 1226), an evaluation that may be assumed to change with circumstances.

Some of the literature on this topic, however, conflates the concept of subjective well-being with that of happiness, a practice acknowledged by Lyubomirsky and Lepper (1999), for example, who stated that happiness was “more broadly defined as subjective well-being” (p. 138). This thesis distinguishes between these two concepts, as recommended by the Organisation for Economic Co-operation and Development Guidelines (2016): Subjective well-being can be considered a condition that involves feelings of life satisfaction, whereas happiness is an experience that includes expressions of joy or delight. This review deals with subjective well-being, not with happiness.

Rationale for Current Study

Gratitude-based interventions are often touted as an effective means of improving subjective well-being. When referring to gratitude, lock and key comparisons are common; gratitude has been described as “the key that opens all doors,” that which “unlocks the fullness of life,” and the “key to abundance, prosperity, and fulfilment” (Hay, 1996; Emmons & Hill, 2001). Another assertion about the power and promise of gratitude is made by Froh, Bono and Emmons (2010), who state that gratitude can contribute to youth more than just momentary happiness, it can awaken a motivation to give back to their community, and world.

Despite these impressive claims, two recent meta-analyses of gratitude-interventions with both adults and youth have concluded that gratitude-based interventions are mostly ineffective (Renshaw & Olinger Steeves, 2016; Davis et al., 2016). Notwithstanding Renshaw and Olinger Steeves's and Davis et al.'s findings, the procedure of asking students to keep gratitude diaries is employed in several New Zealand schools. This practice, combined with the fact that no studies of this issue have been undertaken in a New Zealand context, made it desirable and important to examine the claimed effectiveness of this procedure with New Zealand students in a New Zealand school setting. Moreover, Renshaw and Olinger Steeves assert that there is a need for greater attention to and testing of gratitude-based interventions in schools.

Hence the purpose of the present study was to test the effectiveness of the practice in New Zealand. The study aimed to answer the following two questions:

- Does keeping a gratitude diary in school improve students' sense of well-being, as measured by a standard scale of well-being for young people?
- Does keeping a gratitude diary in school increase students' sense of gratitude, as measured by a standard gratitude scale for young people?

This thesis is presented in five chapters. Following the introduction chapter, the second chapter explores the literature surrounding the concept of gratitude, including its possible theoretical basis, and potential beneficial effects in adults and young people. Chapter three describes and justifies the methodology employed to answer the research questions. Chapter four presents the results that emerged from the research, including the psychometric properties of the questionnaires used, and the outcomes of the principal and secondary hypotheses. Chapter five discusses the results, including possible reasons for the findings, and limitations of the study. The sixth and final

chapter recaps the main findings, makes recommendations for future research, and discusses implications for practice.

Literature Review

This review considers the relation between two separate but related concepts: the sense of gratitude and the sense of well-being. It considers the possible theoretical basis of gratitude, and following that, the measurement of gratitude and subjective well-being are discussed. It examines the potential beneficial effects of gratitude interventions in adults and young people, effects which include enhancing a sense of well-being. This is followed by a consideration of various interventions for enhancing gratitude in both adults and youth. Gratitude and gender differences are considered. The limitations of existing gratitude research are discussed, as are two recent meta analyses of gratitude research. Lastly, conclusions are drawn, and hypotheses proposed.

A thorough search of the published literature was conducted to obtain the studies included in this review. The electronic databases of Google Scholar, ERIC via EBSCOhost, Education Source, PsycINFO, and Web of Science were searched. Search terms included: gratitude, well-being, interventions, adults, adolescents, teenagers, boys, girls, and gender. Several studies in this literature review were found through references provided in other key studies.

Theoretical Perspectives of Gratitude

An interesting theory of gratitude has been developed by Fredrickson (2004), who situates the concept of gratitude in the wider context of positive emotions. Fredrickson posits that emotions are multifaceted response tendencies unfolding over a short time span. She states that the emotional process begins with an individual's evaluation of the personal meaning of an event, and that this assessment process triggers response tendencies. These response tendencies manifest themselves in an individual's subjective experience, their facial appearance, and by physiological changes. Fredrickson notes that traditional models of emotions describe the function of emotions,

and that emotions are linked with 'specific action tendencies'. The negative emotion of anger, for example, is associated with the urge to attack. Fredrickson has classified gratitude as one of the positive emotions, and posits that positive emotions 'broaden and build' (Fredrickson, 2001). 'Broaden and build' emotions are theorised by her to broaden a 'momentary action repertoire'. That is to say, 'broaden and build' emotions broaden, at a specific time, a range of possible behaviours, thus building an enduring personal resource. Broaden-and-build theory posits each positive emotion has an evolutionary-based benefit. Fredrickson posits that during times of low stress, the emotion of gratitude could help create social bonds, thus becoming an added resource able to be utilised during the next period of stress.

In this respect, gratitude differs from negative emotions (for example, fear), which narrow the potential repertoire for action. For example, the emotion of fear may lead to the narrowed action repertoire of wishing to escape. Although they narrow the potential repertoire for action, negative emotions can and do serve a biologically useful function as they promote quick and decisive action that can save lives. In contrast to negative emotions, positive emotions like gratitude normally occur when people feel safe and secure.

A second interesting theory of gratitude, proposed by Froh, Yurkewisc and Kashdan (2009), describes it as a 'moral emotion' serving three fundamental functions. The first function of gratitude is as a 'moral barometer', which makes the beneficiary aware of a gift bestowed upon them. Secondly, as a 'moral motive', gratitude fosters prosocial behaviour towards others. Thirdly, as a 'moral reinforcer', gratitude boosts the chances that the benefactor will act prosocially toward the beneficiary again. This theory of gratitude posits that when a person experiences gratitude, they are then

motivated to uphold moral behaviours, behave prosocially, and are deterred from committing damaging interpersonal behaviours.

The Measurement of Gratitude

According to Emmons, McCullough, and Tsang (2003), gratitude has been measured in four broad categories; Free Response, Attributional Measures, Behavioural Measures and Rating Scales. The free-response category of gratitude assessment refers to qualitative research consisting of interviews about gratitude. Along with direct measures of gratitude (interviews and self-report rating scales), gratitude has been assessed indirectly through attributional measures (to which participants attribute their success). A few studies have investigated grateful behaviour. The most prevalent way of measuring gratitude is the rating scale (Emmons et al.). The following rating scales for measuring gratitude in adults have been developed:

The Gratitude Questionnaire 6 (GQ-6). This self-report measure was developed by McCullough, Emmons, and Tsang (2002). They propose there are four qualities distinguishing grateful people from less grateful people. These four qualities being the intensity, frequency, density, and span of one's gratitude. Based on this construct, McCullough et al. developed the GQ-6, a six-item self-report scale for measuring trait gratitude in adults. Examples of items include "I have so much to be thankful for"; "If I had to list everything that I felt grateful for, it would be a very long list"; and "I am grateful to a wide variety of people."

The Gratitude Adjective Checklist (GAC). A second self-report scale by McCullough, Emmons, and Tsang (2002), the GAC, employs the adjectives: grateful, thankful, and appreciative. This scale measures gratitude as an emotion, mood, or disposition, dependent upon the timeframe given in the scale's instructions (Froh et al., 2011).

The Gratitude Resentment and Appreciation Test-Short Form (GRAT-Short Form). This self-report scale was devised by Thomas and Watkins (2003). This scale measures adults' appreciation of others and their sense of abundance in their life. The GRAT-short form has three factors: (a) lack of a sense of deprivation, (b) simple appreciation, and (c) appreciation for others, with varying numbers of items for each factor. Examples of items are "I really don't think that I've gotten all the good things that I deserve in life" (reverse scored); "I think it's important to appreciate each day that you are alive"; and "I couldn't have gotten where I am today without the help of many people," for the three factors, respectively.

Recently, investigators have studied how these tests might be adapted for use with younger people (Froh et al., 2011), and in schools (Bono, Froh, & Forreth, 2014). Froh et al. assessed the psychometric properties of these scales, which were developed for adults, in children and adolescents. In a large study with 1405 participants, they found all three gratitude scales had acceptable internal consistency and they were positively correlated with each other for 14-19 year olds. However, the GRAT-Short Form displayed a low correlation with the other two measures for children aged 10-13 years. An assessment of the psychometric properties of adult gratitude scales when used in children and adolescents is discussed more fully in the Methodology section.

The Measurement of Subjective Well-Being

Extensive attention has been paid to the study of subjective well-being and happiness in adults (Huebner, 1991). Well-being is said to be comprised of three major components, positive affect, negative affect, and life satisfaction (Andrews & Withey, 1976; Diener, 1984). According to Huebner, positive and negative affect refer to affective responses of individuals, and life satisfaction refers to cognitive responses.

One of the more commonly studied effects of enhancing feelings of gratitude is whether it leads to an improvement in subjective well-being. Three general approaches have been characterised when measuring subjective well-being; ‘evaluative’, ‘experience’, and ‘eudemonic’ (Hicks, Tinkler & Allin, 2013). The eudemonic approach to measuring subjective well-being is sometimes portrayed as the ‘psychological’ approach to well-being. Sometimes known as measures of ‘flourishing’, eudemonic measures look to capture a range of factors that can be considered important. The eudemonic measurement of subjective well-being is almost always undertaken by means of a questionnaire. Several well-respected scales for measuring subjective well-being (which fall under the eudemonic banner), have been developed, for example the Satisfaction with Life Scale (Diener, Emmons, Lar Sem, & Griffin, 1985), and the Students’ Life Satisfaction Scale (Huebner, 1991). For definitions in which subjective well-being involves life as whole, such a questionnaire is designed to tap a person’s evaluation of their life. It does this by asking respondents to rate the degree to which they endorse each of several carefully chosen statements that concern a sense of well-being. The measure of a person’s well-being is found by assigning to each degree of endorsement a numerical value and the sum of those values is taken as a measurement of a person’s well-being. This procedure treats the questionnaire as a Likert scale, in which the summing process assumes that each statement contributes equally to the final estimate and that the degrees of endorsement are equally spaced on the dimension of gratitude.

The Students’ Life Satisfaction Scale (SLSS). Designed to measure global life satisfaction in children, the Students’ Life Satisfaction Scale (Huebner, 1991), is a brief questionnaire comprising of only seven items, two of which are reverse-scored. Said to be useful for measuring one aspect of subjective well-being (life satisfaction) in children

as young as eight, research indicates the Students' Life Satisfaction Scale has adequate psychometric characteristics for research purposes (Huebner, 1991).

Beneficial Effects of Being Grateful

Feelings of gratitude may contribute directly to one's emotional well-being. Research points to there being psychological, social, and physical benefits associated with gratitude (McCullough, Kilpatrick, Emmons, & Larson 2001; Emmons & McCullough, 2003). Some of the beneficial effects of being grateful are considered below. Several of the studies mentioned in this section are discussed in more detail later in the chapter.

In adults. There is some evidence of gratitude being linked with positive affect in adults (Emmons & McCullough, 2003; Froh, Kashdan, Ozimkowski, & Miller, 2009). Regularly experiencing positive emotions may have positive effects on one's health and levels of resilience, leading to increased emotional functioning, well-being, and development (Fredrickson, 2001). Gratitude has been found to be a factor in resilience when coping with a disaster (Fredrickson, Tugade, Waugh, & Larkin, 2003), and is associated with a range of positive social traits, including compassion, empathy, quality of relationships, and generosity (McCullough et al., 2002; Wood, Froh, & Geraghty, 2010). Other benefits of gratitude are claimed to extend to the physical, including better quality of sleep, and a propensity to exercise (Emmons & McCullough, 2003).

Lomas, Froh, Emmons, Mishra, and Bono (2014) differentiate between 'trait gratitude', and 'state gratitude'. They claim trait gratitude in particular, has been proven to uniquely boost subjective well-being. They assert that trait gratitude leads to more positive social interactions, which in turn leads to well-being. They also assert trait

gratitude is positively linked to the prosocial traits of forgiveness, empathy, and a readiness to help others.

In adolescents. Adolescence is a time of considerable change emotionally, socially, intellectually and physically. The benefits of experiencing gratitude during this time have been investigated by several researchers. There is some evidence of gratitude in children being linked with a sense of school belonging (Diebel, Woodcock, Cooper, & Brignell, 2016); with making children less materialistic (Froh, Emmons, Card, Bono, & Wilson, 2011); with facilitating children's wishes to contribute to their community (Froh, Bono, & Emmons, 2010); and with encouraging adolescents to be more generous (Chaplin, Rindfliesch & John, 2008). Four studies of gratitude in adolescents are detailed below.

Froh, Sefick, and Emmons, (2008), studied the effects of enhanced gratitude on subjective well-being of 221 early adolescents, with an average age of 12. They found that listing blessings, as opposed to listing hassles (an active-negative control condition), or listing events (a passive control condition), led to increased self-reported gratitude, optimism, and general life-satisfaction.

Froh, Yurkewicz, and Kashdan, (2008) investigated gratitude in 154 early adolescents, with an average age of 12.14. They found gratitude was positively linked to positive affect, perceptions of social support, positive outlook, and satisfaction with school.

In a study of 389 African American youth, (aged 12-14), Ma, Kibbler, and Sly, (2013), found that what they called 'moral-affect gratitude' (gratitude with a moral orientation) may enhance protective factors (such as academic engagement), whilst 'life-orientation gratitude' (gratitude pertaining to life as a whole) may act as a

safeguard against high-risk behaviours (sexual and alcohol-related), amongst African American youth.

Froh, Emmons, Card, Bono, and Wilson (2011) found among late adolescents that gratitude was positively linked with academic achievement, flow, and the motivation to connect with one's community, and negatively linked with materialism and envy.

Despite the aforementioned studies indicating possible benefits of enhanced gratitude, there is some evidence that in adolescents gratitude-based interventions have had no effect on several aspects of well-being. One such study by Froh, Kashdan, Ozimkowski, and Miller, (2009), found that of 89 young adolescents, with an average age of 12.74, asked to write a gratitude letter, only those low in baseline positive affect had gains in positive affect post-intervention.

In adolescent boys. Only one study could be found that investigated the benefits of a gratitude intervention on adolescent boys (Long & Davis, 2011). Twenty five male juvenile offenders, with an average age of 15, were given one of three writing conditions, one of which was a gratitude condition. Improvements in optimism and mood were found in all three writing groups. No groups experienced significant change on a measure of life satisfaction.

The literature on gratitude in youth has been reviewed by Bono, Froh, and Forreth (2014). In their words, "...gratitude leads to many positive outcomes that are of central importance to youth in schools—psychological well-being, satisfaction with school and other domains, prosocial relationships, improved motivation, and a stronger focus on priorities and planning for the future" (p. 77). In making these assertions, Bono et al. may have overemphasised the positive outcomes of gratitude interventions. As can

be seen, not all gratitude-intervention studies have shown statistically significant gains in these areas.

Gratitude Interventions with Adults

Studies employing four types of adult gratitude interventions are detailed and discussed below.

Counting blessings. The seminal study investigating the impact of gratitude interventions was conducted by Emmons and McCullough (2003). They examined the effect of having a grateful outlook on both psychological and physical well-being. A sample of 432 participants were involved in three studies. In Studies 1 and 2, participants were assigned to one of three groups: a counting blessings group, a hassles group, and a counting events control group. In Study 3, people with neuromuscular disease were assigned to either a counting blessings or a control condition. Emmons and McCullough incorporated several different comparison conditions, dependent variables, and participants (college students and adults with neuromuscular disease) into their studies. They reported that the gratitude-outlook groups, across all three studies, demonstrated enhanced well-being for some of the outcome measures, relative to the hassles and 'any event' groups. In Study 1 and 2, the gratitude intervention significantly increased levels of gratitude, compared to the hassles condition, but not to the event condition. The authors also found that the frequency of the intervention increased the levels of gratitude, daily diary entries producing a higher effect size than weekly diary entries.

A replication of one of Emmons and McCullough's (2003) studies, Study 2, was conducted by Martinez-Marti, Avia, and Hernandez-Lloreda (2010). Martinez-Marti et al. considered the investigation by Emmons and McCullough was deficient because it did not include any pre-intervention measures. Hence any differences between groups

undergoing different interventions could not be exclusively attributed to the interventions. They replicated Emmons and McCullough's study but included a pre-intervention measure as well as a follow-up measure. Their results were similar to Emmons and McCullough's findings on the post-intervention measure of positive affect, but when their analysis included differences between pre and post measures, they reported that the effect of the gratitude intervention disappeared.

Three good things. In an internet study of 577 participants, Seligman, Steen, Park, and Peterson (2005) compared the effectiveness of five positive psychology interventions that were theorised to enhance happiness and reduce depression. Participants in the 'three good things' intervention (a gratitude intervention), wrote daily, for a week, three good things that happened to them, and what they attributed these events to. They found participants in the 'three good things' condition experienced an increase in happiness and a reduction in depressive symptoms, at a three and six month follow up.

The gratitude visit. In the internet study mentioned above, Seligman et al. (2005), also investigated the efficacy of a 'gratitude visit' in increasing happiness and decreasing depressive symptoms. Participants in the 'gratitude visit' condition were asked to write a letter to someone to whom they were grateful, and to then deliver that letter to them in person. Results for this intervention found that any gains in participants' happiness and reduction in depression were not long-lived, (gains lasting only one month as opposed to six months for the 'three good things' condition). Although not maintained, the increase in happiness and reduction in depression resulting from the 'gratitude visit' intervention, were the largest gains made of the five positive psychology interventions trialled. It may be that the emotional nature and

behavioural follow up in the ‘gratitude visit’ intervention make it particularly effective in the short term.

Grateful self-reflection. Chan (2010) investigated ‘grateful self-reflection’ as an intervention for enhancing gratitude in a study of 96 Chinese school teachers in Hong Kong. Participants recorded on a weekly basis, three good things that had occurred, for a total of eight weeks. They were then asked to reflect upon these instances, using questions based on Naikan meditation (a form of reflection focusing on oneself and on others). Those participants who were less grateful at pre-test, reported to be more grateful and to have less teacher-burnout post intervention.

Gratitude Interventions with Children and Adolescents

Gratitude interventions with children and adolescents are still in their early stages. In a thorough search of the literature, only six published studies were found that investigated the impact of gratitude interventions with this age group. The three types of gratitude interventions employed in these studies are discussed below.

Counting blessings. Research investigating counting blessings studies in youth is limited. Only four counting blessings studies with youth could be found. The first study with children on the effects of keeping a gratitude diary was conducted by Froh, Sefick and Emmons (2008). According to the authors, the study’s purpose was to partially replicate Emmons and McCullough (2003), with early adolescent participants. In a quasi-experimental design, 221 early adolescents, with an average age of 12.17, were divided into three groups: a gratitude diary group, a ‘hassles’ group, and a control group, that did not keep a journal. The gratitude diary group listed up to five things for which they were grateful for since yesterday. The ‘hassles’ group listed up to five things that were hassles for them. A six-point Likert scale was used to measure life satisfaction “during the past few weeks”, and expected life satisfaction “next week” (which was

taken as a measure of optimism). Measures were obtained at the beginning, during, and after a two-week period of journal-keeping. In addition, the children completed the Brief Multidimensional Students' Life Satisfaction Scale (Seligson, Huebner, & Valois, 2003).

Froh, Sefick and Emmons (2008) found that the gratitude diary intervention was associated with enhanced optimism, life satisfaction, self-reported gratitude, and with decreased negative affect. The gratitude diary intervention was not associated with gains in positive affect. Measures of gratitude differed significantly between the groups on a post-test and on a follow-up test. The effect sizes, however, were small to medium: eta-squared for gratitude was 0.04 on each occasion, so that 4% of the variation in gratitude was associated with being in the different groups (Richardson, 2011). The means of the three groups at both post-intervention and follow-up were surprisingly similar, but unfortunately the pre-test means are not given and it is not possible to examine the effect of the interventions on them. It is claimed that differences were most pronounced between the gratitude and hassles conditions. Interestingly, Froh et al.'s results showed that the gratitude condition significantly increased satisfaction with the school experience, both immediately post-test and at a follow up three weeks later. (No effect sizes were reported for this result). According to Lomas et al. (2014), satisfaction with the school experience is positively linked to social and academic success, and they propose that counting blessings interventions that enhance gratitude may help alleviate the effects of poor grades and promote positive attitudes to school in adolescents.

Long and Davis (2011) investigated the effects of a creative writing intervention on the well-being of 25 male juvenile offenders. Aged between 13 and 17 years, and living away from their families, boys had to complete either a gratitude diary, an optimism diary, or an event diary. As noted earlier, improvements in optimism and

mood were found in all three writing groups. However, none of the groups experienced significant change on a measure of life satisfaction.

Owens and Patterson (2013) used a gratitude diary intervention that was adapted to reflect the age and skills of the participants. Sixty two children aged 5 to 11, with an average age of 7.35, were divided into three drawing groups; a gratitude group, in which children were asked once a week to draw a picture of something for which they were grateful, a 'Best Possible Selves' group, in which children were asked to draw a picture of when they imagined themselves as the best they could possibly be, and a control group, in which they were asked to draw a picture of something that they did today. The authors measured the effect of these interventions on the children's positive affect, life satisfaction, and self-esteem. Content of the children's drawings was analysed; the most frequently occurring gratitude categories being activities, people, and pets or animals. Owens and Patterson found the children in the gratitude group did not differ in outcome from the other two groups. The authors mentioned some limitations to their study. The sample size was small, partly owing to attrition over the relatively long period of the study. In addition, the authors conceded that a validated measure of gratitude for very young children was not available, and so it was not possible to discover whether the level of gratitude changed as a result of the intervention. The authors also wondered whether their instructions, which asked children about their feelings that day, might have steered the children away from a more fruitful global response to their feelings of gratitude. A strength of this innovative study however, was that it showed how gratitude interventions could be adapted to study gratitude in children as young as five.

Diebel, Woodcock, Cooper, and Brignell (2016) examined the effectiveness of a school-based gratitude diary intervention to promote a sense of school belonging for primary school pupils. The intervention took place over four weeks and involved

participants writing a diary about things that they were either grateful for in school that day or about neutral school events. Those in the gratitude intervention demonstrated enhanced school belonging and gratitude relative to the control group, with the gratitude diary showing clearer benefits for males. Increases in gratitude were positively correlated with increases in school belonging. Lack of a follow-up measure meant that they were unable to determine whether positive outcomes were maintained.

The gratitude visit. Froh, Kashdan, Ozimkowski, and Miller (2009) used a gratitude visit intervention to investigate whether certain youth were more inclined to benefit from gratitude interventions than others. They examined whether a young person's measure on the emotional trait of positive affect, (Laurent et al., 1999), might moderate the effect of interventions intended to enhance gratitude. The authors studied 89 students, aged 8 to 19 years, with an average age of 12.74. Two groups were compared. One group was asked to write a letter to someone for whom they felt grateful and to deliver it to them in person. The other group of participants (a control group), was asked to write about daily events. The authors found that, for children low on positive affect, those who wrote a personal letter gained more positive affect when reassessed two weeks after the study than those who kept a journal about daily events. Those children high in positive affect at baseline did not experience gains in positive affect, negative affect, or life-satisfaction. Froh et al.'s findings suggest that positive affect moderates the effect of a gratitude intervention. They suggest those already high in positive affect may have reached an emotional upper limit and thus are less inclined to benefit from gratitude interventions.

Froh, Kashdan, Ozimkowski, and Miller's 2009 findings contrasted with Froh, Sefick and Emmons (2008) which showed a gratitude diary did not lead to gains in positive affect in early adolescents. Froh et al. (2009) posited that the gratitude visit

may be more effective than counting blessings as an enhancer of positive affect in youth. They argued that the effectiveness of intervening to enhance gratitude may thus partly depends upon the nature of the gratitude intervention, as well as the characteristics of the participant.

Learning schematic help appraisals. Froh et al. (2014) trialled a new gratitude intervention amongst 122 children aged 8 to 11, with an average age of 9.03, which taught children to think gratefully. Participants were randomly assigned to a school-based gratitude curriculum, or a school-based attention-control condition. The structure of the two curriculums were closely aligned, although varied in their content. Froh et al. found that children's awareness of 'grateful thinking' can be increased and that this then made the children more grateful. The children were also found to have increased general positive affect.

Gratitude and Gender Difference

Several studies have investigated gender differences in levels, sources, and expressions of gratitude. Studies examining gender differences in the expression of gratitude in adults suggest that males are less inclined to express gratitude than females. In a study by Ventimiglia (1982), 479 male and female adult participants were observed while a benefactor performed an altruistic act for them. Those most thankful were found to be female beneficiaries for whom male benefactors held doors open. More recent studies have also found males to be less inclined to express gratitude than females. (Kashdan, Mishra, Breen, & Froh, 2009; Thompson, Peura, & Gayton, 2015).

Literature on gratitude and gender differences in children and adolescents have also found distinctions between the sexes. Becker and Smenner (1986) conducted a study of 250 three and four year olds, and found girls said "thank you" spontaneously more often than boys. Gordon, Musher-Eizenman, Holub, and Dalrymple (2004),

analysed the essays of 348 school-age children, with an average age of 8.7, who were asked to describe what they were thankful for. Gordon et al. found that girls were generally more thankful than boys. Girls expressed more gratitude than boys for interpersonal relationships, whereas the boys expressed more gratitude for material possessions. In a study of 154 adolescents, with an average age of 12.1, Froh, Yurkewicz, and Kashdan (2008) undertook a correlational analysis of a constellation of variables: gratitude, positive and negative affect, life satisfaction, optimism, physical symptoms, prosocial behaviour, and gender. One of their findings was that adolescent boys reported slightly lower levels of gratitude than girls, though the difference did not reach statistical significance. Similarly, the boys reported slightly lower levels of life satisfaction than the girls, though again the difference was not significant. Froh et al. also found that for boys, gratitude was positively related to family support, while for girls, gratitude was not significantly linked to family support. They suggest strong familial support may cause boys to experience more gratitude than girls, but that girls with less familial support may still feel gratitude as they have a tendency to be more dispositionally grateful than boys.

Limitations of Existing Research

There are several limitations in the literature involving both adult and child participants that make it difficult to evaluate the effectiveness of gratitude interventions (and the use of gratitude diaries) in the promotion of well-being (Wood et al. 2010). One of the problems in assessing the outcome of gratitude-based interventions is that there is not an agreed protocol. This is the case even among the few studies that attempted to promote gratitude in young people by having them keep a record of their experiences. The record-keeping process varied. It has involved daily diary-keeping for two weeks (Froh, Sefick, & Emmons, 2008), letter-writing for five days spread over two

weeks (Froh, Kashdan, Ozimkowski, & Miller, 2009), and weekly picture-drawing for up to four weeks (Owen & Patterson, 2013). The ages of the participants in these studies have also varied widely: from 5 to 11 years (Owens & Patterson, 2013), to early adolescence (Froh, Sefick, & Emmons, 2008), and up to 19 years (Froh, Kashdan, Ozimkowski, & Miller, 2009). The differences in type, length and frequency of intervention means it is challenging to make conclusions about the circumstances in which some interventions are more successful than others.

Another limitation with the published literature is that many increases in well-being were found only in relation to a hassle diary condition, (for example, Emmons & McCullough, 2003; Froh et al., 2008; Martinez-Marti et al., 2010). It has been claimed that a hassle condition is an ineffective control group as the condition is designed to produce negative affect, and thus exaggerates the differences between groups (Froh, Kashdan, Ozimkowski & Miller 2009; Wood et al., 2010).

Meta Analyses of Gratitude Studies

Despite the variations in gratitude-based interventions, there have been two very recent meta-analyses of the effectiveness of gratitude interventions. Renshaw and Olinger Steeves (2016) presented a systematic review and meta-analysis of correlates and intervention outcomes of studies with gratitude in youth. In a mostly critical review of the empirical status of the field, one of their conclusions was that gratitude-based interventions were generally ineffective. Although they reviewed 20 studies in all, most of those studies investigated possible correlates of gratitude, and only six studied the effect of gratitude-based interventions (see their Table 1). Of those six studies, only one (by Froh, Sefick, & Emmons, 2008) involved the intervention of ‘counting blessings’, which is one of the primary protocols reviewed here. (As reported earlier, Froh et al.’s

2008 ‘counting blessings’ study found that keeping a gratitude diary led to a statistically significant, but relatively small, increase in life satisfaction).

Davis et al. (2016) published a meta-analysis of the effectiveness of gratitude interventions in both adults and youth contemporaneously with Renshaw and Olinger Steeves (2016). Davis et al. summarised the results of their meta-analysis by stating that it showed only weak evidence for the effectiveness of gratitude interventions, a result that concurs with that of Renshaw and Olinger Steeves.

Conclusions and Hypotheses

This review has shown how the concepts of gratitude and subjective well-being can be measured, and how the act of expressing gratitude can, at times, enhance a sense of subjective well-being in both adults and adolescents. Although the concepts of gratitude and subjective well-being have been widely studied, research considering gratitude and gratitude interventions for youth is still in its infancy. The relatively few gratitude studies with children or adolescents have included some interventions that have successfully enhanced their sense of gratitude and/or well-being. One of these interventions was to keep a gratitude diary. The intended beneficial effects of several gratitude interventions have not always been achieved, and there is disagreement in the literature as to the effectiveness of gratitude interventions (Renshaw & Olinger Steeves, 2016; Davis et al., 2016).

Because of its possible association with positive emotional functioning, further investigation of gratitude in youth is warranted. As research on gratitude and adolescent boys is scarce, and studies suggest girls are more predisposed to gratitude than boys, it would seem valuable to explore this area further. The use of gratitude diaries as a means of increasing gratitude has been promoted in more than 30 New Zealand primary and secondary schools by the charity ‘Live More Awesome’ (D. Drupsteen, personal

communication, November 21, 2016). No systematic studies have been conducted as to their efficacy in New Zealand to date. Considering the ambiguous benefits for adolescents of enhanced gratitude, further research into the use of the counting blessings intervention with youth is desirable.

The aim of the present study was to test the effectiveness of the practice of gratitude diary keeping in New Zealand. As the effectiveness of gratitude diaries in enhancing well-being in youth is unclear, the following exploratory research hypotheses were proposed:

- The principal hypothesis was that keeping a gratitude diary would produce an increase in feelings of subjective well-being in participants relative to those caused by an events diary.
- A secondary hypothesis was that keeping a gratitude diary would produce an increase in feelings of gratitude in participants relative to those caused by an events diary.

The following chapter describes the methodology employed to test these hypotheses.

Method

The methods employed in this research involved the measurement of the affective traits of gratitude and subjective well-being both pre and post-intervention. A two-factor mixed-design was used, the two factors controlled being time (pre and post), and treatment (gratitude or event diary). The time factor in this study is a repeated measure, the treatment factor, a between-subject manipulation. The results of the two treatments, gratitude diary (experimental) and event diary (control), were subject to both quantitative analysis and graphical depiction. This entailed undertaking analysis of the distributions of the participants' summated ratings, in the form of box plots, an analysis of variance of the groups' possible change in well-being, and modified Brinley plots of individual data.

Participants

Participants were recruited from a Decile 8 Catholic school for boys in Years 7 to 13 in central Auckland, New Zealand. Choice of school was influenced by the willingness of the school to be involved in the research. The school offers both the National Certificate of Educational Achievement (NCEA) and Cambridge International Examinations (CIE) qualifications. Participants were from two Year 12 NCEA English classes. All Year 12 NCEA English classes at the participating school are of mixed ability and the placement of boys in these classes is random. New NCEA English classes are formed at the beginning of each school year.

English class selection was on the basis of the willingness of Year 12 English teachers to be involved in the current study, and thus teacher involvement was voluntary. Participation of the boys in the study was also voluntary. Neither English teachers nor students were offered incentives to participate. In total, 60 boys from the two classes volunteered to be involved. Ninety eight percent of those students asked

chose to participate in the study. Participants were to have been excluded for two reasons: if they had been under 16 years at the time of the study, or if they were currently writing (or had written in the past year), in gratitude diaries. None of the boys who volunteered fell into these two categories, thus none were excluded from participating in the study. During the course of the investigation, no boys withdrew from the study, although not all participants were present for both pre and post-intervention testing. This resulted in an initial sample of 60 adolescent boys, aged 16 to 18 years, ($M = 16$ years, 9 months). It transpired that only 52 boys completed all four questionnaires.

Sample size was determined by the need to cause as little disruption to the participating school as possible. Because the study design required separate groups for the gratitude diary and control conditions, school administrative considerations required that these groups be from different classes. Hence, the sample size was limited both by class size and the need for lack of disturbance to the school.

In an attempt to control for internal validity, demographic data of participants' age and qualifications was collected. (See Table 1).

Table 1. Demographic data of initial participants across condition.

| Demographic | Gratitude Diary | Event Diary | Total |
|--|-----------------|-------------|-------|
| 16 years | 23 | 18 | 41 |
| 17 years | 10 | 7 | 17 |
| 18 years | 1 | 1 | 2 |
| CIE IGCSE passed in 2016 | 2 | 7 | 9 |
| NCEA L1 Achieved in 2016 | 20 | 7 | 27 |
| NCEA L1 Achieved with Merit in 2016 | 10 | 11 | 21 |
| NCEA L1 Achieved with Excellence in 2016 | 2 | 1 | 3 |

Note. The International General Certificate of Secondary Education (IGCSE), is the CIE qualification offered in Year 11.

Design

The design of the current study is similar to the design of two other studies that have examined gratitude and its impact on well-being in adolescents and children, Froh, Sefick and Emmons (2008), and Diebel, Woodcock, Cooper and Brignell (2016). Although mentioned earlier, a brief review of their study designs follows.

Froh et al.'s design consisted of 221 early adolescents who were randomly assigned to one of three groups, a gratitude diary group, a 'hassles' group, and a control group, who did not keep a journal. Froh et al. implemented a two-week intervention. Measures were taken pre and post-intervention, and at a three-week follow up. Diebel et al.'s design consisted of 100 children, who were randomly assigned to one of two groups, a gratitude diary group, or a neutral events diary group. Diebel et al. implemented a four-week intervention. Measures were taken pre and post-intervention.

The design of the current study is similar to Diebel et al. who also used a two-factor mixed-design. Although Diebel et al. investigated gratitude and its effect on sense of school belonging, (as opposed to its effect on well-being as the current study does), Diebel et al.'s two-factors were time and treatment, and each participant was tested on the same variables pre and post-intervention (as were they were in the current study). The current study used the same measure of gratitude as Diebel et al., a modified GQ-6.

A major advantage of a design with repeated measures (as this study has), is that differences in individual characteristics of participants are eliminated for the repeated factor, which in this study, is time. As Ho (2014) states, the advantages of repeated measurements (one component of the present design), include that "they require fewer subjects per experiment, and they eliminate between-subjects differences from the experimental error" (p. 155).

In the current study, the two English classes were randomly assigned to either a gratitude diary (experimental) or to an event diary (control) condition. Participants in each class carried out the intervention for the same number of days.

Measures and Materials

Participants completed pre and post-intervention rating scales measuring gratitude and subjective well-being.

Measures of gratitude. According to Froh et al. (2011), the three most widely-used measures of gratitude in adults are the following: (1) the Gratitude Questionnaire 6, (GQ-6) (McCullough, Emmons, & Tsang, 2002); (2) the Gratitude Adjective Checklist, (GAC) (McCullough, Emmons, & Tsang, (2002); and (3) the Gratitude Resentment and Appreciation Test, (GRAT-Short Form) (Thomas & Watkins, 2003). Froh et al. assessed the psychometric properties of these three measures, normally used for determining gratitude in adults, when used for determining gratitude in young people. They conducted an empirical study of these measures with a large population ($N = 1405$) of young people.

Froh et al. (2011) reported that the factor structure of these tests with young people resembled those for adults, and that the tests exhibited satisfactory internal consistency. Froh et al. offered the following evidence about one of the three measures that made it less suitable for use in studies like the present investigation. They reported that the GRAT-Short Form measured something different in 10 to 13 year olds, (yet they didn't state what was measured differently), from the GQ-6 and GAC. Thus the GRAT-Short Form was judged potentially problematic for use in the current study. The GAC is a three-item measure of gratitude. Although according to Froh et al., GAC scores have demonstrated good internal consistency on adult samples, it was decided the

GAC's coarse measurement scale of only three questions could reduce its usefulness in this study.

Froh et al. (2011) stated that the GQ-6 was "the more psychometrically-sound scale for 10 to 13 year olds" (p.320). Although the sample in this study was slightly older than 10-13, the GQ-6 was preferred for the current investigation.

Gratitude Questionnaire 6 (GQ-6) (Appendix A). Gratitude was measured in the current study by the GQ-6 scale for measuring gratitude (McCullough, Emmons, & Tsang, 2002). This measure comprises six items with each item rated on a 7-point scale. Participants are asked to state their degree of agreement with several statements (*1 = Strongly disagree, 7 = strongly agree*.) This is the standard method for constructing a Likert scale in which each level of agreement is assigned a numerical value. The final measure is the sum of the values assigned to each response. The measure of gratitude provided by the GQ-6 questionnaire thus constitutes the operational definition of gratitude adopted in this thesis. The operational definition of gratitude adopted in the current thesis therefore is a participant's level of agreement with a set of statements in the GQ-6 about their feelings concerning gratitude or thankfulness.

Froh et al. (2011) found that the GQ-6 had satisfactory factor structure and internal consistency. However, they did not recommend including Item 6 for young people. They stated that researchers wishing to use the GQ-6 to measure gratitude in youth should consider excluding Item 6 due to its low factor loading, and possible abstractness and difficulty to understand. Diebel et al. (2016) used a modified GQ-6 to measure gratitude in which Item 6 was altered from 'Long amounts of time can go by before I feel grateful to something or someone', to 'I do not often find myself feeling

grateful'. This modified version of the GQ-6 was adopted in the current study. The six items in the GQ-6 scale were:

- Item 1: I have so much in life to be thankful for.
- Item 2: If I had to list everything that I felt thankful for, it would be a very long list.
- Item 3: When I look at the world, I don't see much to be thankful for. (Reverse-scored)
- Item 4: I am thankful to a wide variety of people.
- Item 5: As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
- Item 6: I do not often find myself feeling grateful. (Reverse-scored)

Measures of well-being. Many scales have been devised to gauge subjective well-being (for example, The Quality of Life Profile – Adolescent Version, Raphael et al., 1996; and as mentioned earlier, The Satisfaction with Life Scale, Diener, Emmons, Lar Sem, & Griffin, 1985; and the Students' Life Satisfaction Scale, Huebner, 1991). The researcher considered five criteria to select a scale that would be suitable for use in this study. These criteria were: (1) that the questionnaire attempted to measure a recognised definition of subjective well-being; (2) that the questions were appropriate for adolescents; (3) that the questionnaire was brief so that it did not impose an undue burden on students or teachers; (4) that the questions entailed both positive and negative responses in order to minimise, for example, a positive response bias (see, for example the Organisation for Economic Co-operation and Development guidelines, 2016); and (5) that the scale had good psychometric properties.

These criteria eliminated from further consideration several well-respected scales. According to Sovet, Atitsogbe, Pari, Park, and Villieux (2016), the Satisfaction with Life Scale, developed by Diener, Emmons, Lar Sem, and Griffin (1985), is considered the most widely-used psychometric scale for assessing life satisfaction.

However, despite Diener et al.'s claim that the Satisfaction with Life Scale is suitable for use with various age groups, this scale was not included as one item in particular was judged unsuitable for including in this study. Item 5, "If I could live my life over, I would change almost nothing", was considered unsuitable for adolescents as it was thought they may have felt too young to answer such a question. Among the few scales intended for children, the Quality of Life Profile – Adolescent Version (Raphael, Rukholm, Brown, Hill-Bailey & Donato, 1996) was considered to be too lengthy, as it comprised 54 items. For practical reasons, it was determined its length would have interfered too much with classroom routine and placed too much of a burden on participating students and teachers.

Students' Life Satisfaction Scale (Appendix B). Subjective well-being was measured in the current study by the Students' Life Satisfaction Scale, Huebner (1991). In contrast to the above scales, Huebner's scale met the five criteria listed above. It clearly aimed to measure satisfaction with life. It had been validated with adolescents (Dew & Huebner, 1994); it is a brief seven-item questionnaire; it has both positive and negative items; and it has satisfactory psychometric properties, including satisfactory test-retest reliability and construct validity (Dew & Huebner, 1994). This scale turns out to have an additional property that is sometimes viewed as desirable. The scale uses four degrees of agreement for each statement, and so there is no middle or neutral degree that a participant can select. This is regarded as beneficial in the Organisation for Economic Co-operation and Development guidelines for measuring subjective well-being, because it prevents participants from selecting neutral or non-committal options that would allow them to avoid expressing an opinion. The seven items in the Students' Life Satisfaction Scale were:

- Item 1: My life is going well.
- Item 2: My life is just right.

- Item 3: I would like to change many things in my life. (Reverse-scored)
- Item 4: I wish I had a different kind of life. (Reverse-scored)
- Item 5: I have a good life.
- Item 6: I have what I want in life.
- Item 7: My life is better than most kids'.

The operational definition of subjective well-being adopted in the current study is a participant's level of agreement with the set of statements in the Students' Life Satisfaction Scale about their satisfaction with life.

As both the GQ-6 and the Students' Life Satisfaction Scale scales were relatively short (six and seven questions respectively), in consultation with the school, the length of scales was considered to be neither burdensome for the students to complete, nor for the teachers to administer.

Physical materials. In addition to the questionnaires, participants were given a small diary and ball point pen. Gratitude and event diaries were identical in their size, shape, and colour. Instructions were printed on the inside front cover of the diaries, and differed according to which intervention (experimental or control), the class was carrying out.

Procedure

Ethical considerations. This project was evaluated by peer review and judged to be low risk. Consequently, it was not reviewed by one of Massey University's Human Ethics Committees. The Board of Trustees at the participating school agreed for the school to be involved in the study. Consent was gained from the students themselves, but as the students were aged 16 years or over, they did not, in accordance with Massey University's Code of Ethical Conduct for Research, need parental consent to be involved. Participants were told that they were able to decline to answer any particular question on either of the questionnaires, withdraw from the study at any time, provide

information on the understanding that their name would not be used, and be given access to a summary of the study findings when the study was concluded.

Collection of data. For both groups, baseline measures were taken directly before the start of the intervention. Post-intervention data was collected directly after final diary entries were made on the last day of the intervention. Before collecting baseline data, an introduction was made by the researcher to each class. The following definition of gratitude was read to both groups:

Gratitude means the quality or feeling of being grateful, or thankful. People can be grateful for things both large and small.

The following verbal instructions regarding how to fill out the two rating scales were read to both groups:

You have in front of you two questionnaires. For each statement you read, please circle the one number that best describes you. There are no right or wrong answers.

Rating scales were completed (first the GQ-6, then the Students' Life Satisfaction Scale), in the same order at each stage.

Interventions.

Considerations. A decision was made in the current study not to include a 'hassles' diary condition along with the gratitude and event diary conditions. Some previous studies investigating gratitude diaries as a means of enhancing well-being (in both adults and adolescents), have included a hassles condition (Emmons & McCullough, 2003; Froh, Sefick & Emmons, 2008). Diebel et al. (2016), who investigated gratitude diaries and their effect on sense of school belonging in children, omitted a hassles condition. The researcher decided not to include a hassles condition in the current study for two reasons. Firstly, it was considered a hassles condition would unnecessarily increase the complexity of the study design. Secondly, as mentioned earlier, it has been argued that a hassle condition is an ineffective control group as the

condition is designed to produce negative affect, and thus exaggerates the differences between groups (Froh, Kashdan, Ozimkowski & Miller 2009; Wood et al., 2010).

Timings. Due to curriculum demands on the two participating English classes, the interventions were initiated by the researcher on subsequent days. The intervention for the control group (event diaries) began on a Wednesday. The intervention for the experimental group (gratitude diaries), began the following day. Participants in each condition were given instructions on how to complete their diary and completed their first entry with the researcher present. The rest of the entries were completed in class time without the researcher present.

Experimental condition: Gratitude diary. Directly after students completed the two baseline measures, the researcher read out the following instructions to the experimental group during class time:

Over the next two weeks, you will be asked during class time to write three things in your gratitude diary for which you are grateful. Please don't write your name on your diary, as you each have an individual code. Everything you write will be confidential, and your teacher will not see what you've written. I will read your diary entries, but only to check that instructions have been followed. The content of your entries will not be analysed.

Next, a modified version of instructions given by Froh, Sefick and Emmons (2008), was read to the boys.

There are many things in our lives, both large and small, that we might be grateful about. Think back over yesterday and write down on the lines below three things in your life that you are grateful or thankful for.

The above instructions were also printed inside the front cover of the gratitude diaries.

Control condition: Event diary. Directly after baseline measures were taken, the researcher read out the following instructions to the control group during class time.

Over the next two weeks, you will be asked during tutor time to write three events in your diary that happened yesterday. You can write any event that you

like. Please don't write your name on your diary, as you each have an individual code. Everything you write will be confidential, and your teacher will not see what you've written. I will read your diary entries, but only to check that instructions have been followed. The content of your entries will not be analysed, or included in the write-up of this study.

Participants were then read the following instruction.

There are many events that happen in our lives, both large and small. Think back over yesterday and write down on the lines below three events that happened yesterday.

The above instructions were also printed inside the front cover of the event diaries.

Participants from both groups completed their first entry, and were instructed that the remaining diary entries would be completed with their class teacher over the next two weeks. The diaries were completed every school day, for a total of two weeks, resulting in 10 days of diary entries per condition. All diaries were collected at the end of the intervention to check whether the diary-entry instructions had been followed. Diaries were returned by the researcher to the boys when analysis of the questionnaire scores was complete.

Analytic Methods

Once the intervention was complete, two main analytic methods were undertaken: analysis of variance to examine the group data, and Brinley plots to examine individual data.

Analysis of variance. The analyses of variance were undertaken separately on the measures of gratitude and of subjective well-being. On both the measure of gratitude and of subjective well-being, the repeated measure was the time at which the trait of gratitude or subjective well-being was measured, that is at both pre and post-intervention. A second factor was a between-subject factor, that is, what intervention the participating group was undertaking, whether keeping a gratitude or an event diary. In addition, an interaction between time and group was examined in order to discover

whether the gratitude-diary intervention produced a larger increase in well-being relative to that of the events-diary intervention. The analysis of variance was conducted with the aid of IBM SPSS software. One of the analysis modules available in this software is termed the ‘general linear model for repeated measures’. This module provides an analysis for data of the kind collected in this study, a two-factor mixed design, in which there is one repeated-measures factor, and one between-subjects factor.

The analysis revealed whether there was a statistically significant effect of the intervention on the average measure of subjective well-being by comparing the measure pre and post-intervention. It also indicated whether the two kinds of intervention differed significantly in their effects on the measured subjective well-being. This analysis tested the principal hypothesis of this study, namely, whether keeping a gratitude diary increased feelings of subjective well-being relative to those caused by an events diary. A similar analysis of repeated measures was conducted on the measure of gratitude.

Brinley plots. In addition to the analysis of the averaged data, modified Brinley plots were presented to depict the results of each participant both pre and post-intervention, an approach recommended by Blampied, (2017). According to Blampied, Brinley plots are a type of scatter plot, originally devised by Brinley in 1965 to measure the performance speed of elderly and young participants in several different cognitive tasks. Modified Brinley plots are useful when sample numbers are small, as in this study, as they illustrate an individual’s results over time, as opposed to showing medians or means of participating groups. According to Blampied, Brinley plots are “directly informative about individual change during therapy in the context of concurrent change in others in the same (or a different) condition... They usefully complement other forms of analysis in therapy outcome research” (p. 115).

This chapter has outlined the rationale behind the methods employed in this research. The recruitment of participants, study design, measures, materials, procedure, and analytical methods employed have been covered. The following Results chapter describes the results obtained from the research methodology used.

Results

This chapter presents the psychometric properties of the questionnaires used, the effect of the number of diary entries made, and the outcome of the hypotheses.

In order to obtain a score for each participant on each questionnaire, the ratings of each participant to each item of the gratitude questionnaire (GQ-6) and of the well-being questionnaire (the Students' Life Satisfaction Scale) were summed. Both questionnaires contained items that were required to be reverse-scored. These summated ratings, or scores, were obtained for the questionnaires both before and after the intervention.

Psychometric Properties of the Questionnaires

Although other researchers have reported the psychometric properties of the two questionnaires used in this study, as described in the Methods section, it is of interest to examine those properties based on how the questionnaires performed in this investigation. Two psychometric properties are described: Chronbach coefficients and the inter-correlations among the questionnaires.

Chronbach coefficients. Cronbach's alpha (sometimes known as coefficient alpha) is a measure of the internal consistency and reliability of a psychometric test. According to Spector (1992), coefficient alpha is a function of the number of items on a scale and their intercorrelation. By adding to the number of items or by raising their intercorrelation, coefficient alpha can be increased. Calculation of Chronbach's alpha of the gratitude (GQ-6) and subjective well-being (SLSS) questionnaires used in this study were undertaken with SPSS software.

Chronbach's alpha pre-intervention for the GQ-6 in this study is 0.728, and for the SLSS is 0.750. According to Nunnally (1978), these coefficients indicate satisfactory internal consistency within both measures. As stated by Spector, "Nunnally

(1978) provides a widely accepted rule of thumb that alpha should at least be .70 for a scale to demonstrate internal consistency” (p.32). Thus, the satisfactory reliability of these scales increases confidence in the results they provide.

Intercorrelations. Table 2 shows the correlations between each questionnaire for both pre and post-intervention. The correlations are based on all participants. The correlations between the results of the same questionnaire presented to the same participants twice, at pre and post intervention, provide a measure of its reliability. Table 2 shows that the reliability of the GQ 6 was 0.878 and that of the SLSS was 0.785. In addition, the positive correlations between the four measures of gratitude and well-being, shown in Table 2, are in accord with the findings of Renshaw and Olinger Steeves (2016), who found in their meta-analysis of correlates and intervention outcomes that gratitude in youth was positively related with some indicators of subjective well-being in youth. The correlations in Table 2 further increase confidence in the results of the measures used in the current study.

Table 2. Correlation of summated ratings for the pre and post gratitude and well-being (WB) questionnaires for both groups. All correlations are significant at $p < 0.05$.

| | Gratitude Pre | Gratitude Post | WB Pre | WB Post |
|----------------|---------------|----------------|--------|---------|
| Gratitude Pre | 1 | | | |
| Gratitude Post | 0.878 | 1 | | |
| WB Pre | 0.635 | 0.564 | 1 | |
| WB Post | 0.495 | 0.532 | 0.785 | 1 |

Number of Diary Entries Written

The effect on the participants’ scores of their number of diary entries was examined. Although the experimental protocol expected that each participant would make a diary entry on each of ten days, not all participants were present on each day. Figure 1 shows the distribution of diary entries. Of the initial sample of 60, 25

participants completed all ten diary entries, 35 participants completed fewer than ten, of whom three completed only two entries.

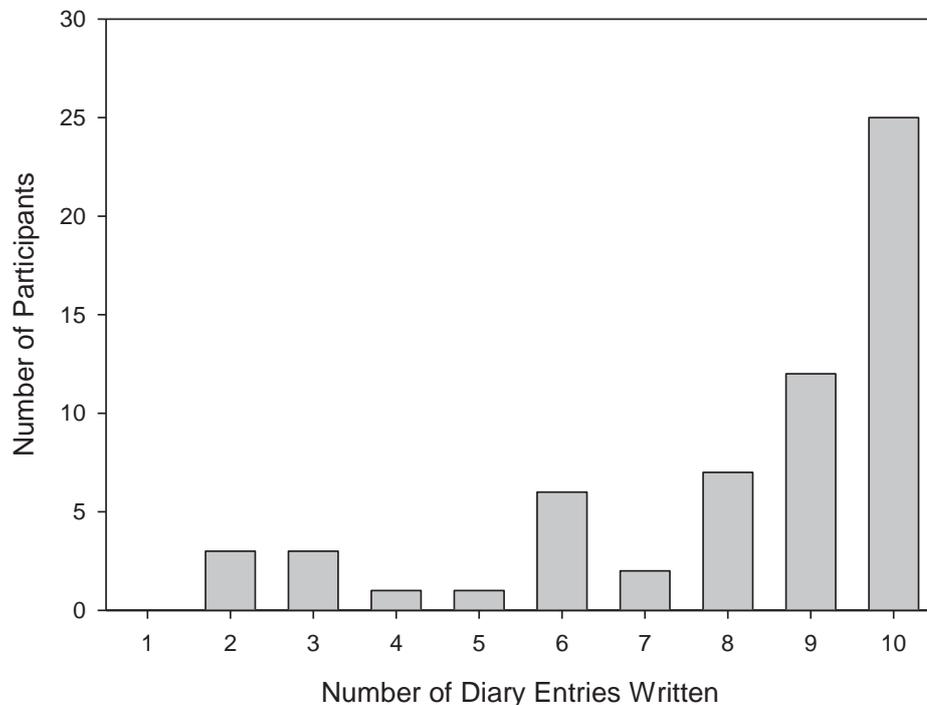


Figure 1. Histogram of the number of participants who wrote a given number of diary entries.

Figure 2 depicts the relation between the number of diary entries that a participant wrote and their subsequent response, after the intervention, to the well-being questionnaire. Figure 3 depicts the relation between the number of diary entries that a participant wrote and their subsequent response, after the intervention, to the gratitude questionnaire. Note that while 60 participants wrote two or more diary entries, only 52 of them also completed the well-being and gratitude questionnaires post-intervention, and note that some data points in Figure 2 and Figure 3 represent more than one participant. As can be seen in Figure 2 and Figure 3, there is a relatively even spread of summated ratings for both groups regardless of how many diary entries were made. Thus, Figure 2 and Figure 3 reveal that the number of diary entries made by the

participants in both groups does not appear to affect their well-being or gratitude scores post-intervention.

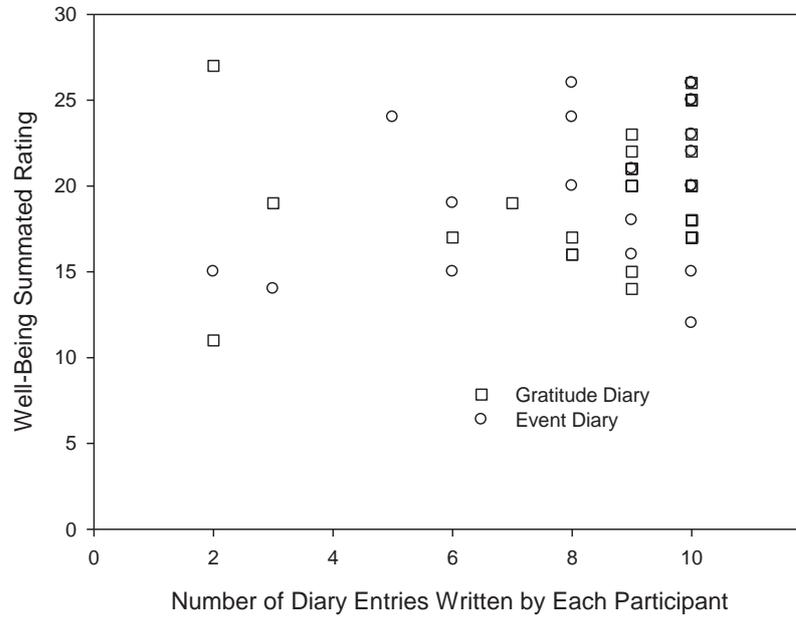


Figure 2. Relation between the number of diary entries written by a participant and their summated rating on the well-being questionnaire, post intervention.

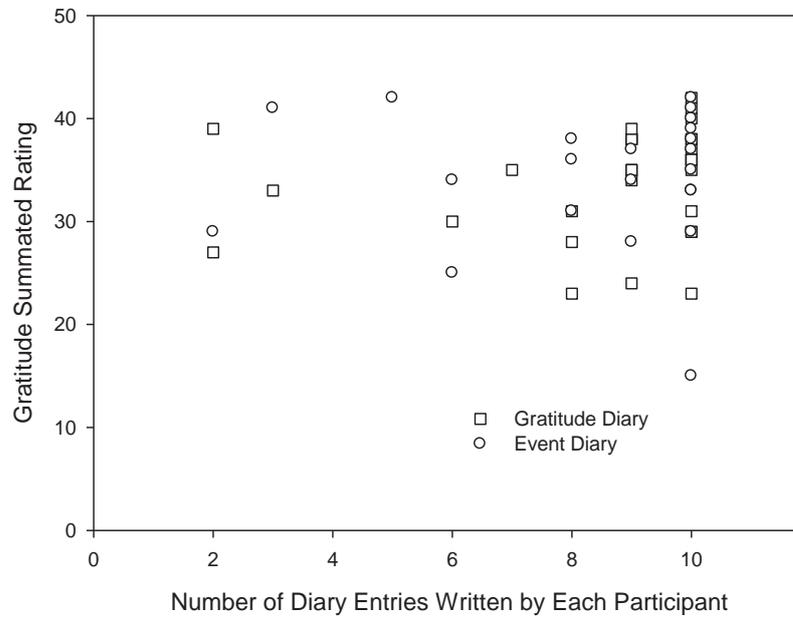


Figure 3. Relation between the number of diary entries written by a participant and their summated rating on the gratitude questionnaire, post intervention.

The results suggest little effect of the number of diary entries that a participant completed on their subsequent rating of the well-being questionnaire. For the 30 participants who kept a gratitude diary and completed the post-intervention well-being questionnaire, the correlation between number of entries and rating of well-being was $r = 0.145$. For the 22 participants who kept an event diary and completed the post-intervention well-being questionnaire, the correlation was $r = 0.397$. Neither correlation is significant at $p < 0.05$.

Similarly, there was little effect of the number of diary entries that a participant completed on their subsequent rating of the gratitude questionnaire. For the 30 participants who kept a gratitude diary and completed the post-intervention gratitude questionnaire, the correlation between number of entries and rating of gratitude was $r = 0.179$. For the 22 participants who kept an event diary and completed the post-intervention gratitude questionnaire, the correlation was $r = -0.003$. Neither correlation is significant at $p < 0.05$.

Outcome of the Hypotheses

The principal hypothesis of this study was that by keeping a gratitude diary at school for ten days, participants would positively reflect upon those things they were grateful for, and that this would lead to an increase in their feelings of well-being. A secondary hypothesis was that by keeping a gratitude diary at school for ten days would lead to an increase in participants' feelings of gratitude. The following analyses were done to determine whether these hypotheses were supported by the data collected. An alpha level of 0.05 was set to determine a statistically significant result.

Distributions of summated ratings. Figure 4 shows results concerning the principal hypothesis in the form of box plots, which divide each distribution into quartiles. Figure 4 shows the medians for well-being of both group, pre and post-

intervention. The medians are shown by the internal horizontal lines in each box. Figure 4 reveals that the medians of the well-being scores, post-intervention, are noticeably different between the boys in the gratitude and the event diary conditions. While the medians of the well-being scores of the boys in both the gratitude and event diary conditions are lower post-intervention than pre-intervention, the gratitude condition medians are markedly lower.

Figure 5 shows results concerning the secondary hypothesis, also in the form of box plots. Figure 5 shows the median results for gratitude of both groups pre and post-intervention. The medians are shown by the internal horizontal lines in each box. Figure 5 reveals that for those in both the gratitude diary and event diary groups, the median scores for gratitude increased slightly post-intervention.

Note that for those in both the gratitude diary and the event diary groups, the median scores for well-being decreased post-intervention. In contrast, for those in both the gratitude diary and event diary groups, the median scores for gratitude increased post-intervention.

The values for the box plots were calculated with SigmaPlot, software published by Systat.

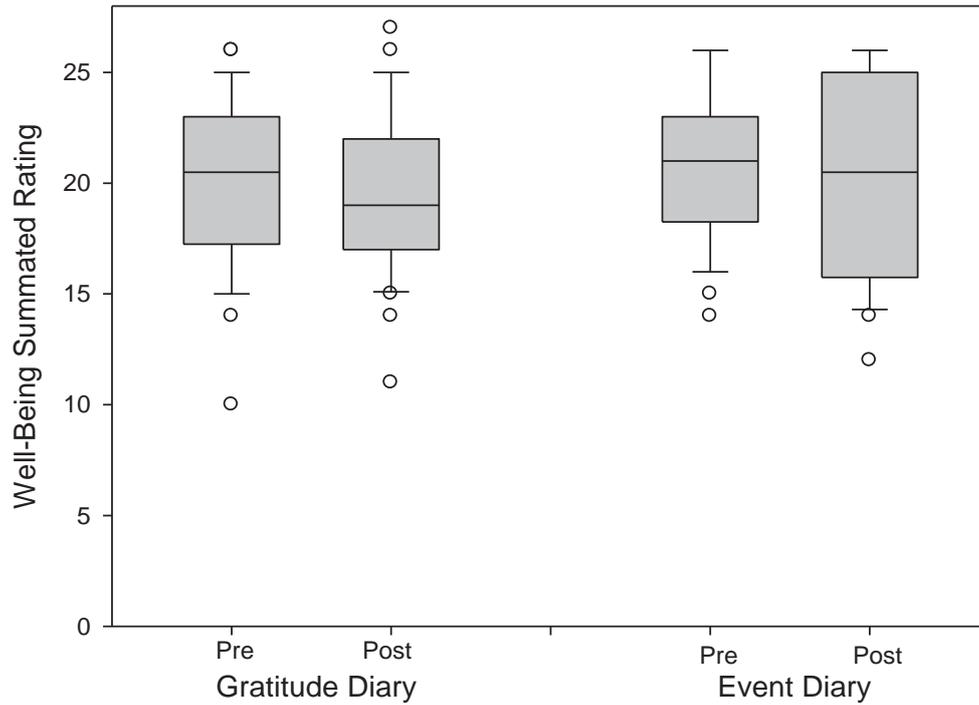


Figure 4. Box plots of summated ratings on the well-being questionnaire by participants who kept either a gratitude or an event diary. Medians are shown by the horizontal lines in each box. The maximum possible value is 28. The open circles represent outliers falling beyond the 10th or 90th percentiles.

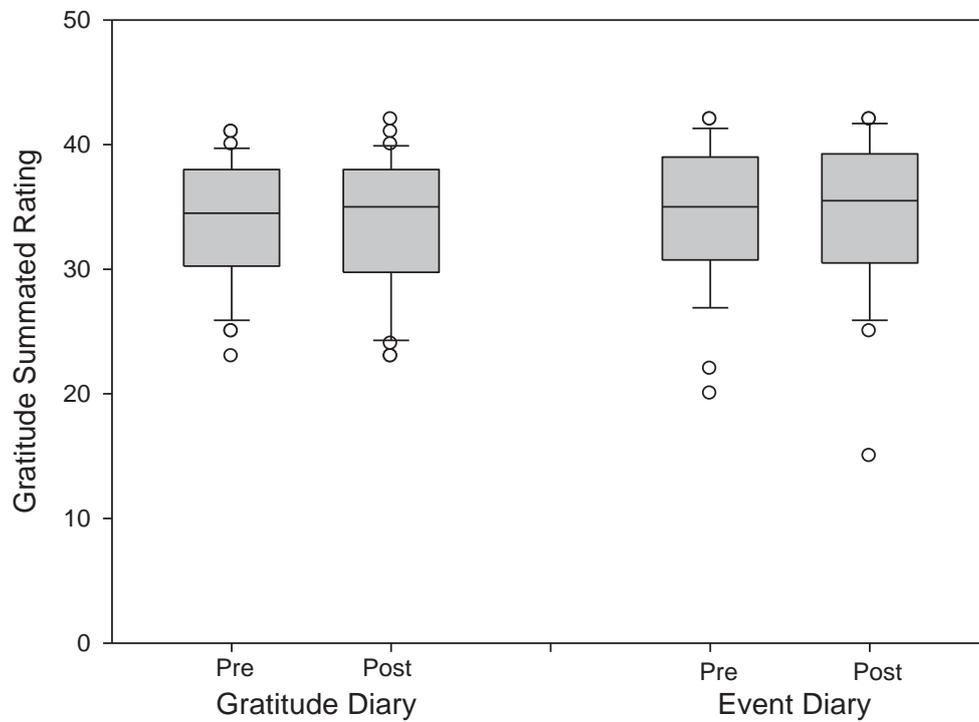


Figure 5. Box plots of summated ratings on the gratitude questionnaire by participants who kept either a gratitude or an event diary. Medians are shown by the horizontal lines in each box. The maximum possible value is 42. The open circles represent outliers falling beyond the 10th or 90th percentiles.

Further information on these distributions is provided in Table 3 which shows the means and standard deviations for both groups on each questionnaire, pre and post-intervention. Table 3 shows the small differences in the pre and post means for well-being and gratitude for each group.

Table 3. Means and standard deviations of summated ratings and number of participants (N) for each questionnaire for the groups keeping either a gratitude diary or an event diary.

| Questionnaire Measure | Gratitude Diary | | Event Diary | |
|-----------------------|-----------------|----|--------------|----|
| | Mean (SD) | N | Mean (SD) | N |
| Well-Being Pre | 20.19 (3.69) | 32 | 20.81 (3.10) | 26 |
| Well-Being Post | 19.37 (3.62) | 30 | 20.55 (4.42) | 22 |
| Gratitude Pre | 33.94 (4.81) | 32 | 34.23 (6.31) | 26 |
| Gratitude Post | 33.93 (5.21) | 30 | 34.41 (6.31) | 22 |

Analysis of variance of summated ratings. A two-group repeated measures analysis of variance of the data summarised in Table 3 was undertaken with IBM SPSS software. Analysis of variance assumes that the variances of the data are homogeneous and that the dependent variable is normally distributed. The data satisfies these assumptions, according to SPSS procedures, with one ambiguous result. The Shapiro-Wilks test for normality of the summated gratitude ratings, pre intervention, returned $p = 0.032$, indicating that these data were significantly different from normal in distribution. However, Kolgomorov-Smirnov's test of the same data returned $p = 0.200$, indicating the data were not significantly different from normal in distribution. The main purpose of this study mitigates the importance of this discrepancy. The principal hypothesis of this research is that keeping a gratitude diary enhances feelings of well-being. Whether keeping a gratitude diary enhances a sense of gratitude is of secondary interest.

The following results were found for the well-being questionnaire for both groups for pre and post. (Note that SPSS ANOVA omits participants without a

complete set of data). Neither the mean difference between the groups, $F(1, 50) = 0.804$, $p = 0.374$, nor the mean difference between times, $F(1, 50) = 3.380$, $p = 0.072$, was statistically significant. The interactions between groups and times were also not significant, $F(1, 50) = 0.609$, $p = 0.439$. These results are in accordance with the results shown in the box plots and Table 3.

The following results were found for the gratitude questionnaire for both groups for pre and post. Neither the mean difference between the groups, $F(1, 50) = 0.086$, $p = 0.771$, nor the mean difference between times, $F(1, 50) = 0.032$, $p = 0.858$, was statistically significant. The interactions between groups and times were also not significant, $F(1, 50) = 0.005$, $p = 0.947$. These results are also in accordance with the results shown in the box plots and Table 3.

The same analysis was undertaken for measures of well-being with only those boys who made nine or ten diary entries from both groups. For this analysis, neither the mean difference between the groups, $F(1, 34) = 0.679$, $p = 0.416$, nor the mean difference between times $F(1, 34) = 3.257$ $p = 0.080$, was statistically significant. The interactions between groups and times were also not significant, $F(1, 34) = 0.232$, $p = 0.633$.

These analyses of variance confirm that neither the differences between the two types of intervention, nor the differences between the two occasions, nor the interaction between these variables, was statistically significant. That is to say, the principal hypothesis of the current study, that keeping a gratitude diary enhances a sense of well-being, was not confirmed.

Brinley plots. A modified Brinley plot analysis was carried out in order to depict change in individual participants. Modified Brinley plots are scatter-plots that compare each individual's scores at time 1 (usually pre-treatment) with scores at one or

various times post-treatment (time 2, 3 and so on). Little or no change in scores over time is shown by individuals' data points lying on or near to the diagonal (45°), while change related to treatment (either improvement or deterioration), is shown by moves away from the diagonal.

Figures 6 and 7 show well-being and gratitude levels respectively for the two groups of participants as their scores changed over time. The left panels in each figure show the individual data for the experimental participants (gratitude diary), while the right panels show the individual data for the control participants (event diaries). Each panel in each figure compares pre and post-intervention. For the pre and post comparison, if the intervention had had no effect on the individual, their data points would lie on or close to the diagonal, regardless of where they lie in the distribution of scores on the measure. If, over that time period, their level of gratitude or well-being had increased, their data point would lie above the diagonal, and if their respective scores had decreased, they would lie below the diagonal.

Figure 6 illustrates well-being levels for the two groups of participants as their scores changed pre and post-intervention. It shows more data points below the diagonal line than above it for those participants in the gratitude diary condition. In fact, nearly twice as many participants in the gratitude diary condition can be seen to have lower well-being scores, post-intervention, than higher well-being scores, post-intervention. Seventeen data points lie below the diagonal, as opposed to nine data points lying above the diagonal. In contrast, the proportion of increases and decreases in well-being in the event diary condition are of a similar number. In the event diary condition, nine data points lie below the diagonal, and eight data points that lie above the diagonal. As Blampied (2017, p. 115) notes: "When constructed with orthogonal axes having the same origin and scale values, little or no change over time is shown by individuals' data

points lying on or closely about the diagonal (45°) while the magnitude and direction of any improvement (or deterioration), outliers, and the extent of replication across cases shows via dispersion of points away from 45° ." There is a discernible difference in the scatter of the data points between those participants who experienced the gratitude-diary intervention and those who experienced the event-diary intervention. Proportionately more participants in the gratitude diary intervention experienced a reduction in their well-being than those in the control condition post-intervention.

The descriptive analyses of the modified Brinley plots and the box plots are in accord with each other. The modified Brinley plots do not support the hypothesis that keeping a gratitude diary enhances a sense of well-being. Indeed, like the box plots, they suggest that the intervention may instead, reduce a sense of well-being.

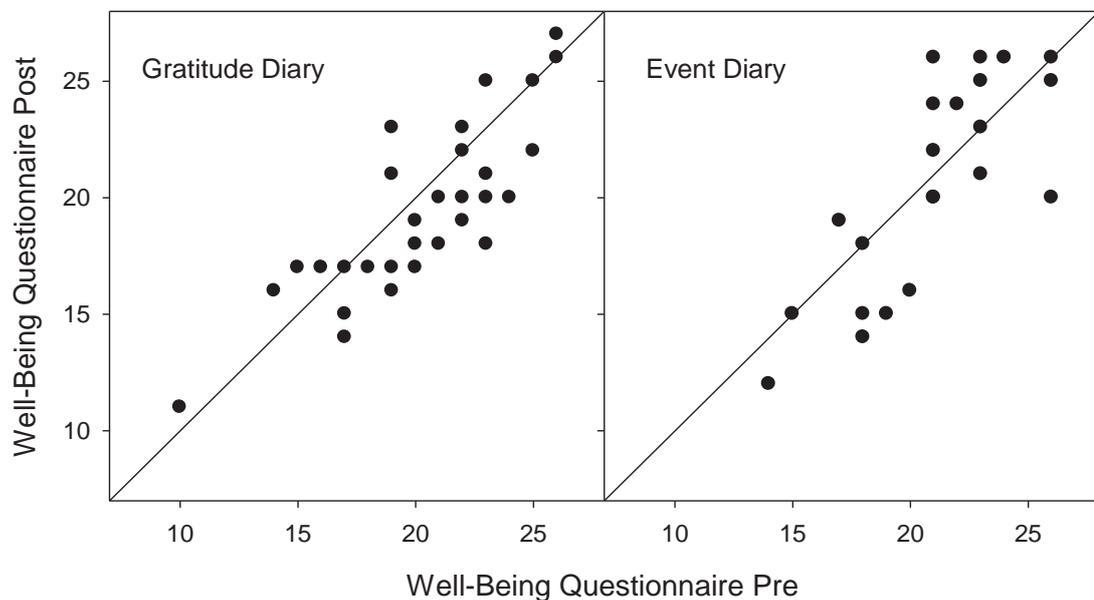


Figure 6. Brinley plots of summated ratings to the well-being questionnaire, both pre and post intervention (maximum score of 28). As labelled, one plot shows the ratings for participants who kept a gratitude diary, and the other for participants who kept an event diary.

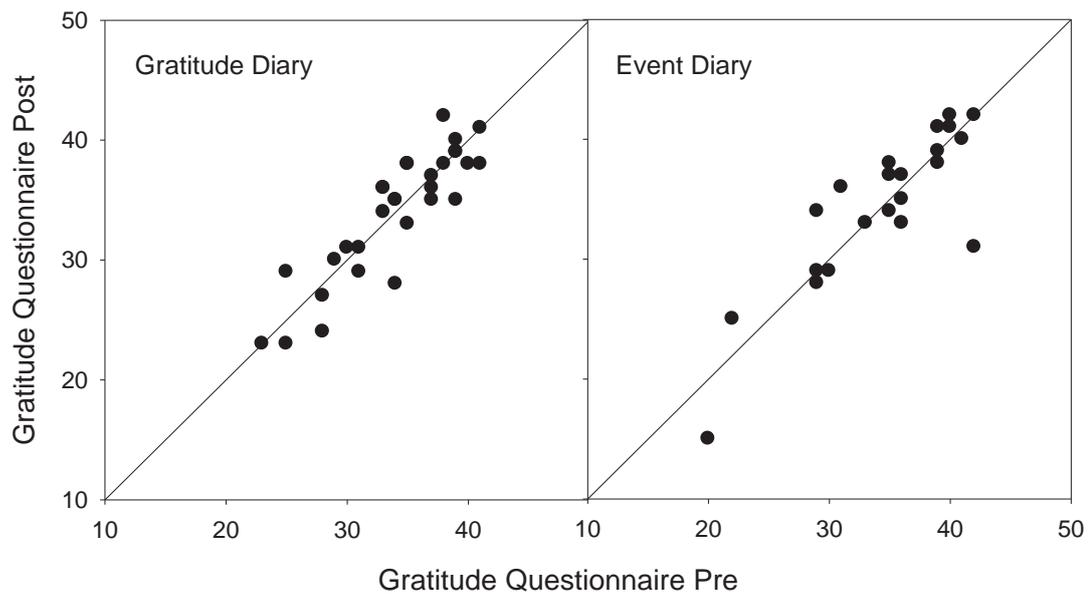


Figure 7. Brinley plots of summated ratings to the gratitude questionnaire, both pre and post-intervention (maximum score of 42). As labelled, one plot shows the ratings for participants who kept a gratitude diary, and the other for participants who kept an event diary.

Figure 7 illustrates gratitude levels for the two groups of participants as their scores changed pre and post-intervention. It shows very similar numbers of data points lying below the diagonal line and lying above it for participants in both the gratitude and event diary conditions. Thus, almost exactly the same number of participants in both conditions can be seen to have increased gratitude scores, post-intervention, as reduced gratitude scores post-intervention.

This chapter has reported the psychometric properties of the questionnaires, the effect of the number of diary entries made by participants, and the outcome of the principal and secondary hypotheses. The following Discussion chapter considers the possible reasons for not finding a gratitude-based effect, and the limitations of the current study.

Discussion

Psychologists have begun to investigate the potential of school-based interventions on both primary and secondary students to enhance well-being and other school-based outcomes (Seligman et al., 2009). The current study has extended the growing international body of gratitude literature. It is the first study to employ the direct manipulation of gratitude and examine its relationship to subjective well-being in a sample of adolescent boys. It is also the first New Zealand study to examine gratitude in the school setting that the researcher is aware of.

The purpose of the current study was to investigate whether a gratitude intervention in school could heighten a sense of subjective well-being in adolescent boys. The principal hypothesis of this thesis was that keeping a gratitude diary in school for two weeks would increase adolescent boys' feelings of subjective well-being. A secondary hypothesis was that keeping a gratitude diary in school for two weeks would increase their feelings of gratitude.

In order to investigate the two hypotheses, two Year 12 English classes were randomly assigned either a gratitude-based intervention or a neutral-events based intervention. Participants, aged 16 to 18 years, were tested on measures of gratitude and well-being. (From an initial sample of 60 boys, 52 completed all four questionnaires). Two classes undertook either a gratitude or a control intervention, writing for ten days in either gratitude or event diaries respectively. After the intervention, the boys were tested on the same measures of gratitude and well-being. Results were analysed to determine whether the ratings of subjective well-being and gratitude increased and differed between the two groups.

The principal outcome of the study was that neither the gratitude intervention nor the control intervention increased subjective well-being in the participants. The

principal results of this thesis are in accord with the results of Renshaw and Olinger Steeves's (2016) meta-analysis of studies of gratitude-based interventions in youth. They reported that although some studies have had success with selected outcomes, their results indicate that in general, gratitude interventions for enhancing youths' subjective well-being and reducing subjective distress are ineffective. In particular, they found that gratitude-based interventions with the intention of improving life satisfaction had, on average, an effect size of -0.05 as measured by Hedge's g (their Table 4).

Despite Renshaw and Olinger Steeves's findings, which are supported by the current study, the procedure of asking students to keep gratitude diaries continues to be employed in several New Zealand schools. This practice, combined with the fact that no studies of this issue have been undertaken in a New Zealand context, made it desirable and important to check the claimed effectiveness of this procedure with New Zealand students in a New Zealand school setting. Moreover, Renshaw and Olinger Steeves assert that "increased attention to, and testing of the effects of gratitude-based interventions with youth in schools is sorely needed" (p.300). Hence the principal objective of the present study was to test the effectiveness of the practice in New Zealand.

In addition, the current study examined the correlation between measures of gratitude and well-being. Four correlations between gratitude ratings and well-being ratings (see Table 1) had a mean coefficient of $r = 0.56$. This was somewhat higher than those reviewed by Renshaw and Olinger Steeves who found in their meta-analysis an average positive correlation between measures of gratitude and of life satisfaction of $r = 0.45$ with a 95% confidence interval of $0.37 - 0.52$ (their Table 2).

In order to inform our understanding of the use of gratitude interventions in schools, it is necessary to compare the results of the current study with results of similar

studies with young people overseas. One counting-blessings study with adolescents in the United States that measured change in subjective well-being was undertaken by Froh, Sefick, and Emmons, (2008). Froh et al. found that a gratitude diary was effective at producing an increase in gratitude, optimism, and life satisfaction, but only when compared with those writing a hassles diary. The most statistically significant finding was a robust relationship between gratitude and increased satisfaction with the school experience.

Owens and Patterson (2013) used a gratitude diary intervention in the United States with younger children, aged 5-11 years. Participants drew pictures of what they were grateful for, instead of writing about them. Like the current study, Owens and Patterson found that the gratitude intervention was not effective in bringing about an increase in life satisfaction.

A recent counting-blessings study examined the effect of gratitude and sense of school belonging in youth in the United Kingdom. Diebel, Woodcock, Cooper, and Brignell (2016) found a gratitude diary intervention enhanced a sense of school belonging with a statistically significant but small effect when compared with a control group. The intervention showed clearer benefits for males. They reported that average gratitude decreased during the study.

It is difficult to compare the current study's findings with the results of Emmons and McCullough's (2003) seminal study into gratitude interventions, as the two investigations differ in sample size, participant sex and age, and study design. Emmons and McCullough's three separate 'counting blessings' studies, with a total of 432 adults, found that gratitude-outlook groups across the three studies demonstrated increased well-being across some of the outcome measures, relative to the comparison groups.

The effect on participants' positive affect, a component of subjective well-being, appeared to be the strongest finding.

Possible Reasons for not Finding a Gratitude-Based Effect

The following discussion reviews a number of reasons why the current study may not have yielded statistically significant results.

Trait gratitude versus state gratitude. The secondary hypothesis of the current study was that keeping a gratitude diary would produce an increase in feelings of gratitude in participants relative to those caused by an events diary. It could be argued that the failure to find an increase in gratitude post-intervention occurred because of the nature of the GQ-6 questionnaire. The GQ-6 measures dispositional, or trait gratitude, which by definition, is a stable, persistent trait, and therefore not subject to manipulation by an experimental intervention.

Contrary to this argument, it should be noted that Diebel et al. (2016) used the GQ-6 as a measure of gratitude in their counting-blessings study with children. They found that participants' gratitude was enhanced post-intervention relative to the control group, despite the use of this measure.

Religiosity. The participating school in the current study was an integrated Catholic boys' school, (years 7 to 13), that educates boys in the traditions of the Catholic faith. All students at the school are 'day boys', that is, the school is not a boarding school. The mission statement on the school's website states the school "educates the whole person in an environment of Christian love and service". The participating boys were educated in an environment that fostered religiosity, that is, the quality of being religious.

Various religions have highlighted the value of gratitude in texts and practices for millennia (Emmons & Crumpler, 2000; Schimmel, 2004; Emmons & Kneezel,

2005; and Rosmarin, Pirutinsky, Cohen, Galler, & Krumrei, 2011). “Indeed, gratitude and religion go hand-in-hand” (Froh, Yurk, & Kashdan, 2008, p.15). Studies have demonstrated that intrinsic religiousness is positively associated with a grateful disposition (Tsang, Schulwitz, & Carlisle, 2012). Rosmarin et al. (2011) sought to answer the question of whether religious gratitude (gratitude to God) is more related to well-being than general gratitude. In a study of 405 adults, they found gratitude to be positively correlated with religious commitment. They suggest that “being grateful to God enhances the psychological benefits of gratitude in accordance with one’s level of religious commitment” (p.389).

In examining why the current study did not generate an increase in subjective well-being in the gratitude diary group, it is possible that the boys’ religiosity played a part. Owing perhaps to the strong Catholic character of the participating school, gratitude levels at baseline were already relatively high ($m = 34.1$ out of a possible 42), and therefore could not be readily increased. However, without a comparison with gratitude ratings from similarly-aged boys at secular secondary schools, it is not possible to confirm this hypothesis.

Positive affect. Another possible reason for there being no statistically significant change in the boys’ subjective well-being relates to the level of positive affect shown by the boys. Positive affect, although not separately measured here, is said to be a component of subjective well-being. Some gratitude intervention studies have shown that youth low in positive affect at pre-treatment, report greater gains in gratitude post-treatment than those high in positive affect at pre-treatment (Froh, Sefick & Emmons, 2008). This hypothesis must remain speculative without measures of positive affect being available.

Frequency of diary entries. Another possible reason for there being no statistically significant change in the boys' subjective well-being is the frequency of diary-entries. Perhaps the boys simply became bored with the gratitude diary-writing process. Some researchers suggest less is more when it comes to diary entries. Emmons (2007) discusses how counting blessings repeatedly, if they are identical, can lead to what he calls 'gratitude fatigue'. (Although in their seminal study investigating the impact of gratitude, Emmons & McCullough, 2003 found that daily diary entries produced a higher levels of gratitude than weekly diary entries). Lyubomirsky and Diener (2005a) report that adults who count blessings only once a week, compared with those who count blessings three times a week, report more life satisfaction. It may be that asking the boys to count blessings every day made the exercise lose its novelty.

Gratitude intervention effectiveness. It may simply be that the current study investigating a gratitude-based intervention did not produce statistically significant results as the presumed effect of gratitude interventions in enhancing youth well-being, may not, as Renshaw and Olinger Steeves (2016) imply, be a real one.

Limitations of Current Study

Several limitations of the study are outlined below. The sample size of the current study was limited to 60, with 34 participants in the experimental group, and 26 in the control. Of the initial 60 participants, 52 completed all measures. The sample size of the current study was smaller than three other larger counting-blessings studies which each produced small but statistically significant effects. Emmons and McCullough (2003), ($n = 432$), reported an effect size of Cohen's d of 0.28 for the mean difference between the gratitude and neutral events conditions. Froh, Sefick and Emmons (2008), ($n = 221$), did not report an effect size for increase in life-satisfaction. Diebel, Woodcock, Cooper, and Brignell (2016), ($n = 100$), reported an effect size of eta-

squared of 0.04 for the mean difference between pre and post-intervention for a sense of school belonging.

The current study was very similar to Owens and Patterson (2013) in sample size. Their sample size ($n = 62$), like the current study, did not produce statistically significant results.

A larger sample is advantageous as it better represents the population it is drawn from. A larger sample size may have found different results, i.e. may have found statistically significant changes in well-being and gratitude, were they in fact present. It should be recognised however, that attaining consent to undertake this study in a school was challenging. In all, eight school principals successively declined a request to take part in the study, before the participating school gave consent. The study was limited to comparing two classes in order to minimise disruption to the school.

The measure used to determine gratitude, the GQ-6, was adapted to suit the age group of the participants. It could be thought that the modified GQ-6 used in the current study may have had lower reliability than the original scale. However, the modified questionnaire had a Chronbach coefficient of 0.728, a value that exceeds 0.7, the widely accepted rule of thumb for satisfactory internal consistency (Nunnally, 1978).

Participants' diary entries were not analysed for content. It was felt that although analysing the content of the boys' gratitude diaries would have been interesting, it would not have served the aims of the study (to examine the effect of gratitude journals on well-being). Secondly, participants did not give consent to having their journal entries used as data. Some researchers have analysed gratitude diaries for content (Gordon, Musher-Eizenman, Holub & Dalrymple, 2004; Froh, Sefick & Emmons 2008). Using younger samples than the current study, with mean ages of 8.6 and 12.2 years respectively, both Gordon et al. and Froh et al. found the most common themes of

gratitude were: family, basic needs, friends, and teachers/school. Because the current study did not consider the content of participants' diary entries it is not possible to comment on the quantity or quality of gratitude expressed, nor the level of enthusiasm for the diary writing activity.

This chapter has compared the results of the current study with the results of similar studies with young people overseas. Possible reasons for not finding a gratitude-based effect (trait versus state gratitude, religiosity, positive affect, frequency of diary entries, and gratitude intervention effectiveness), and limitations of the current study have been discussed. The sixth and final chapter draws conclusions regarding the use of gratitude-based interventions in schools.

Conclusions

This final chapter recaps the current study's main findings, makes recommendations for future research, and discusses implications for practice. Conclusions as to the use of gratitude-based interventions in schools are drawn.

The Main Findings

The current study employed a school-based gratitude intervention with the intention of increasing the evidence base of psychological interventions that encourage the well-being of children and adolescents. The principle hypothesis of the study was that keeping a gratitude diary in school for two weeks would increase adolescent boys' feelings of subjective well-being. A secondary hypothesis was that keeping a gratitude diary in school for two weeks would increase adolescent boys' feelings of gratitude. The principal outcome of the study was that neither the gratitude intervention of a gratitude diary, nor the control intervention of an event diary increased subjective well-being in the participants. The secondary outcome was that neither the gratitude intervention, nor the control intervention increased gratitude in the participants. Although the analysis of variance did not reveal a statistically significant change in the participants' feelings of well-being or gratitude, it should be noted that both the descriptive analyses (the box plots and modified Brinley plots) illustrated that some participants experienced an increase in well-being, some had no change in well-being, and others experienced a reduction in well-being, post-intervention. It is prudent to acknowledge the possibility that there may be conditions in which a gratitude intervention may have the opposite effect to its intent.

Recommendations for Future Research

As the understanding of gratitude in youth is still in its infancy, there are many opportunities for further inquiry. Some of these opportunities are presented below.

The design of the current study did not allow for other outcome-moderators to be investigated. Measuring positive affect at baseline and post-intervention would add valuable understanding about additional psychological mechanisms that may have influenced the observed outcomes. Moderators, such as positive affect, should continue to be investigated as they may influence the extent of effects of gratitude interventions. Other variables of personality, such as religiosity, (Rosmarin, Pirutinsky, Cohen, Galler & Krumrei, 2011; Tsang, Schulwitz & Carlisle, 2012), gender (Froh, Yurkewicz, & Kashdan, 2008; Kashdan, Mishra, Breen & Froh, 2009; Thompson, Peura & Gayton, 2015), and age (Owens & Patterson, 2013), should be deemed as other possible moderating factors that may influence treatment effects. Given the ambiguous effectiveness of gratitude interventions for increasing well-being, researchers need to continue to investigate the moderating factors most likely to lead to robust and sustainable treatment effects.

Some gratitude studies have shown that counting blessings interventions increase other positive emotions. Researchers have found both an increase in a sense of school belonging (Diebel, Woodcock, Cooper & Brignell, 2016), and an increase in satisfaction with the school experience (Froh, Sefick & Emmons, 2008). Due to the potential for increase in these areas of student well-being, there are a number of opportunities to investigate further outcomes of these components of well-being.

The 'interest-factor' in gratitude interventions must be considered. Adolescents and adults may succumb to 'gratitude fatigue,' when counting blessings repeatedly (Emmons, 2007). Further research is needed into the duration and frequency of diary writing. At what stage does 'counting blessings' become routine and tedious, and are there aspects of personality upon which this is dependant? When developing gratitude

and counting blessings interventions for young people, research is needed on how to make them as interesting and enjoyable as possible.

Examining the developmental trajectory of gratitude is an area for future study. Research indicates children begin to develop the concept of gratitude during middle childhood (Emmons & Shelton, 2002; Froh, Miller & Snyder, 2007). The stage of development at which the concept of gratitude can be understood should be a central consideration when developing gratitude interventions.

As is the case in several New Zealand schools already, the gratitude diary can be used at the whole-school level. Another area for future research is to investigate whether a school-wide gratitude diary intervention can influence system-wide qualities such as sense of school belonging, and satisfaction with the school experience. Conceivably, such an intervention could become part of New Zealand's Positive Behaviour for Learning framework, a Ministry of Education range of initiatives to help address problem behaviour, improve children's well-being, and increase educational achievement.

Implications for Practice

The results of the present study are especially pertinent for New Zealand practice as some New Zealand schools have already instituted the procedure that students keep gratitude diaries for their putative beneficial effects. Other researchers have suggested that gratitude should not be considered as merely an expression reflecting a social grace, but instead as a psychological means of promoting positive emotions and social well-being (Diebel, Woodcock, Cooper & Brignell, 2016). The implementation of gratitude diaries in schools is championed as representing a straightforward, low cost intervention that has the potential to increase students' positive emotions, gratitude towards school, feelings of school belonging, and

satisfaction with the school experience. Others have stated the benefits of gratitude interventions for teachers (in the reduction of teacher stress and burnout), as well as for pupils (Chan, 2010, 2011, 2013). Bono and Froh (2009) maintain that a school-wide increase in gratitude could create a positive feedback cycle, where an individual's increase in felt gratitude and positive reflection about school (both student and teacher), could create a flourishing and thriving school environment.

The results of the current study promote the need for caution about the desirability of gratitude-based interventions. This study has clear relevance for the work of educational psychologists as it adds to the evidence base of psychological practices proposed to enhance the emotional outcomes of children. Educational psychologists may wish to counsel schools on the advisability of introducing interventions of this kind. The efficacy of gratitude interventions for young people is often applauded and promoted in popular psychology books as well as in science-based publications, yet there is limited published literature focusing on gratitude in children and adolescents. What peer-reviewed literature there is suggests mixed results. Indeed, Renshaw and Olinger Steeves (2016) propose that further "testing of the effects of gratitude-based interventions with youth in schools is sorely needed" (p. 300). The present study provides one contribution to that recommendation, in the conviction that all interventions recommended by educational psychologists and others to individuals and schools be evidence-based.

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Appendices

Appendix A – Gratitude Questionnaire 6, (Gratitude Questionnaire)

Code _____

For each statement please circle the one number (1, 2, 3, 4, 5, 6, or 7) that best describes you. There are no right or wrong answers. **(Thanks for your help!)**

1. I have so much in life to be thankful for.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. If I had to list everything that I felt thankful for, it would be a very long list.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. When I look at the world, I don't see much to be thankful for.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. I am thankful to a wide variety of people.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. I do not often find myself feeling grateful.

| | | | | | | |
|---|----------|----------------------|---------|-------------------|-------|-------------------|
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
| ----- ----- ----- ----- ----- ----- ----- | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix B – Students' Life Satisfaction Scale (Subjective Well-Being Questionnaire)

Code _____

For each statement please circle the one number (1, 2, 3, or 4) that best describes you. There are no right or wrong answers. (Thanks for your help!)

1. My life is going well

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

2. My life is just right

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

3. I would like to change many things in my life

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

4. I wish I had a different kind of life

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

5. I have a good life

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

6. I have what I want in life

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

7. My life is better than most kids'

| | | | |
|-------------------------------|-----------|-------|---------------|
| Never | Sometimes | Often | Almost Always |
| ----- ----- ----- ----- ----- | | | |
| 1 | 2 | 3 | 4 |

Appendix C – Information for School Board of Trustees



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Count Your Blessings: Gratitude and Subjective Wellbeing in Adolescent Boys

Dear [REDACTED] School Board

I am interested in exploring the experiences of students at [REDACTED] in relation to their use of Gratitude Diaries. I would like to study the effect, if any, of whether keeping a Gratitude Diary for a short time can increase students' feelings of gratitude and well-being.

Researcher Introduction

My name is Jane Irwin. I am a Masters student in Educational Psychology at the Institute of Education, Massey University. I am also a registered secondary school teacher. My Masters' thesis is being supervised by Associate Professor Tracy Riley, in the Institute of Education, and by Dr. Michael Philips, in Massey University's School of Psychology.

Project Description and Invitation

This research seeks to determine whether keeping a Gratitude Diary (a diary in which one records things they are grateful for), in school increases students' sense of gratitude, and improves their sense of overall well-being. Students' gratitude and well-being will be measured by a standard gratitude scale, and a standard scale of well-being for young people. The study will help establish whether or not keeping a Gratitude Diary, a procedure already adopted in some New Zealand schools, (including St Mary's College, Ponsonby), is potentially beneficial or not.

We would like to invite [REDACTED] to consider participating in this study which will be conducted in the school in Term 2, 2017, with preliminary results available July 2017. Please send an email of your approval to janeirwin@hotmail.com at your earliest convenience.

Project Procedures

All participation will be entirely voluntary and no record will be kept of any teacher or student who does not wish to take part.

The project will involve students from two Year 12 Homerooms. Students from these classes will be invited to take part, and must be at least 16 years of age. (Massey University guidelines state that research participants 16 and over do not need parental consent.)

Students in one Homeroom will be asked to keep a Gratitude Diary, whereas those in the other Homeroom will be asked to keep an 'Event' Diary.

(1) At the beginning of the study, during Homeroom, the researcher will ask those students who agree to take part to complete two questionnaires. In these, the students will rate how much they agree with each statement, or how often the statement is true for them. One questionnaire is intended to assess a student's sense of gratitude, and the other questionnaire, their sense of overall well-being. The questionnaires should take about five minutes each to complete (The two questionnaires are included.)

(2) Students will, after completing the questionnaires, be given a notebook for use as either a daily Gratitude or 'Event' Diary. During Homeroom the Homeroom teacher will ask those taking part to either, (depending what Homeroom the students are in), record three things from the

preceding day for which they feel grateful, *or* to record three things that happened yesterday. This process may take perhaps five minutes to complete. It is envisaged that this daily writing will take place over three school weeks, with a total of 10 writing days.

(3) The day after the 10th day of diary-keeping, students will again be asked (during Homeroom), to complete the same two questionnaires they completed at the beginning of the study.

Data Management

(a) The anonymity of the students taking part will be preserved by coding each student's identity on their responses. No names will be included, and data will be reported anonymously. The diaries will be returned to the students when the study is complete. The content of the diaries will not be analysed.

(b) The numerical results of the questionnaires will be stored on the researcher's computer. The data will also be available to the researcher's supervisors. The raw data on paper (questionnaires and consent forms), will be stored in a secure manner at the Institute of Education at Massey University. The data will be stored for five years and then destroyed. Paper data will be shredded. Storage and destruction of all data will be the responsibility of Phillipa Butler, Research Officer in the Institute of Education at Massey University.

(c) The results of the study, though not the identity of the participants, may be published in a scientific journal.

Participants' Rights

Your staff and students are under no obligation to accept this invitation. Completion and return of the consent form will indicate their willingness to participate. If staff and students decide to participate, they will have the right to:

- decline to answer any particular question on either of the questionnaires;
- withdraw from the study at any time;
- provide information on the understanding that their name will not be used;
- be given access to a summary of the study findings when it is concluded.

Anonymity and Confidentiality

The researcher will make every attempt to maintain the anonymity of the data. The researcher pledges to keep everything written in the participants' diaries confidential. No names will be used in the reporting of the data. [REDACTED] will not be named, and in any publications or presentations where findings may be presented, no identifying information will be included. You will be provided a summary report of the results.

Contact Details

If you have any queries or wish to know more please contact me at home on (09) 8455 974, or 021 054 9955, or by email: janeirwin@hotmail.com.

This project has been evaluated by peer review and judged to be low risk. Consequently it has not been reviewed by one of the University's Human Ethics Committees. The researcher named in this document is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher, please contact Dr Brian Finch, Director (Research Ethics), email humanethics@massey.ac.nz.

Sincerely yours

Jane Irwin

Appendix D – Information for Teachers



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Count Your Blessings: Gratitude and Subjective Wellbeing in Adolescent Boys

Dear [REDACTED] Teacher

I am interested in exploring the experiences of students at [REDACTED] in relation to their use of Gratitude Diaries. I would like to study the effect, if any, of keeping a Gratitude Diary for a short time.

Researcher Introduction

My name is Jane Irwin. I am a Masters student in Educational Psychology at the Institute of Education, Massey University. I am also a registered secondary school teacher. My Masters' thesis is being supervised by Associate Professor Tracy Riley, also in the Institute of Education, and by Dr. Michael Philips, in Massey University's School of Psychology.

Project Description and Invitation

This research seeks to determine what effect keeping a Gratitude Diary (a diary in which one records things they are grateful for) in school, has on students' sense of gratitude and overall well-being. Gratitude and well-being will be measured by a standard gratitude scale, and by a standard scale of well-being for young people. Results of this study will be compared with those for similarly-aged young people in other countries. The study will help establish whether or not keeping a Gratitude Diary (a procedure already adopted in some New Zealand schools), is potentially beneficial or not.

I would like to invite [REDACTED] teachers to consider participating in this study which will be conducted in the school in Term 2, 2017, with preliminary results available July 2017.

Project Procedures

All participation will be entirely voluntary and no record will be kept of any teacher or student who does not wish to take part.

The project will involve teachers and students from either two Year 12 or two Year 13 English classes. Students from these classes will be invited to take part, and must be at least 16 years of age. (Massey University guidelines state that research participants 16 and over do not need parental consent.)

Students in one English class will be asked to keep a Gratitude Diary, whereas those in the other English class will be asked to keep an 'Event' Diary.

1. At the beginning of the study, during class time, the researcher will ask those students who agree to take part to complete two questionnaires in which they rate how much they agree with each statement, or how often each statement is true for them. One questionnaire is intended to assess a student's sense of gratitude, and the other questionnaire, their sense of overall well-being. The questionnaires should take about five minutes each to complete. (The two questionnaires are included.)

2. Students will, after completing the questionnaires, be given a notebook for use as either a daily Gratitude or 'Event' Diary. During class time the English teacher will ask those taking part to either, (depending what English class the students are in), record three things from that day for

which they feel grateful, or to write three things that have happened today. This process may take perhaps five minutes to complete. It is envisaged that this daily writing will take place over two school weeks, with a total of 10 writing days.

3. After the 10th day of diary-keeping, the researcher will ask students again (during class time), to complete the same two questionnaires they completed at the beginning of the study.

Data Management

(a) The anonymity of the students taking part will be preserved by coding each student's identity on their responses. No names will be included, and data will be reported anonymously. The diaries will be returned to the students when the study is complete. The content of the diaries will not be analysed. No record will be kept of the teachers who facilitated the diary-keeping.

(b) The numerical results of the questionnaires will be stored on the researcher's computer. The data will also be available to the researcher's supervisors. The raw data on paper (questionnaires and consent forms), will be stored in a secure manner at the Institute of Education at Massey University. The data will be stored for five years and then destroyed. Paper data will be shredded. Storage and destruction of all data will be the responsibility of Phillipa Butler, Research Officer in the Institute of Education at Massey University.

(c) The results of the study, though not the identity of the participants, may be published in a scientific journal.

Participants' Rights

You are under no obligation to accept this invitation. Completion and return of the consent form will indicate your willingness to participate. If staff decide to participate, they will have the right to:

- withdraw from the study at any time;
- understand that their name will not be used;
- be given access to a summary of the study findings when it is concluded.

Anonymity and Confidentiality

We will make every attempt to maintain the anonymity of the data. The researcher pledges to keep everything written in the participants' diaries confidential. No names will be used in the reporting of the data. [REDACTED] will not be named, and in any publications or presentations where findings may be presented, no other identifying information will be included. You will be provided a summary report of the results.

Contact Details

If you have any queries or wish to know more please contact me at home on (09) 8455 974, or 021 054 9955, or by email: janeirwin@hotmail.com.

This project has been evaluated by peer review and judged to be low risk. Consequently it has not been reviewed by one of the University's Human Ethics Committees. The researcher named in this document is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher, please contact Dr Brian Finch, Director (Research Ethics), email humanethics@massey.ac.nz.

Sincerely yours

Jane Irwin

Appendix E – Information for Students



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Count Your Blessings: Gratitude and Subjective Wellbeing in Adolescent Boys

Dear [REDACTED]

I am interested in exploring the experiences of students at [REDACTED] in relation to their use of Gratitude Diaries. I would like to study the effect, if any, of keeping a Gratitude Diary for a short time.

Researcher Introduction

My name is Jane Irwin. I am a Masters student in Educational Psychology at the Institute of Education, Massey University. I am also a registered secondary school teacher. My Masters' thesis is being supervised by Associate Professor Tracy Riley, in the Institute of Education, and by Dr. Michael Philips, in Massey University's School of Psychology.

Project Description and Invitation

This research seeks to determine what effect keeping a Gratitude Diary (a diary in which one records things they are grateful for) in school, has on a student's sense of gratitude and overall wellbeing. Results of this study will be compared with those for similarly-aged young people in other countries.

We would like to invite you, as a student at [REDACTED] to consider participating in a research study which will be conducted in the school in Term 2, 2017 with preliminary findings available in late July 2017.

Project Procedures

All participation will be entirely voluntary and no record will be kept of any student who does not wish to take part.

The project will involve students from two Yr 12 or two Yr 13 English classes. Students from these classes will be invited to take part, and must be at least 16 years of age. (Massey University guidelines state that research participants 16 and over do not need parental consent.)

Students in one English class will be asked to keep a Gratitude Diary, whereas those in the other English class will be asked to keep an 'Event' Diary.

1. At the beginning of the study, during class time, the researcher will ask those students who agree to take part to complete two questionnaires in which they rate how much they agree with each statement, or how often each statement is true for them. One questionnaire is intended to assess a student's sense of gratitude, and the other questionnaire, their sense of overall wellbeing. The questionnaires should take about five minutes each to complete.

2. Students will, after completing the questionnaires, be given a notebook for use as either a daily Gratitude or 'Event' Diary. During class time the English teacher will ask those taking part to either, (depending what English class the students are in), record three things from that day for which they feel grateful, or to record three things that happened that day. This process may take five minutes to complete. It is anticipated that this daily writing will take place over two school weeks, with a total of 10 diary-writing days.

3. After the 10th day of dairy-keeping, students will again be asked (during class time), to complete the same two questionnaires they completed at the beginning of the study.

Data Management

(a) The anonymity of the students taking part will be preserved by coding each student's identity on their responses. No names will be included, and data will be reported anonymously. The diaries will be returned to the students when the study is complete. The content of the diaries will not be analysed.

(b) The numerical results of the questionnaires will be stored on the researcher's computer. The data will also be available to the researcher's supervisors. The raw data on paper (questionnaires and consent forms), will be stored in a secure manner at the Institute of Education at Massey University. The data will be stored for five years and then destroyed. Paper data will be shredded. Storage and destruction of all data will be the responsibility of Phillipa Butler, Research Officer in the Institute of Education at Massey University.

(c) The results of the study, though not the identity of the participants, may be published in a scientific journal.

Participants' Rights

You are under no obligation to accept this invitation. Completion and return of the consent form will indicate your willingness to participate. If you decide to participate, you will have the right to:

- decline to answer any particular question on either of the questionnaires;
- withdraw from the study at any time;
- provide information on the understanding that your name will not be used;
- be given access to a summary of the study findings when it is concluded.

Anonymity and Confidentiality

We will make every attempt to maintain the anonymity of the data. The researcher pledges to keep everything written in the participants' diaries confidential. No names will be used in the reporting of the data. [REDACTED] will not be named, and in any publications or presentations where findings may be presented, no identifying information will be included. You will be provided a summary report of the results.

Contact Details

If you have any queries or wish to know more please contact me at home on (09) 8455 974, or 021 054 9955, or by email: janeirwin@hotmail.com.

This project has been evaluated by peer review and judged to be low risk. Consequently it has not been reviewed by one of the University's Human Ethics Committees. The researcher named in this document is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher, please contact Dr Brian Finch, Director (Research Ethics), email humanethics@massey.ac.nz.

Sincerely yours

Jane Irwin

Appendix F - Consent Form, Participants



MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

Count Your Blessings: Gratitude and Subjective Wellbeing in Adolescent Boys

PARTICIPANT CONSENT FORM

- I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.
- I agree to participation in this study under the conditions set out in the Information Sheet.

STAFF/STUDENT'S FULL NAME: _____

STAFF/STUDENT'S SIGNATURE _____ DATE _____



Appendix G – Ethics Notification

Date: 07 May 2016

Dear Jane Irwin

Re: Ethics Notification - **4000016049 - Count Your Blessings: Gratitude and Subjective Wellbeing in Adolescent Girls.**

Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee. The low risk notification for this project is valid for a maximum of three years. If situations subsequently occur which cause you to reconsider your ethical analysis, please go to <http://rims.massey.ac.nz> and register the changes in order that they be assessed as safe to proceed.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Dr Brian Finch, Director - Ethics, telephone 06 3569099 ext 86015, email humanethics@massey.ac.nz. "

Please note, if a sponsoring organisation, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to complete the application form again, answering "yes" to the publication question to provide more information for one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

Dr Brian Finch
Chair, Human Ethics Chairs' Committee and Director (Research Ethics)