

Gratitude reflection: Its effect on levels of
gratitude, happiness and materialism
among third level students.

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Table of contents	Page
Acknowledgements.	2
Abstract.	3
Introduction.	4
Methodology.	14
Participants.	14
Design.	14
Materials.	15
Apparatus.	17
Procedure.	17
Results.	20
Discussion.	25
References.	35
Appendix.	38
A – Cover sheet.	39
B – Questionnaires in the booklet.	40
C – Debrief sheet.	45
D – Word search.	46

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Abstract

The purpose of this true experiment, is to examine the effects of momentary gratitude reflection among third level students, on levels of gratitude, materialism and happiness. A between participant's design was implemented. The control group's (n= 32) task involved completing a word search containing non emotive words and the experimental group's (n= 27) task involved participating in a gratitude reflection intervention; both part time (n= 27) and full time (n= 32) students were recruited from Dublin Business School. Both tasks took ten minutes. Afterwards participants completed a questionnaire booklet containing the Oxford Happiness Questionnaire, the Short-Form GRAT questionnaire and the Material Value Scales. The sole significant result found that the control group was happier than the experimental group. Results obtained conflicted with prior research. The study explored its strengths and limitations. It was concluded that statistically non significant does not equal psychological non significance. Suggestions for further directions were discussed.

Introduction

There is a visible conflict regarding materialism in society. There is a conflict between individualistic values and collectivistic values. There is such a great emphasis placed on materialistic values and acquiring material goods, but there is also an emphasis on the other end of the spectrum which include community and family bonds. This conflict creates tension which in turn hinders subjective well-being (Burroughs & Rindfleisch, 2002). There are many theorists who recognise that materialism is a problem, however there are some who have expressed opposing views. The humanistic and existential psychologists acknowledge the need for certain material possessions to meet basic physical needs. However, they argue that happiness and psychological fulfilment are undermined when there is a focus on wealth and possessions (Kasser, 2002).

Research on the happiness of both wealthy and non-wealthy individuals, have shown that financial success beyond what is considered necessary (i.e. food, shelter and clothing) has a small effect on an individual's overall happiness and well-being (Kasser, 2002; Myers & Diener, 1996). Researchers regularly find that individuals who focus on acquiring material goods exhibit a reduction regarding life satisfaction as well as a reduction in overall levels of happiness (Belk, 1985; Richins & Dawson, 1992; Ryan & Dziurawiec, 2001).

Polack & McCullough (2006) state that often individuals pursue materialistic goals due to the belief that wealth and goods can provide happiness. Individuals are unaware and blinded by the fact that materialism has the opposite effect. Materialism is negatively associated with almost every quality of life measure that has been studied (Polack & McCullough, 2006). It is proposed that gratitude, as a personality disposition, as a short-lived emotion or mood state, may be able to counteract materialistic strivings among individuals (McCullough et al, 2001, 2002). Fredrickson (1998) makes a valid point that positive

emotions are less studied than negative emotions, and more studies investigating traits relating to positive affect are needed.

Gratitude has several definitions. Solomon (1977) defines gratitude as “an estimate of gain coupled with the judgement that someone else is responsible for that gain” (p.316). Weiner and Graham (1989) define gratitude as “a stimulus to return a favour to the other and thus reintroduce balance” (p. 403). Emmons & Crumpler (2000) wrote, “Minimally, gratitude is an emotional response to a gift. It is the appreciation felt after one has been the beneficiary of an altruistic act” (pp. 56–57). Emmons (2004) define gratitude as “the recognition and appreciation of an altruistic gift” (p.9). These definitions of gratitude put forward the notion that gratitude results from two things. Firstly, the individual obtains a positive outcome, and secondly an external object is responsible for the positive outcome (McCullough et al, 2002). Gratitude can be considered an emotion or a trait. For instance, “I am a grateful individual” is considered a trait and “I am grateful for all the support I have received” is an emotion. Froh et al (2011) define gratitude as “a life orientation toward noticing and appreciating the positive in life” (p.312). They also state how crucial gratitude and the concern one has for others and their welfare is, in regards of having a healthy social development. The strengthening of the social bond, be it with friends, family or whoever, leads to an individual feeling secure and of value, which is “negatively related with materialism” (Froh et al, 2011, p.292). Froh et al’s (2010) study found that gratitude was positively correlated with life satisfaction. Gratitude in fact “serves as a safeguard against the erosion of relationships by materialism, by promoting intrinsic pursuits” (Froh et al, 2010, p.208). Individuals who are grateful report being happier, this has been supported by several studies including McCullough et al. (2002), Adler & Fagley (2005), McCullough et al (2004) and Froh et al (2010, 2011).

Materialism in the Oxford English Dictionary can be defined as “a devotion to material needs and desires to the neglect of spiritual matters, a way of life, opinion, or tendency based entirely upon material interests” (Richins & Dawson, 1992, p.304). Inglehart (1981) was the first to try and measure the construct of materialism. However, his approach stated by Richins & Dawson (1992) contained several problems, such as the items that were presented on the scale were far from realistic materialistic concerns. Belk (1985) defined materialism as the significance a consumer places on worldly possessions. Richins & Dawson (1992, p.307) define materialism as “a value that guides people’s choices and conduct in a variety of situations, included but not limited to consumption arenas”.

Richins & Dawson’s (1992) early findings are supported by Ryan & Dziurawiec’s (2001) findings, that is, how an individual who is highly materialistic elicits many negative effects onto themselves. Roberts & Clement (2007) supported this and found that quality of life and materialism were negatively correlated. Richins (2011) further supports, that there is a negative association between life satisfaction and materialism.

Positive psychology faces a basic challenge, that is to find an agreement on the terminology of happiness. The term well-being and happiness are often used interchangeably for one another (Delle Fave et al., 2011). Waterman (1993) and Ryan & Deci (2001) have noted that researchers within the domain of positive psychology have primarily investigated happiness from two seemingly contrasting conceptions which are, subjective well-being and psychological well-being. Happiness is usually considered a by-product of pursuing activities that an individual considers to be important and meaningful (Delle Fave et al., 2011).

Numerous non-experimental studies have shown that gratitude is positively associated with an individual’s well-being. McCullough et al (2002) obtained results from a series of studies, indicating that there are positive associations between gratitude and measures of well-being which include vitality, satisfaction with life, optimism as well as happiness.

Watkins et al (2003) as well as Adler & Fagley (2005) discovered that longer, more advanced measures of gratitude were positively associated with measures of positive affect, such as satisfaction with life and happiness. Adler & Fagley's (2005) study indicates how gratitude can in some ways be considered a trait which is the opposite of materialism and therefore in turn, might help prevent materialism and its negative effects on subjective well-being.

McCullough (2003) carried out a number of studies which provided evidence showing that gratitude improves psychological well-being. In the first study, participants recorded information on their emotions, physical symptoms, and health behaviours once a week for 10 consecutive weeks and were broken up into three groups. The three groups consisted of the gratitude condition, the hassle condition and the last condition where individuals recorded their daily life experiences. The gratitude condition involved participants recording what they were grateful for. The hassle condition involved participants recording the hassles which they encountered in everyday life. In the second study Emmons & McCullough (2003) instructed participants to complete daily diary entries for two consecutive weeks rather than once a week. Keeping a record of grateful occurrences on a daily basis resulted in higher levels of positive affect, in addition it resulted in a higher likelihood of having helped someone in some way. The hassle condition where participants kept a record of the daily hassles they encountered had the opposite effect, as did the condition where participants kept a record of ways in which they fared better than other people. In their third study, Emmons & McCullough (2003), recruited participants with neuromuscular disease. Results discovered that participants in the daily gratitude writing condition experienced more positive affect than the participants in the control condition where daily self-report measures were used. This study also showed the benefits of keeping a gratitude journal and how it also influenced spouse's reports on the participants' life satisfaction. Emmons & McCullough's (2003) analysis was consistent with the notion that gratitude inductions lead to an increase in

grateful emotion. This results in a generalised increase in subjective well-being, that in turn results to an increase, specifically in the production of gratitude.

Watkins et al (2003) carried out an experiment consisting of three experimental conditions. The participants were instructed to either 1) think about someone whom they felt grateful for, 2) write about someone to whom they felt grateful for or 3) write a letter to someone to whom they felt grateful for. The control group wrote about the layout of the living room. All three experimental conditions resulted in short-term increases in positive affect when compared to the control group. There was also an even greater short term reduction in negative affect in the experimental groups when compared to the control group. Results from this experiment suggest that individuals who are grateful tend to be happy, well-adjusted people.

Watkins et al (2003) support the idea that happiness and gratitude operate in a “cycle of virtue”. Gratitude enhances happiness, and happiness enhances gratitude as well. However, they do state that this notion is speculative and awaits further research in the future. They believe that the results they presented from their study and results from elsewhere (McCullough et al. 2002), indicates that a grateful trait exists and are reliably measureable. Watkins et al (2003) suggest that grateful individuals tend to be happy individuals, and further, grateful thinking improves an individual’s overall mood. The science of gratitude is still relatively new when compared to other topics. Preliminary findings however, suggest that gratitude may be a vital component of “the good life” (Watkins et al., 2003).

This current study intends to investigate whether gratitude does in fact enhance happiness which will then lead to an individual’s overall mood to be improvement. Since the science of gratitude is still relatively new, this study aims to add to the existing literature.

Rosenberg (1998) proposed that affective experience can be structured into three hierarchical levels of analysis: affective traits, moods, and emotions. Gratitude, like all affects, manifests itself in various forms with specific psychological properties. The research on gratitude that already exists is quite consistent and shows gratitude as an affective trait, as a temporary emotion and mood state. Gratitude not only promotes positive affect and reduces negative affect. Gratitude also increases life satisfaction, and may even result in autonomic changes that could promote and individual's health and well-being. Gratitude is not limited in only improving psychological wellbeing directly. It may also result in a change in the social behaviour of individuals that could therefore influence their relational well-being (Polak & McCullough, 2006).

Polak & McCullough (2006) express that only one study has been published, that they are aware of, which has examined the association between materialism and gratitude. The results indicated that the two constructs, materialism and gratitude are negatively associated. McCullough et al (2002) discovered that gratitude measured as an affective trait, correlated negatively with two common self-report measures of materialism (Ger & Belk, 1990; Richins & Dawson, 1992). Richins & Dawson's (1992) Material Values Scales (MVS) is going to be the self-report measure of materialism that will be used in the present study.

Polak (2005) conducted a study where participants completed self-report Questionnaires assessing momentary feelings of gratitude and materialism. Gratitude as an affective trait was measured using the GQ-6 (McCullough et al., 2002). Participants also reported how they felt 'right now' by using the adjectives such as 'grateful', 'thankful', and 'appreciative' which was measured on a 5-point Likert-type scale (1= very slightly or not at all; 5= extremely). Materialism was measured using the financial success subscale of the Revised Aspiration Index (Kasser & Ryan, 1993) and the Materialistic Desires Scales (Kasser, 2004). In Polak's (2005) experimental study, participants were randomly assigned to

mood-induction conditions however they were not successful. After the mood inductions had taken place, participants completed the gratitude manipulation questionnaire, and the two materialism measures. Correlational data was generated and showed that gratitude as a personality trait has a small negative relationship with materialistic striving. No gender effects were found.

It was decided from these findings, that since gender effects were not previously found, gender was not going to be considered as an independent variable in the present study.

Lerner and Keltner's (2000, 2001) work on affect-cognition relationship implies that gratitude might reduce materialism. Lerner and Kelter (2000, 2001) have asserted that certain emotions such as anger and fear are able to produce changes in social cognition and judgement. Jackson et al. (2001) applied Lerner & Kelter's concept to gratitude, and demonstrated that gratitude causes individuals to focus on other individuals as causal agents, and as a result it is expected that gratitude may help prevent the need for materialistic striving. It can be seen as a mechanism of coping with existential insecurity (Kasser, 2002).

Polak & McCullough (2006) state that lab studies, daily diary entries or experience sampling studies may help one's understanding on whether momentary experiences of gratitude help deter the problematic materialistic strivings in an individual's daily life. Individuals that place an emphasis on materialistic strivings tend to be unhappy, dissatisfied with life, experiencing high levels of negative emotion in addition to low levels of positive emotion. In contrast, grateful individuals tend to be exceptionally happy, satisfied with life, experiencing high levels of positive emotion and low levels of negative emotion. Given the results that gratitude fosters, Polak & McCullough (2006) state that it seems worthwhile examining the possibility of gratitude reducing materialism in the future. They believe the link between gratitude and materialism is one worth exploring in future research on happiness in particular. It may be that gratitude reduces materialistic pursuits, however, it

also may be that materialistic pursuits inhibit gratitude. They believe individuals that experience gratitude should be less likely to try obtain materialistic strivings due to the fact they will tend to view their lives as more secure and complete. They also suspect that the connection between the two constructs, materialism and gratitude could be a causal one.

This current study is building upon the previous research but it was Polack and McCullough's (2006) statements that lead to the decision to investigate gratitude with not just materialism but with happiness also. They believed the connection between the constructs were causal and therefore this study wanted to design an experiment to try and verify this cause and effect.

Previous studies that have incorporated daily gratitude diaries, have had a momentary reflection component, however they have spanned over a longer time frame than momentarily reflection. Cheng & Lam (2015) undertook a diary entry study where participants reordered information in a diary twice a week over four consecutive weeks. The recorded events, where the participants felt grateful had a significant effect reducing their negative symptoms associated with stress and depressive symptoms, which was the overall aim of the study. Some other research examples of longitudinal diary entry studies include Geraghty et al (2010) who used a two-week intervention diary study. Also McCullough et al (2004) who used a 21-day intervention diary study. Intervention studies have shown how gratitude can have the most convincing confirmation on the improvement of wellbeing in young adults (Froh et al., 2011).

Kasser (2005) has shown that materialistic youths are at a higher risk of unhappiness. If grateful qualities can be developed in early life, it could have a potential result in several positive developmental outcomes (Froh et al., 2011).

The present study is based on a gratitude intervention task; unlike previous studies its purpose is to examine whether a once off, momentary reflection of gratitude can have a

significant effect on overall levels of gratitude, happiness and materialism on third level students. The questionnaires that will be used to measure levels of gratitude, materialism and happiness will be the Short-form GRAT questionnaire (Watkins et al., 2003), The Oxford Happiness Questionnaire (OHQ) (Hills & Argyle, 2002) and the Material Values Scale (MVS) (Richins & Dawson, 1992). The results of this study, if significant could potentially be integrated into an educational setting and help tackle the problem of materialism in society, especially in early life. If significant the study could be repeated with several different samples of the population to examine whether the same effect would be observed. The existing research available concerning areas of materialism, happiness and gratitude is mainly conducted in America. In this study psychology students will be recruited from Dublin Business School (DBS), located in Dublin's city centre in Ireland. If the results are significant it would be interesting to investigate whether the same results would be obtained from different courses, and also would the same result occur across Irish third level educational institutions. This study aims to add to the existing research available by reaching conclusions in an Irish student sample. In addition, this research will attempt to fill a gap in the literature in relation to gratitude, materialism and happiness. As previously mentioned gratitude tends to have a positive relationship with happiness and gratitude tends to be negatively associated with materialism. Materialism and happiness are also negatively associated. Previous research has shown how these relationships exist but a causal factor has not yet been determined. Polak & McCullough (2006) predict that there is a causal factor between the constructs. The intervention tasks seem to have had the most convincing confirmation with regards to gratitude. Gratitude is one of the most unstudied emotions, however over the last decade more research has examined the construct that is gratitude (McCullough et al., 2002). This study hopes to add to the research of gratitude and positive emotions in a beneficial way.

The hypothesis being put forward are listed below:

Hypothesis one: It is hypothesised that there will be a significant difference in overall levels of gratitude between the experimental group and the control group, with further differences between part time and full time students.

Hypothesis two: It is hypothesised that there will be a significant difference in overall levels of happiness between the experimental group and the control group, with further differences between part time and full time students.

Hypothesis three: It is hypothesised that there will be a significant difference in overall levels of materialism between the experimental group and the control group, with further differences between part time and full time students.

Hypothesis four: It is hypothesised that there will be a significant difference in well being between the experimental group and the control group.

Methodology

Participants

Fifty-nine individuals (n=59) were recruited from the psychology undergraduate course in Dublin Business School (DBS) and voluntarily participated in the study. Non probability sampling was used to recruit participants; it was a sample of convenience. The participants were sourced from the Psychology's courses Research methods class and the Data analysis class in DBS. The inclusion criteria for the experiment were psychology students from DBS who were over 18 years of age and who were willing to participate in the experiment. The fifty-nine participants (n=59) were made up of twenty-seven part-time students (n=27) and thirty-two full-time students (n=32). The experimental group consisted of twenty-seven participants (n=27) out of which fourteen (n=14) were part time students and thirteen (n=13) were full time students. The control group consisted of thirty-two participants (n=32) out of which thirteen (n=13) were part time students and nineteen (n=19) were full time students.

Design

A quantitative between-participants true experimental design was implemented to examine whether a brief gratitude reflection task effects overall levels of gratitude, materialism and happiness among undergraduate students. The sample was one of convenience as the classes being examined were conveniently divided up into two separate

rooms from the chosen population. The two rooms were randomly allocated either to the control condition or to the experimental condition.

The independent variables were the participant's mode of study: part time and full time students, and the group the participants were randomly assigned to: the experimental group or the control group. The dependant variables consisted of gratitude scores, materialism scores and happiness scores. A combined dependent variable called well being was composed of the three dependent variables.

Materials

The following materials were used for each participant: either a blank A4 page for the experimental group or a word search containing seventeen non-emotive words for the control group (see Appendix), spare pens were available if needed. A self-administered questionnaire booklet was used containing The Oxford Happiness Questionnaire (OHQ) (Hills & Argyle, 2002), The Short-form GRAT questionnaire (Watkins et al., 2003), and The Materialism Values Scale (MVS) (Richins & Dawson, 1992) (see Appendix). A cover sheet giving a brief outline of the experiment was attached to the front of the questionnaire booklet (see Appendix). Due to slight deception a debriefing form was also given to participants (see Appendix).

The following materials were used by the experimenter: An envelope containing the two pieces of folded over paper, with the letter A on one and the letter B on the other.

The Short-form GRAT Questionnaire (Watkins et al., 2003)

The Short-form of the Gratitude Resentment and Appreciation Test (Watkins et al., 2003) consists of sixteen questions that are scored on a 9-point Likert scale. Watkins et al, (2003) propose that a grateful person possesses certain traits. Therefore, the overall scale is

composed of three subscales which are broken down into: A Lack of a sense of Deprivation (LOSD), Simple Appreciation (SA) and Appreciation for Others (AO). The items 2, 3, 6, 10, 11, 15 form the LOSD factor. Items 4, 7, 9, 12, 13, 16 form the SA factor and items 1, 5, 8, 14 form the AO factor. Items 3, 6, 10, 11, 15 are reversed scored. Higher scores are related to higher Gratitude scores. All items in the overall scale are scored from 1-9 respectively, which ranged from 1-strongly disagree to 9-strongly agree. The scores are summed to derive a general overall gratitude score which can range from 16-144. Examples of questions include: “I feel deeply appreciative for the things others have done for me in my life” and “Oftentimes I have been overwhelmed at the beauty of nature”. The scale had reported good reliability, with an exceptionally strong Coefficient alpha of .92 (Watkins et al., 2003).

The Oxford Happiness Questionnaire (OHQ) (Hills & Argyle, 2002)

The Oxford Happiness Questionnaire (OHQ) (Hills & Argyle, 2002) was originally derived from the Oxford Happiness Inventory (OHI) (Argyle, Martin & Crossland, 1989) which was devised as a broad measure of personal happiness. The OHQ consists of twenty-nine questions that are scored on a 6-point Likert scale. Items 1, 5, 6, 10, 13, 14, 19, 23, 24, 27, 28, 29 are reverse scored. All items are scored from 1-6 respectively, which ranged from 1- strongly disagree to 6- strongly agree. The scores are summed and then divided by 29 to a general overall happiness score, which can range from 1-6. Examples of questions include “I feel that life is rewarding” and “I often experience joy and elation”. The scale has reported good reliability with a strong Coefficient alpha of .91 (Hills & Argyle, 2002).

The Materialism Values Scale (MVS) (Richins & Dawson, 1992)

Richins and Dawson’s (1992) Material Values Scale consists of eighteen questions that are scored on a 5-point Likert scale. The scale is further broken down into three

subscales that delve into three dimensions associated with Materialism which include, Success, Centrality and Happiness. The Success subscale assesses whether a person considers the success of others, as well on their own success based on acquired possessions; items 1-6 inclusive make up the Success factor. The Centrality subscale measures, at what degree individuals place on the acquisition of goods at the main focus of their lives; items 7-13 inclusive make up the Centrality factor. The Happiness subscale measures the degree that individuals place on possessions as a main source of their personal well-being and satisfaction; items 14-18 inclusive make up the Happiness factor. Items 4, 5, 10, 11, 12, 14, 15 and 16 are reverse scored. High scores are related to a high materialism score. All items in the overall scale are scored from 1-5 respectively which ranged from 1-strongly agree to 5-strongly disagree. The scores are summed to derive and an overall general materialism score which can range from 18-90. Examples of questions include: for Success “The things I own say a lot about how well I’m doing in life”, for Centrality “Buying things gives me a lot of pleasure” and for Happiness “I’d be happier if I could afford to buy more things”. Richins & Dawson’s (1992) test and re-test reliability reported strong Coefficient alphas of .83 and .87.

Apparatus

An online word search generator was used to create the word search. Microsoft word was used to generate the cover sheet, debrief form and put the questionnaire booklet together. A stopwatch was used by both the experimenter and research assistant. SPSS (Statistical Package for Social Sciences) version 22 for mac was used to analyse the data after its collection.

Procedure

A research proposal along with a completed ethics form was submitted to DBS for review by their ethics board. Once the proposal was passed and the ethics approved, the study was carried out.

The module leader for the chosen classes were emailed asking for permission to access the sample. Once permission was granted, the experimenter along with the research assistant went along to the classes at the designated times. The research assistant was recruited to conduct the control condition; the same research assistant conducted all control conditions. Prior to entering the classes, the research assistant was verbally informed of the what the procedure and their duties entailed and was given the materials and apparatus needed. The research assistant was to distribute the word search, time the task for ten minutes on the stopwatch and this was to be followed by the hand out the questionnaires. Once the questionnaires were completed, they were to be gathered. The research assistant was then to distribute the debrief form and inform the group that the experimenter would return shortly to answer any queries that the class may have in relation to the experiment. Once that was outlined, the research assistant randomly chose which class was going to receive the control condition. This was done by the research assistant choosing either A or B out of an envelope that the experimenter had provided. A and B were allocated room numbers before the research associate withdrew them from the envelope. Whichever room the research associate withdrew, would be assigned the control condition seeing as they were recruited for that purpose.

The experimenter entered the control classroom firstly to introduce themselves, the research assistant and to verbally give some instructions. The experimenter invited the class to voluntarily participate in the study. The class was verbally informed that the study entailed a short ten-minute task followed by the completion of a questionnaire booklet and that the total duration of the study should not be any longer than twenty minutes. The class was

reminded that participation was voluntary and therefore by participating they were giving their informed consent. The class was assured that the questionnaires were anonymous and that participants had the right to withdraw from the study at anytime but not after the questionnaires had been returned, as they would not be identifiable. No incentives were used to gain their participation.

Once the control condition was addressed the experimenter entered the experimental classroom and verbally gave identical instructions to that class. However, in the experimental condition a blank sheet of A4 paper was distributed instead of the worse search. The experimental group were verbally informed to “close their eyes and visualise someone that they were grateful for and why they were grateful to that person”. The class were then verbally informed they had ten minutes to write down who they were thinking of and why, and that the pieces of paper that were distributed were not going to be collected.

After the ten minutes was complete in all groups the questionnaires were distributed. Once they were completed, they were gathered and a debriefing form was handed out informing the participants of what the experiment was examining. The experimenter at this stage answered any queries the experimental class may have had, and then verbally thanked the class for their participation before returning to the control group and answering any of their queries and also thanking them for their participation.

The same procedure was put into action for the part time and full time students. The rooms where the experiment took place was in computer laboratories. The data that was collected from each group was put into labelled A4 envelopes with either the experimental or control group labelled on the front, as well as whether the questionnaires pertained to the full time or part time students. The envelopes containing the data were stored securely, and were purely used for academic purposes. All the questionnaires that were returned, participated in the study. The results were then analysed using SPSS version 22 for mac.

All hard copy data and SPSS inputted data were and will remain securely stored for one year after the examination process ceased, which was February 17th 2016. Therefore, on February 17th 2017 the questionnaires will be shredded and the online data will be deleted from the hard drive.

Results

The data was analysed using SPSS version 22 according to APA Publication Manual 6th edition (American Psychological Association, 2010). The descriptive statistics were gathered for all the variables and the the tests for normality were performed to see whether the variables were normally distributed. The questionnaires' reliability was checked. Confidence intervals of 0.95 were set. A two way between participant's ANOVA was used on hypothesis 1, 2 and 3 and a MANOVA was used for hypothesis 4.

Descriptive Statistics

Out of the 59 participants, 46% (n = 27) were part time psychology students and 54% (n = 32) were full time psychology students. The full time classes and part time classes were randomly assigned to either condition. 54% (n = 32) were assigned to the control condition and 46% (n = 27) were assigned to the experimental condition.

Table 1: *Descriptive Statistics of Psychological Measures*

Variable	Mean	Standard Deviation
Happiness	4.06	.77
Gratitude	106.27	16.49
Materialism	53.31	6.42

Table 1 shows that on the happiness scale the mean score was 4.06, with a standard deviation of .77. The maximum score on the OHQ is 6, therefore the 4.06 represents 68%, which suggests a moderate to strong happiness tendency in the sample.

Table 1 displays that on the gratitude scale the mean score was 106.27, with a standard deviation of 16.49. The maximum score on the Short-Form GRAT scale is 144, therefore the 106.27 represents 74%, which suggests a strong tendency to gratitude in the sample.

Table 1 shows that on the materialism scale the mean score was 53.31, with a standard deviation of 6.42. The maximum score on the MVS is 90, therefore the score of 53.31 represents 59%, which suggests moderate to strong materialistic tendencies in the sample.

Inferential Statistics

Three separate two-way between-groups ANOVA were conducted to see if there were: statistically significant differences in overall levels of gratitude following a brief intervention task, statistically significant differences in overall levels happiness following a brief intervention task and statistically significant differences in overall levels materialism

following an intervention task between the full time and part time students in the control and experimental group. A Multivariate Analysis of Variance (MANOVA) was conducted to see if there were statistically significant differences between the experimental and the control group across overall well being. Overall well being is the combined dependent variable that is made up of the three dependent variables of gratitude, materialism and happiness. The alpha level was .05.

Hypothesis one stated that there will be a significant difference in overall levels of gratitude between the experimental group and the control group, with further differences between part time and full time students. A two-way between-groups ANOVA examined the role of the full time and part time students, and the experimental and control group on levels of gratitude and found no significant interaction effect ($F(1,55) = 1.24, p = .271$). Likewise, there were no significant main effects for whether the students were full time or part time students ($F(1,55) = .03, p = .874$) or whether the students were in the experimental or control group ($F(1,55) = .93, p = .339$). Therefore, the null hypothesis was accepted.

Hypothesis two stated that there will be a significant difference in overall levels of happiness between the experimental group and the control group, with further differences between part time and full time students. A two-way between-groups ANOVA examined the role of the full time and part time students, and the experimental and control group on levels of happiness and found no significant interaction effect ($F(1,55) = .04, p = .846$). Similarly, there were no significant main effects for whether the students were full time or part time students ($F(1,55) = .14, p = .711$). However, there were significant main effects regarding if the students who were in the experimental or control group ($F(1,55) = 4.63, p = .036$, effect size = .08). Figure 1 displays that the mean happiness in the control group was higher ($M = 4.25, SD = .73$) than it was in the experimental group ($M = 3.83, SD = .76$). Therefore, the null hypothesis was rejected.

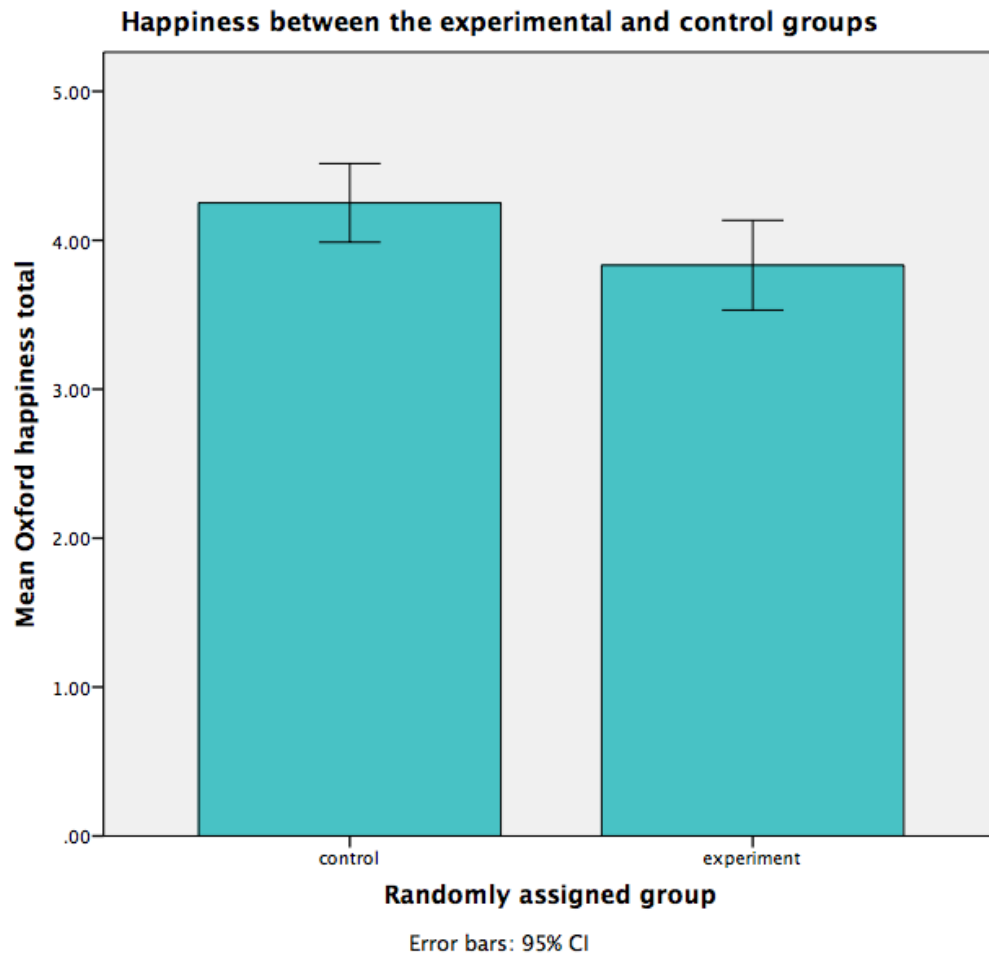


Figure 1: *Bar charts displaying the mean happiness scores*

Hypothesis three stated that there will be a significant difference in overall levels of materialism between the experimental group and the control group, with further differences between part time and full time students. A two-way between-groups ANOVA examined the role of full time and part time students, and the experimental and control group on levels of materialism and found no significant interaction effect ($F(1,55) = 2.06, p = .156$). Likewise, there were no significant main effects for whether the students were full time or part time

students ($F(1,55) = .33, p = .567$) or whether the students were in the experimental or control group ($F(1,55) = .05, p = .832$). Therefore, the null hypothesis was accepted.

Hypothesis four stated that there will be a significant difference in well being between the experimental group and the control group. A one-way multivariate ANOVA found that there was not a statistically significant difference between the two groups on overall scores on well being ($F(3,53) = 1.62, p = .195$, with an effect size of .42). Therefore, the null hypothesis was accepted.

Discussion

The current study aimed to examine whether a once off, momentary reflection of gratitude could have a significant effect on overall levels of gratitude, happiness and materialism among third level education students; DBS psychology undergraduate students. The concept of a gratitude reflection intervention task was the main focus of the study overall. It was Polak & McCullough (2006) who suspected the connection that exists between gratitude and materialism could be a causal one, and that gratitude could possibly reduce materialism. Polak & McCullough's (2006) belief was that the link that exists between gratitude and materialism is well worth exploring through future research, but especially future research relating to happiness.

Through reading the previous literature regarding gratitude, materialism and happiness, it was observed that there had been research on the three constructs but there was not any study which incorporated all three together. This gap in the literature helped to focus what the present study was going to investigate. Through engaging with the previous findings, it was anticipated that a difference would exist between the experimental group whom participated in the gratitude intervention reflection task, and the control group on overall levels of gratitude, materialism and happiness.

Hypothesis one - It was hypothesized that there would be a significant difference in overall levels of gratitude between the experimental group and the control group, with further differences between part time and full time students. The results of the current study showed that there was not a statistically significant difference between the experimental group and

control group or between the part time or full time students on overall levels of gratitude. The null hypothesis was accepted.

Emmons and McCullough's (2003) analysis confirmed and was consistent with the concept that inductions of gratitude can result in an increase in an individual's gratitude levels. Their results from their analysis show that gratitude leads to an overall increase in subjective well-being and this increase specifically relates to the production and increase of gratitude. This contradicts and conflicts with the findings of the current study.

It was visible that participants did not fully engage in the experimental task. This will be explained in more detail when the limitations of the study are explored, which is explained on page 30. Therefore, if the participants did not engage fully in the gratitude reflection task, it would not be surprising that there was not a significant difference between the experimental and the control group. This lack of engagement with the gratitude reflection task was evident with both the part time and full time students. However, participants actively engaged in the control condition where the word search was to be completed.

Hypothesis Two - It was hypothesized that there will be a significant difference in overall levels of happiness between the experimental group and the control group, with further differences between part time and full time students. Results showed that there was not a statistically significant difference between part time and full time students. However, there was a statistically significant difference between the control and the experimental group, with the control scoring higher in happiness than the experimental group. The null hypothesis was rejected.

Previous studies, namely the studies which had been investigated prior to the carrying out of this current research have conflicting findings to this current study. McCullough et al (2002) state gratitude is positively associated with an individual's well being and therefore their happiness. Their 2002 study confirmed this. In 2003 McCullough et al carried out

several studies and the evidence provided by these studies, furthered confirmed their previous findings that gratitude improves psychological well being, therefore improving happiness. Well-being and happiness are terms that are often interchanged for one another (Delle Fave et al., 2010).

Both Watkins et al (2003) and Adler & Fagley (2005) have shown that more advanced measures of gratitude were positively associated with a number of measures associated with positive affect and happiness was one of them. Grateful individuals therefore tend to be happy individuals. Watkins et al's (2003) study affirms the concept that happiness and gratitude operate in what is called a "cycle of virtue". This "cycle of virtue" emphasises that gratitude has the ability to enhance happiness and vice versa; happiness can also have the ability to enhance gratitude. Polak & McCullough (2006) further confirmed the concept that individuals who are grateful tend to be extremely happy. Intervention studies have shown the most promising results how gratitude can have the most convincing confirmation on the improvement of wellbeing among young adults (Froh et al., 2011).

Thus several studies including McCullough et al. (2002), Adler & Fagley (2005), McCullough et al (2004) and Froh et al (2011) have found that individuals who are grateful happen to be happier than individuals who are not as grateful. This current study has found that it was in fact the control condition who did not partake in the gratitude reflection intervention task that happened to be happier. This conflicts with previous research. It is plausible that in general, as a whole, the control condition happened to be more grateful than the experimental group, even after the intervention had taken place and were therefore happier.

Even though gratitude reflection interventions in the past have increased levels of happiness, those interventions spanned over a longer duration of time. This perhaps could bring up the question whether a momentary reflection of gratitude can have the same effect.

From the findings of the current study it seems that momentary reflections of gratitude do not have the same results as the longer gratitude interventions, however this could be investigated in future. The study could be replicated and improved, with the idea of taking the limitations that will be mentioned in the coming pages into account. It would also be interesting to see whether the same results would be obtained from different undergraduate degree programs not just in Dublin but throughout Ireland. Perhaps an individual's gratitude levels therefore their happiness levels in Dublin differ from individuals in other areas throughout Ireland. The areas that could be of interest could be the contrasting areas such as the money driven capital to the more relaxed way of life in the counties outside big towns.

Hypothesis three - It was hypothesized that there will be a significant difference in overall levels of materialism between the experimental group and the control group, with further differences between part time and full time students. The results from the present study showed that there was no significant difference between the experimental group and the control group, with further differences between part time and full time students. These results conflict with the previous literature. The null hypothesis was accepted.

Richins & Dawson's (1992) study had found that an individual who is highly materialistic elicits numerous negative effects onto themselves. These findings were later supported by Ryan & Dziurawiec (2001). After Adler & Fagley (2005) had carried out their study, they stated that the study indicated how in fact gratitude as a trait, can be considered as a trait which is on the opposite side of the spectrum to materialism. The current study took this concept and implemented it through the induction of gratitude; if gratitude is increased, materialism would be expected to decrease. For Adler & Fagley (2005), gratitude may be trait that can therefore prevent materialism and all the negative affects associated with it, especially the negative effects on an individuals subjective well-being.

The work that Lerner & Kelter (2000, 2001) have accomplished on affect-cognition relationships implies gratitude may in fact reduce materialism among individuals. In 2001 Jackson et al applied Lerner & Kelter's concept that gratitude might reduce materialism. What Jackson et al (2001) had found, demonstrated that gratitude can cause an individual to focus on others as causal agents and thus it is expected that gratitude may aid in the prevention for the need of materialistic strivings.

Hypothesis four - It is hypothesised that there will be a significant difference in well being between the experimental group and the control group. Results showed that there was not a statistically significant difference between the experimental and control group on well being. The null hypothesis was accepted. Well being was the combined dependent variable that was created to combine all three dependent variables. Due to the test not achieving a statistically significant result, further follow-up tests were not performed.

There is such a misconception among society that materialistic goods can provide happiness. Often individuals strive to pursue materialistic goals with this misconception that wealth and material goods can provide happiness. Individuals are unaware that materialism and the acquiring of material goods has scientifically been shown to have the opposite effect. Materialism is in fact negatively associated with just about every quality of life measure that has been studied (Pollack & McCullough, 2006). McCullough et al (2001, 2002) propose that gratitude may be able to counteract materialist strivings. That is either gratitude as a personality disposition, as a short-lived emotion or mood state.

As previously mentioned Richins & Dawson's (1992) findings along with the support from Ryan & Dziurawiec's (2001) show how a highly materialistic individual elicits many negative effects onto themselves. Robert & Clement (2007) further supported these findings and found themselves that materialism and quality of life as being negatively correlated. Richins (2011) more recently found information consistent with previous findings, that there

was a negative correlation between quality of life and materialism. Polak & McCullough (2006) believed the link between materialism and gratitude was one worth looking into in the future, especially in relation to happiness.

Limitations and weaknesses of the research

There are some limitations and weaknesses gathered from the present study that warrant discussion.

The Cronbach's alpha coefficient was used to test for internal consistency and reliability for all the scales that were used in the current study. Unfortunately, a limitation arose where The Material Values Scale (MVS) (Richins & Dawson, 1992) did not have an ideal coefficient alpha of above .7. The Cronbach's alpha coefficient was .6.

Fredrickson (1998) made an interesting point that has already been mentioned, that positive emotions are not studied to nearly the same extent as negative emotions, and that more studies examining these traits relating to positive affect are needed. That being said it has been eighteen years since Fredrickson has cited this, and since then there has been an increase in material relating to positive affect and emotion, however it is evident that more are still needed. Watkins et al (2003) made another valid point that the science of gratitude is a relatively new topic when compared to other topics, for example topics such as sadness and anger. Again it has been thirteen years since Watkins et al has stated this and the science of gratitude is not as new as it previously was, however it is still to this day a relatively new topic. There is information regarding gratitude but it is evident from researching around the topic that the amount of research and information available regarding gratitude is a lot less compared to other topics. This can be considered a limitation.

It was noted that participants in the experimental group did not participate fully during the gratitude reflection intervention task. The experimental setting was in a computer

laboratory and rather than fully engaging in the task, individuals were preoccupied with other stimuli (computer, phone and general conversation amongst the class), yet all participants whether engaging in the task or not, still completed questionnaires and returned them to the experimenter. Looking back at the instruction given to the experimental group, participants were not instructed to solely engage in the task at hand. This should not have been overlooked and could therefore be improved upon for future research. Perhaps the results after this small yet important change, may then confirm what the previous literature has found and has cited.

Strengths of the research

A weakness that was mentioned, was that positive affects are not studied as much as negative affects (Fredrickson, 1998) and that the science of gratitude is a relatively new topic when compared to some others such as sadness (Watkins et al, 2003). Therefore, this current study adds to not just the science of gratitude but also adds to the existing research on positive emotions. This study is adding to the literature and helps pave a pathway for future research to rest upon.

Previous gratitude intervention studies have been conducted (McCullough et al., 2004; Geraghty et al., 2010 and Cheng & Lam, 2015) but they occurred over a longer time span than what the current study used. The current study tried to examine if a momentary gratitude reflection intervention can have the same impact as previous studies have shown that have ranged over a longer time frame. It could be considered a weakness that the results did not conform with previous studies. However, no significance does not necessarily mean no difference. The current study strengthens the available research as it has added to the literature, again paving the pathway to future research and future questions.

Parametric tests were used. This brings strength to the study as they are very powerful tests, more powerful than non parametric tests. Parametric tests are more likely to find differences between variables than non parametric tests as they use more of the information from the data than non parametric tests do (Dancey & Reidy, 2011).

The same experimenter was used for all the experimental groups and the same research assistant conducted all the control groups. This is a strength as it helped eliminate any differences between the instructions given for the different control groups and the different experimental groups.

The true experimental design was between groups; the samples were unrelated. This can be considered a strength as there are no problems relating to order effects. Random assignment to which group received what condition is a strength as it relates to the internal validity of the experiment. The true experiment is considered one of the most powerful tools researchers have at their disposal (Howitt & Cramer, 2014). The true experimental design of the study was therefore strong point.

Future Research

Despite the majority of the results being non significant, and despite the results conflicting with previous research, the present study still expands on the literature currently available. The conflicting results make it even more worthwhile to examine these topics again in the future. It is hoped that future research can build on the results presented in this study.

It would be interesting to see if the instruction that was given to the experimental group, if that had been clearer and participants fully engaged in the task at hand, would the results support what previous research has found. It is only speculative, but there is so much evidence supporting how gratitude increases both gratitude and happiness and how gratitude

reduces materialistic strivings among individuals that it is believed that the small alteration in the study could result in the results supporting what previous literature has found.

The Material Values Scale (Richins & Dawson, 1992) as mentioned in the limitations, did not have an ideal coefficient alpha of above .7. The Cronbach's alpha coefficient was .6 after the reliability tests were carried out. The Cronbach's coefficient only refers to the reliability of the scale and not the experiment itself, however maybe using another scale to test materialism with an adequate Cronbach's coefficient could be implemented in the future.

The findings in the present study where the control group happened to be statistically significantly higher in happiness compared to the experimental group was not anticipated. This would be interesting to investigate in future research and to examine whether what occurred in this study was a once off, or in fact can be replicated in future studies. Perhaps brief momentary reflections of gratitude instead of increasing happiness, could reduce happiness from baseline levels. It is evident that more research needs to be conducted around this topic.

Conclusion

In conclusion the main aim of the current study was to examine whether overall levels of gratitude, materialism and happiness could be effected through the introduction of an intervention, specifically a gratitude reflection intervention. The current study's results did not support prior research. Although this study did not demonstrate what the previous research has found, it is still a beneficial and informative study. It has shown how momentary gratitude reflection may not necessarily have the same impact on an individual as previous longer gratitude reflection tasks have had. The finding that was surprising, was that the control condition was happier than the experimental condition after the intervention had taken place. This as previously mentioned was not anticipated.

Even though no significance was found in the majority of tests, no significance does not necessarily mean no difference, and no significance does not equal psychological significance. The findings from this experiment further add to the existing literature concerning gratitude interventions and its effect on constructs such as gratitude, happiness and materialism. This experiment has shed light on an area of psychology that needs more attention. Through the study's findings, questions relating to future research have been identified. Hopefully in the future, more research will be conducted regarding positive emotions. This area of psychology is a vital considering the significant impact it can potentially have on all of society.

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Appendix

A - Cover sheet

My name is Lia Zekanovic and I am currently a final year Psychology student in Dublin Business School. As partial fulfilment of my undergraduate Honours degree in Psychology, I am undertaking a research project. The study aims to investigate whether levels of gratitude, materialism and happiness can be altered through a momentary task.

I would like to invite you to participate in this study. Participation is voluntary. By completing the task and questionnaires provided you are giving your informed consent to participate. There are no right or wrong answers. Answer the questions in a way that best describes how you feel.

All data will be anonymous; no personal information will be included as no personal information is needed. You have the right to not take part in the study. You also have the right to withdraw at anytime during the collection of the data. After the data is collected, you will be unable to withdraw your data, as it will be anonymous and therefore will not be identifiable. The information you provide is strictly confidential.

I would like to take this opportunity to thank you for your participation. If you have any questions about this study, please do not hesitate to contact me.

Lia Zekanovic at 

If you are affected by the task or any of the questions asked please contact AWARE for support.

AWARE phone: (01) 661 7211 or email: wecanhelp@aware.ie.

Thank you again for your participation in this study, it is greatly appreciated.

B - Questionnaires in the booklet

Below are a number of statements about happiness. Please indicate how much you agree or disagree with each by entering a number in the blank after each statement, according to the following scale:

1 = strongly disagree

2 = moderately disagree

3 = slightly disagree

4 = slightly agree

5 = moderately agree

6 = strongly agree

Please read the statements carefully, some of the questions are phrased positively and others negatively. Don't take too long over individual questions; there are no "right" or "wrong" answers (and no trick questions). The first answer that comes into your head is probably the right one for you. If you find some of the questions difficult, please give the answer that is true for you in general or for most of the time.

1. I don't feel particularly pleased with the way I am. _____
2. I am intensely interested in other people. _____
3. I feel that life is very rewarding. _____
4. I have very warm feelings towards almost everyone. _____
5. I rarely wake up feeling rested. _____
6. I am not particularly optimistic about the future. _____
7. I find most things amusing. _____
8. I am always committed and involved. _____
9. Life is good. _____
10. I do not think that the world is a good place. _____
11. I laugh a lot. _____
12. I am well satisfied about everything in my life. _____
13. I don't think I look attractive. _____
14. There is a gap between what I would like to do and what I have done. _____
15. I am very happy. _____
16. I find beauty in some things. _____
17. I always have a cheerful effect on others. _____
18. I can fit in (find time for) everything I want to. _____
19. I feel that I am not especially in control of my life. _____
20. I feel able to take anything on. _____
21. I feel fully mentally alert. _____
22. I often experience joy and elation. _____
23. I don't find it easy to make decisions. _____
24. I don't have a particular sense of meaning and purpose in my life. _____

25. I feel I have a great deal of energy. ____
26. I usually have a good influence on events. ____
27. I don't have fun with other people. ____
28. I don't feel particularly healthy. ____
29. I don't have particularly happy memories of the past. ____

Please provide your honest feelings and beliefs about the following statements which relate to you. There are no right or wrong answers to these statements. We would like to know how much you feel these statements are true or not true of you. Please try to indicate your true feelings and beliefs, as opposed to what you would like to believe. Respond to the following statements by circling the number that best represents your real feelings. Please use the scale provided below, and please choose one number for each statement (i.e. don't circle the space between two numbers), and record your choice in the blank preceding each statement.

1	2	3	4	5	6	7	8	9
I strongly		I disagree		I feel		I mostly		I strongly
disagree		somewhat		neutral		agree		agree with
				about the		with the		the
				statement		statement		statement

1. I couldn't have gotten where I am today without the help of many people. ____
2. Life has been good to me. ____
3. There never seems to be enough to go around and I never seem to get my share. ____

4. Oftentimes I have been overwhelmed at the beauty of nature. ____
5. Although I think it's important to feel good about your accomplishments, think that it's also important to remember how others have contributed to my accomplishments. ____
6. I really don't think that I've gotten all the good things that I deserve in life. ____
7. Every Fall I really enjoy watching the leaves change colors. ____
8. Although I'm basically in control of my life, I can't help but think about all those who have supported me and helped me along the way. ____
9. I think that it's important to "Stop and smell the roses." ____
10. More bad things have happened to me in my life than I deserve. ____
11. Because of what I've gone through in my life, I really feel like the world owes me something. ____
12. I think that it's important to pause often to "count my blessings." ____
13. I think it's important to enjoy the simple things in life. ____
14. I feel deeply appreciative for the things others have done for me in my life. ____
15. For some reason I don't seem to get the advantages that others get. ____
16. I think it's important to appreciate each day that you are alive. ____

The below items are scored on a 5-point Likert-type scale from 1-strongly agree to 5 strongly disagree.

1. I admire people who own expensive homes, cars, and clothes. ____
2. Some of the most important achievements in life include acquiring material possessions. ____

3. I don't place much emphasis on the amount of material objects people own as a sign of success. _____
4. The things I own say a lot about how well I'm doing in life. _____
5. I like to own things that impress people. _____
6. I don't pay much attention to the material objects other people own. _____
7. I usually buy only the things I need. _____
8. I try to keep my life simple, as far as possessions are concerned. _____
9. The things I own aren't all that important to me. _____
10. I enjoy spending money on things that aren't practical. _____
11. Buying things gives me a lot of pleasure. _____
12. I like a lot of luxury in my life. _____
13. I put less emphasis on material things than most people I know. _____
14. I have all the things I really need to enjoy life. _____
15. My life would be better if I owned certain things I don't have. _____
16. I wouldn't be any happier if I owned nicer things. _____
17. I'd be happier if I could afford to buy more things. _____
18. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like. _____

C - Debrief sheet

Dear participant,

The purpose of this study is to investigate whether a once off, momentary gratitude reflection task can effect overall levels of gratitude, materialism and happiness among third level students.

The control group completed a word search containing non emotive words in terms gratitude which consisted of surnames of famous psychologists and psychoanalysts. The experimental group participated in a gratitude reflection task. The participants in the gratitude reflection group were asked to close their eyes and visualise someone that they are grateful for and why they are grateful to that person. Participants in the experimental group were then verbally instructed to write down who they were grateful for and why. These pieces of paper were not collected.

If you have any further queries regarding the study, please contact me.

Lia Zekanovic at [REDACTED]

If you are affected by the task or any of the questions asked please contact AWARE for support.

AWARE phone: (01) 661 7211 or email: wecanhelp@aware.ie.

Thank you for your participation.

D - Word search

MAKE YOUR OWN WORKSHEETS ONLINE @ WWW.ATOZTEACHERSTUFF.COM

NAME: _____ DATE: _____



www.AtoZTeacherStuff.com

Group A

D D N Y E V B Q I N Z X S N C T Q T J
 W I E Y B Z V U R I Q I R E A L E S M
 D O T E G A I P P Q T C C H M C W B T
 J F L N M Q R L O N Z H H G H A A M L
 B N S R Y M C U V X T X O A H I J L O
 Y P V O A X E H D O T V Z R R I S W P
 A M N H Q H E X X N N W S S N C C V F
 D I Q H M J H E X N A R F I G D O Q N
 B B Q T R B D G B T K B W G G G I T V
 O U T M R S A R S K M K F R E U D K L
 D S B L K R E O A X T D H Y E Z E X E
 A I S U O U N I S R E G O R V Y Q M W
 P F P R E N N I K S W F V E G E W V O
 M X B R K S Z C O B C D O T R P C Q R
 L H P R W K J I A I B C L E P V V K G
 G J X O O U I D I O B C V A D L E R D
 F M R D C N R T H C S A A E V N N E A
 B T J J Q G O K L J R F P I I F J E V
 H J T D D Y T F G X O S W C N O L N

ADLER
 AINSWORTH
 ASCH
 BANDURA
 BREUER
 CHARCOT
 FREUD
 HARLOW
 HORNEY
 JAMES
 LACAN
 PIAGET
 ROGERS
 PAVLOV
 SKINNER
 WATSON
 THORNDIKE