Breaking down Positive Orientation to Self-Esteem, Optimism and Life Satisfaction:

What predicts Test Anxiety?¹

Magdalena Fredriksson & Sarah Wahlstedt Corméry

Örebro University

Abstract

Positive orientation is a pre-dispositional trait containing three components: self-esteem, optimism and life satisfaction. The components are linked to enhanced well-being and coping better with stressful situations and anxiety. The goal for this study was to examine if positive orientation predicts test anxiety and explore which component is the strongest predictor. Students (n=311, 73.6% females) from Örebro University between age 20 to 30 answered an internet survey. Results suggest that participants with a positive orientation experienced less test anxiety and among the three components of positive orientation, self-esteem is the strongest predictor of test anxiety. The study provides evidence that a positive orientation, potentially through the self-esteem component, contributes to lower levels of test anxiety.

Keywords: Positive orientation, test anxiety, self-esteem, optimism, life satisfaction.

Breaking down Positive Orientation to Self-Esteem, Optimism and Life Satisfaction:
What predicts Test Anxiety?

Magdalena Fredriksson & Sarah Wahlstedt Corméry

Örebro Universitet

Sammanfattning

Positiv inriktning beskrivs som ett predisposition beståendes av komponenterna självkänsla, optimism och livstillfredsställelse. Dessa komponenter är kopplade till ökat välmående och bättre coping gällande stressfulla situationer och ångest. Målet med studien var att undersöka om en positiv inriktning predicerar tentaångest för att sedan undersöka vilken av dess komponenter som är den starkaste i att predicera tentaångest. Studenter (n=311, 73,6% kvinnor) från Örebro Universitet mellan 20 till 30 år besvarade en internetenkät. Resultatet visade att deltagare med en positiv inriktning upplevde lägre grad av tentaångest och bland de tre komponenterna av positiv inriktning är det självkänsla som påverkar tentaångest mest. Denna studie ger empiriskt stöd för att en positiv inriktning, förmodligen genom komponenten självkänsla, bidrar till lägre grader av tentaångest.

Nyckelord: Positiv inriktning, tentaångest, självkänsla, optimism, livstillfredsställelse.

Handledare: Tatiana Trifan
Psykologi C
VT 2015
Breaking down Positive Orientation to Self-Esteem, Optimism and Life Satisfaction:

What predicts test anxiety?

Performance is an important part of our life and most of our daily life contexts request us to achieve, in one way or another. Tests, examinations and tasks are parts of everyone's life, and can have an important impact on the person’s future and well-being. When confronted with such stressors, some people manage to perform the tasks with little to no anxiety, while other people experience a high level of anxiety and discomfort (see Zeidner, 1998). In relation to tests and examinations, people tend to experience a special form of anxiety, called test anxiety. But, the question is - what drives test anxiety, and why do some people evaluate the situations that require them to perform as more anxious compared to others? These questions are important to answer towards the goal to fully understand what individual differences that contributes to various levels of test anxiety. Increased knowledge about this phenomenon can be crucial for test-anxious individuals, in terms of coping with the evaluative, anxiety-provoking situations they are confronting. For those who experience test anxiety as an inhibitor to performance, this can aggravate their chances of achieving, which in turn may affect their well-being. It is important to investigate the phenomenon, since it can inhibit performance and achievements that are important for almost every human in their daily lives.

Individuals who tend to experience anxious feelings in relation to examinations might have anxious-prone personalities. Test anxiety is a specific form of anxiety, which affects individuals' cognitions and how they apprehend evaluative situations (Wine, 1971; Zeidner, 1998). Anxiety in general is an emotion that arises in a variety of situations that individuals’ apprehend as threatening, which in turn leads to both psychological and physiological reactions (see Zeidner, 1998). Test anxiety is instead a specific form of anxiety, which arises in specific situations - namely, tests and examinations (Spielberger & Vagg, 1995). In order to understand the complex phenomenon of anxiety, and test anxiety, it is important to begin with
describing what trait-anxiety and state-anxiety are. Spielberger (1966) stated that trait-anxiety is like a personality trait or characteristic. The individuals possessing this trait are more prone to experience anxiety in their general life, in part because they perceive stressful situations as more threatening than people without this trait do (Spielberger, 1966; Spielberger & Vagg, 1995). State-anxiety is instead more of an emotional state where the individual actually experiences the anxiety, and is more easily aroused in people with the personality trait of anxiety (Spielberger, 1966; Spielberger & Vagg, 1995). Test anxiety is an emotional state that comes along before and during an individual takes a test (Pekrun, Goetz, Perry, Kramer, Hochstad & Molfenter, 2004), but is often elicited because of the individuals' personality trait of anxiety (Spielberger & Vagg, 1995). Even if test anxiety is situational-bound, individuals who have anxiety-prone personalities seems to be more likely to experience test anxiety because influenced attitudes and reactions in evaluative situations.

Test anxiety may be tangible for some individuals, and inhibit their performance because it leads to psychological and physiological reactions. Researchers within the field are describing test anxiety as an emotional state, but there is a difference in how individuals experience the test anxious feelings. As reviewed in Zeidner (1998), the reactions of test anxiety are in theory divided into three facets - the behavioral facet, the cognitive facet and the affective facet. The behavioral reactions can be that an individual does not study sufficiently for an exam or that they engage in procrastination, while cognitive reactions can take the form of excessive worrying over the exam and its outcomes, thoughts that are irrelevant to the test, and feelings of nervousness (Deffenbacher, 1978; Spielberger & Vagg, 1995; Zeidner, 1998). The affective facet involves physiological reactions, for example, tensions (Zeidner, 1998). Due to these reactions, it is reasonable that students' performance may be inhibited. The levels of test anxiety will vary in relation to how hard the questions in the test are, and if the student feels prepared for the test (Spielberger & Vagg, 1995). People
suffering from test anxiety may experience and express all of these reactions in an evaluative situation, or they may experience just one or two of them (Sarason, 1984, referred in Zeidner, 1998). Even though some individuals do not apprehend test anxiety as an inhibitor, at a severe level, test anxiety and its uncomfortable reactions can determine the quality of performance.

If test anxiety is affected by a certain personality trait, one potential factor explaining the individual differences in test anxiety could be how positively orientated an individual is. An individual who is positively orientated possess a general tendency to have a positive outlook on the self, the world and the future (Alessandri, Caprara & Tisak, 2012a). Alessandri et al. (2012) developed the positive orientation theory, stating that positive orientation is a pre-dispositional trait containing three components: self-esteem, optimism and life satisfaction. Self-esteem is individuals' subjective evaluation about themselves, which can be both negative and positive (Baumeister, Campbell, Krueger & Vohs, 2003). Optimism means that one have the tendency to look at future outcomes in life with a positive view, whereas pessimism refers to having a negative view on future outcomes (Carver & Scheier, 1992, referred in Eichner, Kwon & Marcus, 2014; Carver & Scheier, 1989, referred in Zeidner, 1998). Life satisfaction refers to a subjective evaluation of how satisfied an individual is with life, based on subjective criterions that the individual apprehend as a "good life" (Diener, Emmons, Larsen & Griffin, 1985). Positive orientation theory builds upon the view that self-esteem, optimism and life satisfaction share a common factor and derives from the same latent dimension, namely positive orientation, and that they together form a cognitive triad (Alessandri et al., 2012a). This positive cognitive triad is functioning as a predisposition increasing well-being in everyday life (Alessandri et al., 2012a). The researchers compare the theory to Beck's negative cognitive triad (Beck, 1967, referred in Alessandri et al., 2012a), which is a cognitive process that lies as a core of a negative view of the self, the world and the future (Beck & Alford, 2014). An individual that has the tendency to have negative thoughts
is prone to develop feelings of depression, which in turn leads to decreased well-being (Beck & Alford, 2014). In contrary, positive orientation is beneficial for subjective well-being (Caprara, Steca, Alessandri, Abela & McWhinnie, 2010). Empirical evidence also suggests that being positively orientated predicts better job performance (Alessandri, Borgogni, Schaufeli, Caprara & Consiglio, 2015; Alessandri, Vecchione, Tisak, Deiana, Caria & Caprara, 2012b). Further, the trait is associated with to positive and negative affect, general health status and quality of interpersonal relationship (Alessandri et al., 2012a). Relatedly, people reporting higher levels of positive orientation through self-reports, also reported higher levels of social support and perceived physical health (Caprara et al., 2010). Overall, positive orientation functions as a predisposition that contributes to handling and coping better with stressful events (Alessandri et al., 2012a). It seems that individual differences in test anxiety may depend on how predisposed an individual is to be positively orientated, and that individuals with this predisposition may experience less test anxiety because of more positive cognitions and coping better with stress in relation to exams.

As described, positive orientation may affect the levels of test anxiety, but its three components seem to function in different ways, especially in cases where it can affect performance. Studies have revealed self-esteem as the component within positive orientation as most likely to affect successful performance and test anxiety (Hembree, 1988; Peleg, 2009; Rosenberg, Schooler & Schoenbach, 1989; Skaalvik & Hagtvet, 1990). Self-esteem is important in determining who will suffer from test anxiety, and empirical evidence suggests that high or low self-esteem is determined from earlier performance (Hembree, 1988; Peleg, 2009; Rosenberg et al., 1989; Skaalvik & Hagtvet, 1990). People tend to see their performances and achievements as a synonym to their value as humans, and therefore, bad performance could harm their self-esteem, and contribute to test anxiety (Covington, 1984/1992). Longitudinal findings show that depending on how good or bad you have
performed in earlier school years will affect your self-esteem in these situations in the future (Rosenberg et al., 1989) and that higher a grade a year before lead to higher self-esteem the year after (Skaalvik & Hagtvet, 1990). When confronting stressful situations, as exams, pessimistic people tend to have negative thoughts about their performance, low self-confidence, worry and underestimate their capacity, which increase feelings of test anxiety (Wine, 1971; Carver & Scheier, 1989, referred in Zeidner, 1998). The setbacks are disadvantages for pessimistic individuals because of increased risk of debilitated performance (Wine, 1971; Zeidner, 1998). Although pessimism might lead to debilitated performance, on the other hand, recent studies suggests that optimism does not lead to better performance (Tenney, Logg & Moore, 2015). Optimism may function as an advantage because of decreased feelings of test anxiety due to positive cognitions, but the actual results depend on other factors, such as skills and intelligence (Macnamara, Hambrick & Oswald, 2014; Tenney et al., 2015). Gaining insight in how differently self-esteem and optimism may affect test anxiety and performance is possible due to research within the field, but regarding life satisfaction and its relationship to test anxiety and performance, the literature is scarce. Overall, the individuals' levels of test anxiety can vary depending on their levels of self-esteem and optimism, which in turn, can affect the way they perform.

It is reasonable to believe that individuals high in levels of self-esteem and optimism are more satisfied with life because they have the tendency to handle stressful situations in an effective way, including handling test anxious feelings. With empirical findings that self-esteem, optimism and life satisfaction are highly inter-correlated, which means that there are a mutual connection between them (Bailey, Eng, Frisch & Snyder, 2007; Schimmack & Diener, 2003), it is also likely that they have an effect on each other. Self-esteem has the tendency to protect individuals from feelings of anxiety (Baumeister et al., 2003), which increases life satisfaction because anxiety makes people prone to develop feelings of depression (Arrindell,
Meeuwsen & Huyse, 1991; Carver & Scheier, 1998, referred in Carver, Scheier & Segerstrom, 2010). Life satisfaction increases because of handling stressful situations better due to positive thoughts about future outcomes (Nes & Segerstrom, 2006), in other words possessing an optimistic view, and experiencing less anxiety because of self-esteem (Arndt & Goldenberg, 2002). Nevertheless, since self-esteem and optimism are helpful components in reducing anxiety (Baumeister et al., 2003; Carver & Scheier, 1989, referred in Zeidner, 1998), and reduced anxiety increases life satisfaction, it is reasonable that test anxiety may affect life satisfaction, since it is a specific form of anxiety (Spielberger & Vagg, 1995). These three components contribute in helping individuals handle stressful situations and failure in different life domains (Carver & Scheier, 2005; Diener, Lucas & Oishi, 2005). It seems, as the determinant of the levels of test anxiety is the individuals’ capacity to handle a stressful situation, for example an examination. Self-esteem and optimism are important tools that contribute to advantages in times of stress. If an individual possesses these tools, helping them to manage the situations that may evoke test anxious feelings, this may lead to increased life satisfaction because of absence of anxiety and negative cognitions.

Although previous research focused mainly on self-esteem as linked to test anxiety, the relationship between positive orientation and test anxiety is plausible because of three reasons. The first reason is that empirical findings shows that positive orientation has associations with mental well-being outcomes such as positive and negative affectivity (Alessandri et al., 2012a). Since test anxiety affects individuals' cognitions (Zeidner, 1998), which is a mental outcome, it is reasonable to imagine an association between these. The second reason is that self-esteem and optimism have associations with test anxiety (Hembree, 1988; Zeidner, 1998). The third reason for imagining an existing relationship between positive orientation and test anxiety is the fact that self-esteem, optimism and life satisfaction are highly correlated with each other (Alessandri et al., 2012a). This implies that even though
life satisfaction lacks connections to test anxiety within the field of research, other studies have shown the significant effects it has together with self-esteem and optimism in other domains, such as in health and affect (Alessandri et al., 2012a). Since self-esteem, optimism and life-satisfaction are closely related, and self-esteem and optimism have associations with test anxiety, it is possible to imagine that positive orientation and test anxiety have a relationship.

Certain demographic factors and other aspects influence the levels of test anxiety as well. As reviewed in Zeidner (1998), both age differences and gender differences exist for test anxiety. Findings indicate that females are more test anxious than males (Hembree, 1988; Pekrun et al., 2004). Research also suggests that there are age differences in test anxiety, even though there is not enough evidence regarding this link quite yet (see Zeidner, 1998). As summarized in Zeidner (1998), test anxiety seems to increase across the school years and be at its worst in high school, and then decreases in and throughout college - that means, that test anxiety seems to decrease with age. Hembree (1988) has also found a small relationship between socioeconomic status and test anxiety. It is possible that the number of exams students have during a semester can affect the levels of test anxiety as well. How prepared students feel for a test is important in determining levels of test anxiety (Spielberger & Vagg, 1995), and therefore, it is logical to think that students who has many exams during a semester will be more test anxious than those who has less. This is because they may feel like they have less time to prepare for the exams, than the students who have fewer exams. Therefore, it seems like gender, age, socioeconomic status and numbers of exams are aspects influencing test anxiety.

There is a lack of research in the literature regarding explorations of positive orientation in relation test anxiety. Earlier research has investigated self-esteem and optimism separately with their relevance to test anxiety (see Zeidner, 1998), but as far as we know, no
studies have yet investigated the relationship between positive orientation and test anxiety. Thus, it is important to investigate self-esteem, optimism and life satisfaction together and their relationship in association to test anxiety. Although optimism and self-esteem have associations with test anxiety separately, it is still unknown which of these that predicts test anxiety the most. No studies have yet investigated the link between life satisfaction and test anxiety, nor regarding its possible connections while accounting for self-esteem and optimism. Exploring these components is important, as they can offer us a better understanding of what leads to test anxiety. Although there is research investigating the relationship between positive orientation in different cultures and countries (Caprara, Alessandri, Tromsdorff, Heikamp, Yamaguchi & Suzuki, 2012; Caprara et al., 2010; Heikamp, Alessandri, Laguna, Petrovic, Caprara & Tromsdorff, 2014), to our knowledge, no such studies have examined the verification of a positive orientation in Sweden, nor its link to test anxiety. Due to the lack of research regarding positive orientation and its components in relation to test anxiety, further examination is advisable to broaden the field of research.

This study aims to contribute to the understanding of what causes test anxiety in relation to a positive orientation. We want to explore if a possible link exists between positive orientation, its components and test anxiety. We hope to contribute with further information that may increase awareness that can help to reduce feelings of test anxiety, and therefore increase students' well-being. It is important to increase the knowledge about why test anxiety may be tangible for some students by raising awareness of which components that may affect the most. Nearly all students experience some pressure during times of examination and for some students test anxiety might be an obstacle that inhibits students' chances to perform their best. With the positive orientation theory in mind, we want to examine these components together and separately to see which the strongest predictor of test anxiety is. This study aims to answer two questions:
1. Does positive orientation predict test anxiety?

2. Which one of positive orientations' three components (i.e., self-esteem, optimism and life satisfaction) is the strongest predictor of test anxiety?

We hypothesize that positive orientation will significantly predict test anxiety. The reason for expecting to find this relationship is that self-esteem and optimism are identified as advantages regarding reducing test anxiety and because high inter-correlations between positive orientations' three components. Findings by Alessandri et al. (2012a) showed that self-esteem has the strongest relation to positive orientation, followed by optimism, and last life satisfaction. Based on these findings, we hypothesize that self-esteem will be the strongest predictor of test anxiety, followed by optimism and life satisfaction. To answer our questions in this study we measured students’ self-esteem, optimism and perceived life satisfaction together with test anxiety in a self-report questionnaire.

Method

Participants

The participants in this study were 311 students from Örebro University ranging from age 20 to 30 (M=22.94, SD=2.36). We chose to explore test anxiety among university students, because examinations are a recurring situation for them. We collected the sample through convenient sampling on a Facebook Page for students at Örebro University. This was to secure that the sample would only consist of students at the university, since we wanted to ensure that our participants had an exam experience the past six months. We chose to examine students at Örebro University since this suited our time and resources. Of the 311 participants, 237 (76.3%) were ranging from 20 to 24 years old and 74 (23.7%) of the participants were between the ages of 25 to 30. Age wise, our sample reflects the general population of students age, since most students at universities in Sweden are between 20 to 25 years old (Statistiska Centralbyrån [SCB], 2015a). Our sample consisted of 229 females (73.6%) and 82 males.
The majority of the participants in the sample had a monthly income between 5,000 to 9,999 SEK (47.9%). In addition, 31.8% reported an income between 10,000 to 14,999 SEK, 13.5% reported income of 0 to 4,999 SEK, 3.9% reported an income of 15,000 to 20,000 SEK and at last, 1.9% reported earning over 20,000 SEK per month. Further, 36.3% of the participants reported going on holiday one time per year, and the majority (56.6%) reported having approximately 1 - 4 exams the past six months. We have little comparison data regarding students monthly income across Sweden, but based on the average income per capita for Swedish individuals between 20 - 24 years old, the reported monthly income in our sample is similar to income per capita in the general population, which is approximately 10,000 SEK (SCB, 2015b). We chose to compare the participants’ income to the average income for the general population between 20 - 24 years old because the majority of our sample was within this age range. Regarding health, 3.9% of the participants reported being diagnosed with a chronic disease the past 12 months and 9.6% reported that someone in their family had been diagnosed. Since our participants were not required to specify type of chronic disease, we did not compare with statistics regarding the prevalence in the general population. We excluded four participants from the sample because they did not fit in our age range between 20 to 30 years. The dropout rate for this study was 1%.

**Measures**

**Test anxiety.** To measure test anxiety we used Zung Self-Rating Anxiety Scale (SAS) (Zung, 1971). Zung (1971) originally developed this scale to measure clinical anxiety. We chose this scale to capture the students who experience higher levels of test anxiety. The majority of students experience some level of test anxiety so we chose a scale that would not be sensitive to milder forms of test anxiety. We changed the instructions of the scale that was given to the students, so they were clear to rate their anxiety in association to a testing situation. To clarify, we changed the instructions from rating clinical anxiety to test anxiety.
We asked the participants to rate their levels of test anxiety during the past 6 months, through a 20-items questionnaire. Every item had a four point rating scale (1 = a little of the time, 2 = some of the time, 3 = good part of the time, 4 = most of the time). Examples of items are: “I feel more nervous and anxious than usual” and “I can feel my heart beating fast”. High scores indicate high levels of test anxiety whereas low scores indicate low levels of test anxiety. Some of the items in the scale were reverse coded. The scale was reliable with a Cronbach Alpha of .79.

Positive Orientation. To measure positive orientation and its separate components we used the same instruments as the researchers used when developing positive orientation theory (Alessandri et al., 2012a). Specifically, the scales we used were the Rosenberg Self-esteem Scale (RSGE), Satisfaction with Life Scale (SWLS) and Revised-Life Orientation Test (LOT-R). We will further describe these instruments below this paragraph.

Self-esteem. To measure self-esteem we used Rosenberg Self-esteem Scale (RSGE). Rosenberg developed this scale in 1989 (referred in Christensen, Johnson & Turner, 2014). We measured the participant’s level of self-esteem through a 10-item questionnaire through a four point rating scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). Examples of items are: “I feel that I am a person of worth, at least on an equal basis with others” and “I take a positive attitude towards myself”. The summed scores range between 0 and 30 whereas high scores indicate high self-esteem and low scores indicate low self-esteem. Some items were reverse coded. The scale showed a Cronbach Alpha of .84, which indicates that the scale is reliable to use.

Life satisfaction. To measure general satisfaction with life we used the Satisfaction with Life Scale (SWLS). Diener et al. (1985) originally developed this scale. However, regarding this study, we used a Swedish translation (Diener et al., 1985, trans. n.i.). We measured the participants’ general level of life satisfaction through a 5-item questionnaire
through a seven-point rating scale (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neither agree nor disagree, 5 = slightly agree, 6 = agree, 7 = strongly agree). Examples of items are: “In most ways my life is close to my ideal” and “I am satisfied with my life”. The summed scores ranges between 5 to 35 whereas the lowest scores between 5 to 9 indicate extremely dissatisfied with life and the highest scores between 30 to 35 indicates that an individual is highly satisfied with life. The scale showed a Cronbach Alpha of .75, which indicates that it is reliable to use.

**Optimism.** To measure optimism we used Revised Life Orientation Test (LOT-R) developed by Scheier, Carver, and Bridges (1994). We adapted the Swedish translation by Muhonen and Torkelson (2005). The LOT-R consists of six items that measures positive expectations on a 5-point rating scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Examples of items are: “In uncertain times, I usually expect the best” and “I'm always optimistic about my future”. High scores indicate optimism whereas low scores indicate pessimism. Some items in the scale were reverse coded. The scale was reliable to use since it showed a Cronbach Alpha of .74.

**Demographic variables.** With earlier research in mind, we wanted to control for gender, age, income and number of exams as a predictor of anxiety. We controlled for this by requesting information about these variables. To control for income we asked for the participants' monthly income and number of holidays they had been on the past 12 months. The purpose of the control question about holidays was to control for socioeconomic status, excluding the participants' own income. For example, a participant may have financial resources in terms of savings or help from family, although they do not earn much money their self. The control question had a second function, because it controls for participants whose anxiety arises because of limited resources.

**Health-related issues.** To control for illness we asked if the participants or someone
in their families had been diagnosed with a chronic disease during the past 12 months. The purpose of controlling for illness was because this may affect the levels of anxiety. Combined with the illness question, we had a complementary question rating the levels of anxiety because of eventual chronic illness. We measured the degree of anxiety through a five-point rating scale, only required from the participants answering yes on the disease question.

**Procedure**

Using a cross-sectional design, meaning that we collected the data only one time, we conducted the study through an Internet survey. We combined the four measurements into one questionnaire, including the control questions. The questionnaire contained 49 questions and the estimated time to complete the questionnaire was 5 to 10 minutes. Because lack of translation, two of the scales (SAS and RSGE) were independently translated from English to Swedish by the two researchers conducting this study, then an independent person who fluently speaks English and Swedish back translated the items to English. The purpose of back translation into English was to compare the original items with the back translated ones, to assure that the Swedish translation and the content of the items were correct (see Appendix 2 for complete translated questionnaire). We published the questionnaire in a Facebook group for students at Örebro University to secure that the participants were students and had an exam experience. To secure that the participants in the study were students at Örebro University, we asked for their current type of major. It was only allowed to fill in the questionnaire one time per IP-address, which decreases the risk of participants answering the questionnaire more than one time. We published the survey four times during seven days to ensure that as many students as possible had the chance to notice the survey. By collecting the data through Internet, we gave the participants the free will to participate in the study. Further, this way of collecting data ensured anonymity as well as confidentiality because we did not request any information from the participants that might reveal their identity. Before
answering the survey, the participants received information about the purpose of the study, their anonymity and the researchers contact information if they had any questions.

When combining the questionnaire we placed demographic questions as gender, age, number of exams, income and holiday first. Secondly, we placed the scales measuring self-esteem, optimism and life satisfaction. Afterwards we placed the test anxiety questions and the final part was questions about the participants' health. The decision to place the screening section about possible illness after the test anxiety items was to avoid negative emotions, or memories, associated with possible illness that would affect higher feelings of anxiety. The questionnaire did not contain any leading questions that would influence the participants' answers in a desirable way. We chose firstly to ask questions about self-esteem, optimism and life satisfaction, to avoid framing negative emotions after answering the test anxiety items. To avoid possible biases we placed the questions in this particular order.

All measures were pilot-tested prior to the study. We conducted a pilot study (N=30) to assure that the participants understood the translations correctly. We also conducted the pilot study to explore whether the three separate components, that is, self-esteem, optimism, and life satisfaction loaded on a single factor, called positive orientation. We investigated this through factor analysis with principal components analysis (PCA) as an extraction method. The PCA showed that self-esteem, optimism and life satisfaction loaded on a single dimension, which means that they all represent one factor - namely, positive orientation. The eigenvalue of 2.113 suggests that self-esteem, optimism and life satisfaction explains 70.42% of the total variance in this factor.

Analyses

To begin with, we first checked whether our data fulfilled the normality assumptions following the indications of Field (2013). None of the four scales we used violated these assumptions (i.e., homogeneity of variances, skewness and kurtosis were smaller than the
value of +1. In other words, this means that the data have a homogeneous variance, and is normally distributed, thus we preceded with the multivariate regression analyses. We ran all the analyses in the IBM Statistical Package for the Social Sciences (SPSS Statistics 20).

Further, we ran a bivariate correlational analysis to see if we could find an existing relationship between self-esteem, optimism, life satisfaction and test anxiety. Then, we ran simple regression model analyses for each of the control variables to investigate if they significantly predicted test anxiety. The variables that predicted test anxiety significantly were included in our analyses as control variables. In order to test our first hypothesis, if positive orientation (i.e., self-esteem, optimism and life satisfaction) will predict test anxiety, we started with combining self-esteem, optimism and life satisfaction into one variable. Further on, we analyzed this by running a multiple regression model analysis. We included the variables that could have a possible influence on the outcome in the same multiple regression model analysis, to control for them. In the analysis, we coded females as 0 and males as 1. To test our second hypothesis if self-esteem, optimism and life satisfaction differ in how much variance in test anxiety they explain, we ran a hierarchical regression model analysis with the constructs separately. In other words, we divided positive orientation into its three separate components: self-esteem, optimism and life satisfaction. Based on findings by Alessandri et al. (2012a), the hierarchical order followed: self-esteem in the first step, optimism in the second and life satisfaction in the third. Together with self-esteem in the first step, we placed the control variables that were significantly predicting test anxiety alone. This was to control for their influence on the outcome variable. We placed self-esteem, optimism and life satisfaction in this order with respect to earlier research findings.

We have a few missing values in our data set. To begin with, we excluded four participants that were not in our age range, but this did not significantly influence the results. We also had three missing values for the item regarding the monthly income because they had
ticked two options, which gives misleading data. Further, we chose to remove three answers regarding the illness question because of duplicate answers. This was misleading because two of the three participants had ticked “no” and “yes, someone in my family” and one had ticked “no” and “yes I do”. At last, we also had to remove five answers regarding the exam question and treat them as missing variables. The reason for doing this was the problem with duplicated answers.

We also estimated the effect size between our predictors (i.e., self-esteem, optimism and life satisfaction) and our dependent variable (i.e., test anxiety) according to Cohen's d. According to Cohen (1992, referred in Christensen et al., 2014) a small effect size is 0.20, a moderate effect size is 0.50 and a large effect size is 0.80. Our estimated effect size was 0.45, which indicates that it is a small to moderate effect. As soon as we received all the answers on the questionnaire, we continued with a power analysis to check if our sample size (N=311) was valid to test our hypotheses - that is, if we had enough participants to detect a real effect, if an effect exists. The power analysis suggested that for a valid sample size we should at least have 116 participants to detect a real effect. With 311 participants, we had enough participants to detect the hypothesized medium effect size between self-esteem, optimism, life satisfaction and test anxiety.

**Results**

**Descriptive statistics.** Overall, most of the participants in this study reported experiencing test anxiety some of the time in relation to exams (M=2.02 SD=.52). Further the participants agreed that they had moderate to high levels of self-esteem (M=2.87 SD=.67). The majority of the participants reported moderate levels of optimism, indicating neither optimism nor pessimism (M=3.25 SD=.80). Similar to the values of optimism, the participants reported moderate levels of life satisfaction, although more spread throughout the sample, which indicated that they neither agree nor disagree that they are satisfied with life (M=4.22
SD=1.40). The standard deviations regarding self-esteem, optimism and test anxiety indicates that the participants' average spread around the mean was not large (SD under value of 1). See further information in table 1.

Table 1.
Descriptive Statistics for Test anxiety, Self-esteem, Optimism and Life satisfaction

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>Range</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test anxiety</td>
<td>2.02</td>
<td>.52</td>
<td>1.05</td>
<td>3.60</td>
<td>2.55</td>
<td>.28</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.87</td>
<td>.67</td>
<td>1.10</td>
<td>4.00</td>
<td>2.90</td>
<td>.45</td>
</tr>
<tr>
<td>Optimism</td>
<td>3.25</td>
<td>.80</td>
<td>1.00</td>
<td>5.00</td>
<td>4.00</td>
<td>.64</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>4.22</td>
<td>1.40</td>
<td>1.00</td>
<td>7.00</td>
<td>6.00</td>
<td>1.95</td>
</tr>
</tbody>
</table>

Note. N=311

To investigate the relationship between self-esteem, optimism, life satisfaction and test anxiety, we ran a bivariate correlational analysis. The results showed that self-esteem, optimism, life satisfaction and test anxiety have a moderate to strong relationship with each other. Specifically, self-esteem, optimism and life satisfaction separately have negative significant associations with test anxiety. In other words, participants who have high levels of self-esteem, optimism and life satisfaction report experiencing less test anxiety (see Table 2).

Table 2
Correlations among Self-esteem, Optimism, Life Satisfaction and Test Anxiety

<table>
<thead>
<tr>
<th></th>
<th>Self-esteem</th>
<th>Optimism</th>
<th>Life satisfaction</th>
<th>Test anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>-</td>
<td>.677**</td>
<td>.516**</td>
<td>-.546**</td>
</tr>
<tr>
<td>Optimism</td>
<td>-</td>
<td>-</td>
<td>.540**</td>
<td>-.439**</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.241**</td>
</tr>
<tr>
<td>Test anxiety</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. * p < .05; **p < .01

To investigate if our control variables gender, age, number of exams, income, holiday and illness significantly predicted test anxiety alone, we ran different simple regression analyses for each variable. The results suggested that gender, number of exams, income, holiday and participants' own illness separately predicted test anxiety, so we controlled for them. Specifically, those who experience more test anxiety are females, students with more exams, and a lower income. Further, participants diagnosed with a chronic illness the past 12
months also tended to experience higher levels of test anxiety. We excluded family illness as a control variable because family members' illness did not predict test anxiety. We removed the rating scale for levels of anxiety, regarding the disease question, because it did not provide any sufficient information regarding test anxiety. Although not significant, we kept age as a control variable due to earlier research regarding age differences. We excluded holiday from the following analyses, because it overlapped with the variable of income and income had more explanatory power.

**Does positive orientation predict test anxiety?** To investigate if positive orientation predicts test anxiety we firstly created one single variable, named POS, by averaging the self-esteem scale, the optimism scale and the satisfaction with life scale. Secondly, we ran a multiple regression analysis with positive orientation as a predictor, together with age and the control variables that were significant predictors, and test anxiety as the outcome. The results showed that positive orientation, with the control variables, significantly explains 31% of the total variance in test anxiety, \( F(6, 296) = 22.192, p < .05 \). Specifically, individuals who hold a positive orientation towards life, the self and the future, experience less test anxiety, \( (\beta = -.415, p < .05) \). Moreover, females experience more test anxiety compared to males, \( (\beta = -.262, p < .05) \). However, income, age, and the participants' possible chronic illness did not significantly predict test anxiety. The effect of exams disappeared from the model, because it did not explain any variance in test anxiety together with the other variables (see Table 3).

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE b</th>
<th>( \beta )</th>
<th>95% CI for ( \beta )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.4</td>
<td>.15</td>
<td>-</td>
<td>2.90, 4.04</td>
</tr>
<tr>
<td>POS</td>
<td>-.29</td>
<td>.03</td>
<td>-.42***</td>
<td>-.36, -.22</td>
</tr>
<tr>
<td>Age</td>
<td>.04</td>
<td>.02</td>
<td>.10</td>
<td>-.00, .09</td>
</tr>
<tr>
<td>Gender</td>
<td>-.32</td>
<td>.06</td>
<td>-.26***</td>
<td>-.43, -.19</td>
</tr>
<tr>
<td>Income</td>
<td>-.05</td>
<td>.03</td>
<td>-.08</td>
<td>-.11, .02</td>
</tr>
<tr>
<td>Students' Illness</td>
<td>.18</td>
<td>.13</td>
<td>.07</td>
<td>-.08, .44</td>
</tr>
<tr>
<td>Exams</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. \( R^2 = .31, F = 22.192. * p < .05, ** p < .01, *** p < .001 \)
Which one of positive orientations' three components (i.e., self-esteem, optimism and life satisfaction) is the strongest predictor of test anxiety? To investigate which one of positive orientations' three components (i.e., self-esteem, optimism and life satisfaction) that is the strongest predictor of test anxiety, we ran a hierarchical regression model analysis including the control variables. We chose the order of the variables with respect to the theoretical findings that implies self-esteem having the strongest relationship to positive orientation, followed by optimism and life satisfaction.

In the first regression step, we inserted self-esteem, together with the control variables that was significant predictors to test anxiety (i.e., gender, exams, income and illness for the person). We also inserted age as a control variable although age did not significantly predict test anxiety alone. This was because age may have an influence together with the other variables. In the second regression step, we inserted optimism and in the third step, we inserted life satisfaction. The results suggested that 35.8% of the total variance in test anxiety was explained by self-esteem, exams, age, income, gender and illness (F(6,296) = 27.536, p <.05.) Specifically, individuals with low self-esteem, (β = -.480, p <.05), and females, (β = -.229, p <.05), were more likely to experience test anxiety. On the other hand, controlling for self-esteem and the control variables, the results suggested that optimism (Fchange (1, 295) = 3.627, p>.05) did not predict test anxiety. When inserting life satisfaction into the model, results suggested that life satisfaction (Fchange (1, 294) = 1.640 p>.05) did not predict test anxiety either. This means that optimism and life satisfaction brought little explanatory power over and above the variation in test anxiety explained by self-esteem. Moreover, the results from the hierarchical regression model showed that income, age, number of exams and illness did not have any significant prediction in test anxiety either. Overall, self-esteem and gender were the only variables in the regression model that significantly predicted test anxiety (see Table 4).
Table 4

Hierarchical Multiple Regression Analysis Predicting Students Test Anxiety

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>-.48***</td>
<td>-.40***</td>
<td>-.42***</td>
</tr>
<tr>
<td>Gender</td>
<td>-.23***</td>
<td>-.23***</td>
<td>-.23***</td>
</tr>
<tr>
<td>Age</td>
<td>.08</td>
<td>.08</td>
<td>.09</td>
</tr>
<tr>
<td>Exams</td>
<td>.09</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>Income</td>
<td>-.05</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Students illness</td>
<td>.06</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>Optimism</td>
<td>-</td>
<td>-.12</td>
<td>-.15*</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>-</td>
<td>-</td>
<td>.07</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>.36***</td>
<td>.37</td>
<td>.37</td>
</tr>
<tr>
<td>∆R²</td>
<td>-</td>
<td>.008</td>
<td>.004</td>
</tr>
<tr>
<td>F</td>
<td>27.536***</td>
<td>24.330***</td>
<td>21.540***</td>
</tr>
<tr>
<td>∆F</td>
<td>3.627</td>
<td>1.640</td>
<td></td>
</tr>
</tbody>
</table>

Note. ∆R² = R² change, ∆F = F change. * p < .05, ** p < .01, *** p < .001

Discussion

This study sought to explore if positive orientation influences the levels of test anxiety and which component among self-esteem, optimism and life satisfaction that is the strongest predictor of test anxiety. Our results implies that a positive orientation can be helpful for students in testing situations, and that self-esteem seems to be the most important component affecting levels of test anxiety. Further, females tend to experience test anxiety in a larger extent than their male counterparts do. The results suggest that a positive orientation predicts test anxiety, which verifies the first hypothesis in this study. This means that individuals with a positive view on the self, the world and the future seems to be experiencing less test anxiety and in contrary, individuals lower in positive orientation tend to be more prone to experience test anxiety. One should have in mind that positive orientation explained 31% of the variance in test anxiety, which leaves us with 69% that are unexplained, due to other factors. However, when investigating the three components of positive orientation separately, we found that only self-esteem was significant in predicting test anxiety. In other words, students with high levels of self-esteem will probably not suffer from as much test anxiety as students with low levels of self-esteem. Again, one should remember that self-esteem, together with the control
variables, only explained 35.8% of the variance in test anxiety, which means that 64.2% of the variance remains unexplained. Our findings only partially supported the second hypothesis, that self-esteem would be the strongest predictor followed by optimism and life satisfaction. Although our results supported the hierarchical order among self-esteem, optimism and life satisfaction, only self-esteem was the significant predictor in the model. This leads to the fact that we cannot account with the effect of optimism and life satisfaction because they do not seem to bring any unique contribution over and above the variation they have in common with self-esteem. It seems as if the levels of self-esteem students possess are instead more important. Even if self-esteem was the single component that predicted test anxiety, the correlational results suggest a relationship among all these constructs. We consider these results as support to the statement that optimism and life satisfaction are still components of importance, potentially influencing feelings of test anxiety in some way. However, one should bear in mind that these relationships may unfold differently over time and if one uses experimental or longitudinal designs, for example. Overall, we found relationships between positive orientation and that it seems to predict test anxiety, and further, when separating the components, self-esteem seems to be the driving part in positive orientation that affects test anxiety the most.

Our study provided knowledge that a positive orientation is helpful for students in examination situation in terms of lowering their test anxious feelings. Positive orientation is a new theory, which needed more exploring, and this study provided new findings that confirms the latent dimension of positive orientation in a Swedish population and that it affects test anxious feelings. Moreover, and slightly more interesting, is how the components in positive orientation functions when they are separated from each other, in relation to test anxiety. In our results, self-esteem reduced the effects of both optimism and life satisfaction in predicting test anxiety. These findings open new doors in the field of research regarding the fact that
optimism does not seem to contribute to levels of test anxiety with the effect of self-esteem. This is of importance because several studies have found that optimism does affect the levels of test anxiety. The question that arises with our finding is how strong optimism really is when including self-esteem, and how do these components function together in relation to test anxiety? Our results also imply that self-esteem is the bearing, if not the only, component in positive orientation that contributes to lower levels of test anxiety. This is something earlier research has not investigated or found, so this finding as well open up for further research regarding the positive orientation theory and how its separate components works in relation to different outcomes in life that has not been examined yet. Our findings somewhat contradict earlier empirical work and more research is encouraged to establish the relationship between optimism and test anxiety when accounting for the effects of other variables, such as self-esteem, and regarding the positive orientation theory and different outcomes in life. However, our results imply that possessing a positive orientation can be helpful for students, and that it is important when reducing feelings of test anxiety.

The relationship among the components of positive orientation and test anxiety seems complex, and speculations concern the effects of self-esteem and how life satisfaction, through self-esteem and optimism, may affect test anxiety. The fact that the effect of optimism seems to disappear when including self-esteem could be that self-esteem lays a fundamental role when developing optimism. We imagine that the relationship between test anxiety and self-esteem is similar to the relationship between self-esteem and performance (see Baumeister et al., 2003). We consider it possible that the levels of test anxiety may be a result of self-esteem and therefore, a result of earlier performance. This could be an explanation to why the effect of optimism seems to disappear because if students have high self-esteem, because of earlier performance in relation to exams, this can decrease the test anxious feelings alone. One explanation could be due to earlier experiences (see Rosenberg et
al., 1989; Skaalvik & Hagtvet, 1990) and that self-esteem lays a fundamental base for the level of test anxiety in terms of earlier examinations. In other words, if students have received good grades and therefore developed high self-esteem, they will probably be optimistic about the future outcomes. In addition, bad grades will decrease self-esteem so student's hopes of the outcome of the exam will not be as high. This further increases the test-anxious feelings because of negative thoughts in association to earlier results. In a real life setting, one might interpret the levels of self-esteem as optimism settles varies levels of test anxiety, when instead the self-esteem affects the positive or negative thoughts. Second, regarding life satisfaction, we found that it do not predict test anxiety. However, life satisfaction may affect test anxiety indirectly because of self-esteem and optimism. We have two speculations regarding the relationship between life satisfaction and test anxiety. Firstly, if students in general have positive thoughts of future outcomes, which reflect an optimistic view on life, it may lead to increased satisfaction with life because of less worry. Secondly, both self-esteem and optimism leads to handling stressful situations better, not just in relation to an examination situation (Nes & Segerstrom, 2006; Arndt & Goldenberg, 2002), and if individuals are more prone to cope better with diversities in life it is reasonable that these individuals will experience more satisfaction with life. Even though positive orientation, as one construct, predicted feelings of test anxiety, the separate components indeed have their complicated relationships together and separately.

There are some unexpected findings regarding our results. To begin with, because of the empirical research on optimism and test anxiety, we had expectations that optimism would predict test anxiety. Surprisingly, we found that optimism was not a significant predictor to test anxiety. We based our expectations on the fact that earlier research has found empirical evidence that high-test-anxious students engage in negative thoughts and tend to worry in relation to exams which increases test anxiety (Carver & Scheier, (1989, referred in Zeidner,
In fact, self-esteem was the only component in positive orientation that significantly predicted test anxiety. This was highly unexpected that neither optimism nor life satisfaction would bring any unique contribution over and above the variation they have with self-esteem. Even though we expected self-esteem to predict test anxiety in a larger extent, we did not expect it to be the only component in positive orientation that predicted test anxiety, so this was an unexpected finding for us.

We have some limitations in our study that is important to acknowledge. The first limitation concerns the fact that we used cross-sectional data, thus we cannot assume the over time relationship between positive orientation and test anxiety, nor can we infer causality. Moreover, our sample contained more female participants compared to males. This could have affected the significant results. We have controlled for the effect of gender on our results, though, also because of the earlier findings in the research that showed that women experience more test anxiety than men do. In hindsight, we could have controlled for this bias by selecting a more equally distributed sample gender wise, for example by using a stratified sampling method. Nevertheless, research shows, irrespective of the gender, associations between positive orientation and different well-being outcomes (see Alessandri et al., 2012a). Based on our control of gender, we have limited the influence our slightly unbalanced sample might have had on the results. The second limitation, also regarding our sample, was the distribution of age, where the majority was younger participants. This could have led to low variance in age, which could be responsible for the lack of any significant age differences. Moreover, the vast majority of people deciding to follow university studies do so in their early twenties (SCB, 2015a), thus the limited age range. With a stratified sample, meaning dividing the participants into age groups, our results might have been different. However, we did not choose this method, in part because of the limited time, in part because of the narrow age pool of registered students. Further, we excluded this option because our main purpose of the study
was not to investigate age differences regarding test anxiety, although it would be interesting with earlier research mind. Nevertheless, our main goal was to explore whether positive orientation predicts test anxiety, and the most prevalent testing situation in adulthood is during the university years, thus, our rather narrow age range. The final acknowledged limitation is the fact that all measures are self-reports. This issue can lead to common method variance that could enhance our estimates, such as the regression coefficients. One possible issue of common method variance can be due to social desirability bias (see Christensen et al., 2014). The participants may want to portray themselves as optimistic individuals with high self-esteem whom are satisfied with life, because these traits may be desirable for an individual, which could lead to social desirability bias. Still, with our limited time and resources in mind, we consider these instruments as valuable because we believe that the participants chose the answers that was applicable to them and was honest when answering the questions. Although there may not be a problem with social desirability, we do not have any measures to control for it. Still, the fact that the participants were completely anonymous decreases the risk for social desirability bias (see Christensen et al., 2014). With more resources and time, one way to control for this, could be that someone who knows the participant compliment with another questionnaire regarding these beliefs. For future replications, we suggest that the researchers consider these acknowledged limitations as important, and try to control for them.

Even though this study has its limitations, it also has several strengths. To begin with, by conducting a pilot study, we wanted to make sure of the validity of our instruments and establish a correct Swedish translation before handing out the final questionnaire. We believe that the pilot study is one of the main strengths because it established a strong and fundamental base for continuing with the study. The pilot fulfilled its purpose because it validated the scales we were using in terms of inter-item reliability and confirmed the latent
factor of positive orientation in a Swedish sample so we could continue the research with
great confidence. Another strength is that we used the same scales to measure our variables as
the researchers did when developing the positive orientation theory (Alessandri et al., 2012a).
Even though there are other scales available, we used the same instruments as the previous
researchers so we could ensure that we measured positive orientation. The next strength
concerns our sample. We validated our sample size through a power analysis, which showed
that our sample size of 311 participants was big enough, which contributes to lower risk of a
type-2 error. If the sample size would be too small, it could increase the risk to reject
associations that in fact exists (see Christensen et al., 2014). This conduces to that we can be
more certain about our results and increases the chances that we found true and significant
relationships. Moreover, we took an approach that allowed us to tear apart the influences of
the three components of positive orientation. We also had an original approach and applied
this theory to a very important real-life situation that is taking a toll on young adults’ well-
being: test anxiety due to exams. All the strengths that are mentioned forms a solid foundation
for this study and we are confident that a well conducted pilot study and a large sample
secures trustworthy results.

In conclusion, the findings in this study suggests that individuals with a predisposition
to be positive about themselves, their life and their future will have an advantage in evaluative
settings by reduced feelings of test anxiety. However, even though positive orientation as one
construct predicts test anxiety, self-esteem is the only component that predicts test anxiety
when separating the components. This implies that self-esteem seems to be the component
that drives positive orientation to affect the levels of test anxiety. Still, we suggest using other
methods to explore how optimism and life satisfaction affect test anxiety because separately
they do not, but together with self-esteem, they do. In future research, it would be interesting
to explore how they may affect each other. A suggestion could be to involve optimism and
life satisfaction as moderators to explore their indirect effects with self-esteem and test anxiety. For further investigation of the relationship between self-esteem and test anxiety, it would be interesting to examine if self-esteem and test anxiety together affect students performance. This would not just involve self-report questionnaires, but also different tasks measuring the performance. By overlooking the fact that test anxiety might be a disadvantage for students, the feelings can become so tangible that it might debilitate the capacity to perform. Even though our study has shown that a positive orientation functions as a predictor to test anxiety, the field of research still has empty gaps to fill in towards the goal to fully understand its complications regarding its components. If individuals have a positive orientation as a predisposition, this will function as an advantage for future challenges educational wise. With this study as a start, we further encourage to investigate to which extent a positive orientation really affects test anxiety because self-esteem seems to be the bearing component that drives the other two. Therefore, we cannot infer if it is positive orientation, or self-esteem, that affects test anxiety. This is of great importance towards the goal to help young students, in terms of reducing test anxious feelings. Despite our power regarding the sample size, the fact that the results only apply to students at Örebro University remains. Thus, generalization is not possible, so we encourage further research to replicate the study in other Swedish universities to see if similar results occur, and include different age groups. This is an important issue for future research because if test anxiety is so tangible for some students that it will debilitate their performance, this may inhibit these students’ chances of pursuing higher education, and in turn, affect their well-being. Even if reducing test anxiety and increasing positive orientation in young students do not directly lead to subjective well-being, in the end, we are sure it will make it easier to gain a higher education. In today's society, it is a rule rather than an exception to have a higher education to qualify for a successful job. With education in mind, it is important to explore the phenomenon and find
ways to reduce test anxiety, so every student gets a chance to perform the best they can and succeed in their future.
References


*Journal of Personality Assessment, 49*, 71-75. EISSN: 1532-7752


http://www.ebrary.com


Appendix 1

Information letter for the questionnaire

Hej!

Vi är två studenter från Samhälls- och Beteendevetenskapliga programmet vid Örebro Universitet som skriver vår kandidatuppsats i Psykologi. Vi vill ta reda på relationen mellan positiv inställning och tentaängest. Syftet med denna studie är att undersöka vilka faktorer som leder till tentaängest hos universitetsstudenter i åldrarna 20 till 30.

Vi skulle uppskatta om Du tog dig tid att besvara vår enkät. Enkäten består utav 49 frågor och uppskattas ta ca 10-15 minuter att besvara. Svarsalternativen är utformade som kryssalternativ, där Du ska kryssa i det alternativ som stämmer bäst in på Dig i relation till en examination.

Ditt deltagande är anonymt och Dina svar kommer att behandlas konfidentiellt. Dina svar kommer enbart att användas till denna studies syfte.

Vid frågor rörande studien, dess syfte eller utformande, vänligen kontakta oss på:

Mail: Magfrh131@studentmail.oru.se & Sarcoh131@studentmail.oru.se

Tack för Din medverkan!

Magdalena Fredriksson & Sarah Wahlstedt Corméry
Appendix 2

Questionnaire

1. Kön: Man □ Kvinna □

2. Ålder: ______________________________

3. Vilket program läser du? ________________

4. Inkomst:
□ 0 - 4.999 kr
□ 5.000 - 9.999 kr
□ 10.000 - 14.999 kr
□ 15.000 - 20.000 kr
□ > 20.000 kr

5. Hur många gånger har du åkt på semester det senaste året?
□ 0 gånger
□ 1 gång
□ 2 gånger
□ 3 gånger
□ Fler än 3 gånger

6. Hur många tentor har du skrivit de senaste 6 månaderna?
□ 0 tentor
□ 1 - 2 tentor
□ 3 - 4 tentor
□ 4 - 5 tentor
□ Fler än 5 tentor

Dessa 10 påståenden behandlar din generella självkänsla. Tänk inte på specifika situationer, utan din självkänsla i allmänhet. Påståendena besvaras med hjälp av en 4-gradig skala som sträcker sig från "instämmer inte alls" till "instämmer helt". Du ska besvara påståendena med det alternativ som stämmer bäst in på Dig. Kryssa endast i ett alternativ.

7. Jag känner att jag är en värdefull person, åtminstone lika värdefull som andra.
□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

8. Jag upplever att jag som person har goda egenskaper.
□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

9. I det stora hela kan jag känna mig misslyckad.
□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

10. Jag klarar av att göra saker lika bra som de flesta andra personer.
□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls

13. På det stora hela är jag nöjd med mig själv.
□ Instämmer helt
□ Instämmer något
□ Instämmer ej
□ Instämmer inte alls
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

15. Då och då känner jag mig oduglig.
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

16. Vissa stunder tycker jag att jag inte är bra alls.
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

Följande sex frågor behandlar din inställning till livet i allmänhet. Påståendena besvaras med hjälp av en 5-gradig skala där 1 = instämmer inte alls, och 5 = instämmer helt. Du ska besvara påståendena med det alternativ som stämmer bäst in på Dig. Kryssa endast i ett alternativ.

17. I osäkra tider, förväntar jag mig vanligtvis det bästa.
   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

18. Om något kan gå fel för mig så gör det.
   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

19. Jag är alltid optimistisk när det gäller min framtid.
   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

Följande fem frågor behandlar hur tillfredsställt du är med livet i allmänhet. Tänk inte på specifika situationer, utan ditt liv i det stora hela. Frågorna besvaras med hjälp av en 7-gradig skala där 1 = instämmer inte alls och 7 = instämmer helt. Du ska besvara påståendena med det alternativ som stämmer bäst in på Dig. Kryssa endast i ett alternativ.

22. Jag förväntar mig i stort sett att det ska hända mig fler saker än dåliga.
   1 2 3 4 5
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

23. Det mesta i mitt liv är nära mitt ideal.
   1 2 3 4 5 6 7
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

24. Förutsättningar för mitt liv är utmärkta.
   1 2 3 4 5 6 7
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

   1 2 3 4 5 6
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

26. Så här långt har jag fått de saker jag anser viktiga i livet.
   1 2 3 4 5 6 7
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

27. Om jag kunde leva om mitt liv, skulle jag inte ändra nästan någonting.
   1 2 3 4 5 6 7
   - Instämmer helt
   - Instämmer något
   - Instämmer ej
   - Instämmer inte alls

Följande 20 påståenden behandlar ångest i relation till tenta. Detta kan vara ångest inför, under eller efter ett tentamenstillfälle, som exempelvis en salstenta. Vänligen fyll i det alternativ som bäst beskriver hur ofta Du känt eller uppvisat dessa beteenden under de senaste 6 månaderna. Frågorna besvaras med hjälp av en 4-gradig skala som sträcker sig från "nästan aldrig" till "nästan alltid". Du ska besvara påståendena med det alternativ som stämmer bäst in på Dig. Kryssa endast i ett alternativ. Viktigt när du besvarar dessa
påståenden är att du relaterar svaret till en tenta!

☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

29. Jag känner mig rädd utan någon anledning.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

30. Jag blir lätt upprörd och upplever känslor av panik.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

31. Det känns som att jag bryter ihop.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

32. Jag känner att allt är bra och att ingenting dåligt kommer att hända.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

33. Mina ben och armar skakar och/eller darrar.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

34. Jag besväras av huvudvärk, nacke- och ryggsmärtor.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

35. Jag känner mig svag och blir lätt trött.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

37. Jag upplever att mitt hjärta slår fort.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

38. Jag känner mig yr
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

41. Jag besväras av avdomningar eller stickningar i tår och fingrar.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels

42. Jag besväras av magsmärtor och/eller magproblem.
☐ Sällan
☐ Ibland
☐ Ofta
☐ Mestadels
43. Jag måste tömma min blåsa ofta.
□ Sällan
□ Ibland
□ Ofta
□ Mestadels

44. Mina händer är vanligtvis torra och varma.
□ Sällan
□ Ibland
□ Ofta
□ Mestadels

45. Mitt ansikte blir varmt och rodnar.
□ Sällan
□ Ibland
□ Ofta
□ Mestadels

46. Jag har lätt för att somna och känner att jag fått en god natts sömn.
□ Sällan
□ Ibland
□ Ofta
□ Mestadels

47. Jag drömmer mardrömmar.
□ Sällan
□ Ibland
□ Ofta
□ Mestadels

Följande två frågor behandlar din eller någon i din familjs hälsa. Familj inkluderar föräldrar, syskon, partner och barn.

48. Har du eller någon i din familj blivit diagnosticerade med en kronisk sjukdom under de senaste tolv månaderna?
□ Ja, jag.
□ Ja, någon i min familj.
□ Nej

49. Om ja, (jag eller någon i min familj har blivit diagnosticerade), hur starkt har detta påverkat din ångest på en 5-gradig skala? (1 = Det har inte påverkat mig, 5= det har påverkat mig väldigt mycket)
□ 1
□ 2
□ 3
□ 4
□ 5
□