



Dublin Business School
excellence through learning

**The Effectiveness of ISPCC Services on Stress, Self-Esteem
and Test Performance Anxiety**

Prakashini Banka

Submitted in partial fulfilment of the requirements of the
Bachelor of Arts degree (Psychology Specialization) at DBS
School of Arts, Dublin.

Supervisor: Dr John Hyland
Head of Department: Dr S. Eccles

March 2012
Department of Psychology
DBS School of Arts

Table of Contents

Abstract	4
Chapter One	
Introduction	5
1.1 Stress and School	5
1.2 Self-esteem	6
1.3 Stress	7
1.4 Stress and Coping Model	10
1.5 Anxiety	11
1.6 Social Support.....	14
1.7 Current Study.....	16
Chapter Two	
Methodology	18
2.1 Material	18
2.2 Participants	19
2.3 Design	19
2.4 Procedure	20
2.5 Data Analysis	20
Chapter Three	
Results	21
3.1 Stress Variable	21
3.2 Self-Esteem Variable	22

3.3 Test Performance Anxiety	23
3.4 ANOVA	24
3.5 Correlation	26
Chapter Four	
Discussion	27
4.1 Aim	27
4.2 Variable Results.....	28
4.3 Other Statistical Analyses	28
4.4 Interpretations of Results: Stress	29
4.5 Interpretations of Results: Self-Esteem.....	30
4.6 Interpretations of Results: Test Performance Anxiety..	30
4.7 Limitations.....	31
4.8 Future Research.....	34
4.9 Conclusion.....	34
References	35
Appendix.....	49

ACKNOWLEDGMENT

I would like to thank the best lecturer and supervisor in Dublin Business School for all his support and his readiness to help at anytime. Without Dr John Hyland this thesis wouldn't be possible. I would also like to thank Deputy Principal Dermot Morris from [REDACTED] Secondary, Deputy Principle Cunningham and Principal Cullen from [REDACTED] Secondary School for all the support throughout the data collection process. A special thanks to Margie Roe and Caroline Sullivan from the ISPCC for their permission to conduct this research and their help, to the children who took part in the survey and to the teachers who helped distributing the questionnaires. Last but not least, I would like to thank my mum, dad and my family for their constant support.

The aim of the ISPCC is to provide support for children and be there 24/7 to assist a child. There has been a lack of previous research looking at social support, particularly family, closer friends and to a lesser extent, support agencies. The purpose of this study is to evaluate the ISPCC services in practice and its impact on stress, test performance anxiety and self esteem. The study is a survey design and the sample consists of children (age range 13 –18 years old) who have used (SU) and who haven't used the services (NSUS). There was a total number of 99 girl and 89 boys. They were given a battery of measures including the perceived stress scale, test performance anxiety scale and Rosenberg's Self-esteem questionnaires. The hypotheses were that SU will indicate lower levels of stress, test performance anxiety and higher level of self-esteem than NSUS. The results were significant for stress ($F(2, 166) = 11.68, p = 0.005, 1\text{-tailed}$) and self-esteem ($F(2, 171) = 6.52, p = 0.01, 1\text{-tailed}$); however test performance anxiety result was insignificant ($F(2, 171) = 2.53, p = 0.41$).

Chapter One

1.1 Stress and School

School years can be a very stressful period of time for children. According to researchers such as Blyth, Simmons & Carlton-Ford (1983); Eccles, Midgley & Adler, (1984); Hill & Lynch, (1983); Rosenberg, (1986); Simmons, Blyth, Van Cleave and Bush (1979), the transition from elementary to middle school or junior high school can have a significant impact on student's self-perceptions and self-esteem (as cited in Wigfield, Eccles, Iver, Reuman & Midgley, 1991). Research by Eccles, Midgley and Adler (1984) suggests that young adolescents become more negative school and about themselves (as cited in Wigfield et al, 1991). Rosenberg (1973) study showed that the move to junior high school has caused young adolescents general self-esteem is lower and less stable and they have higher levels of self-conscious (as cited in Wigfield et al, 1991). According to Harter (1983), self-esteem represents the evaluation of the value and worth of self-concept (as cited in Vallerand, Pelletier & Gagné, 1991). There are two main views of self-esteem. The first view is that self-esteem is unidimensional (Coopersmith, 1967; Rosenberg, 1965), meaning that there is only a general feeling of self-esteem. The multidimension approach is a more recent and accepted view of self-esteem (Byrne, 1984; Harter, 1983; Shavelson & Marsh, 1986). The multidimensional approach suggests that self-esteem is different across various domains, for example, an individual may have higher self-esteem academically while they may suffer from lower self-esteem in interpersonal relationship (Vallerand et al, 1991). There has been much research looking at the benefit of high self-esteem on children and the disadvantage of low self-esteem. For example, some researchers (Branden, 1994; Wiggins & Wiggins, 1992) observed that children with high self-esteem tend to have a favorable views about themselves and are more successful in academia and more responsible in school and home. Children with

low self-esteem view themselves negatively and they have poorer self-control (as cited in Larkin & Thyer, 1999). To have high self-esteem is to have self-respect and to consider oneself as worthy (Rosenberg, 1965). Preadolescence is also a very important stage of development, where the child has to prepare for adolescence. At this stage it is believed that they child may suffer from decreased self-esteem (e.g. Frank & Cohen, 1979).

1.2 Self-Esteem

There are also many studies looking at how low self-esteem has a negative impact on children's behaviour in school (e.g. Burnett, 1984; Hwang, 1995; Lochman & Lampton, 1986, Wiggins & Wiggins, 1992). Research by Rosenberg and Pearlin (1978), suggested that social class has an impact on self-esteem for adults however adolescents did not show signs of low self-esteem caused by social class (as cited in Wiltfang & Scarbecz, 1990). Research has shown that higher self esteem leads to better mental health, better coping abilities and less likeliness of suffering from depression at later stage in adulthood or even adolescents (Birndorf, Ryan, Auinger, & Aten, 2005). Gender differences has been a factor rarely studied when it comes to self-esteem. Puskar, Bernardo, Ren, Haley, Tark, Switala and Siemon (2010) found that females score lower on self-esteem scale as well as optimism scale compared to male. Trzesniewski et al (2006) found that adolescents suffering from lower self-esteem are more likely to have poor mental health, physical health, economic situation and increase criminal activity in young adulthood. Other studies such as Donnellan, Trzesniewski, Robins, Moffitt and Caspi (2005) found that adolescents with lower self-esteem are more likely to involve in anti-social behaviour, eating disorders, depression and suicidal ideas. Therefore self-esteem has a significant importance on the outcomes of life's other domains (Erol & Orth, 2011). Results of self-esteem in adolescents have been inconsistent across research. Some studies found an increase in self-esteem (e.g. Huang, 2010; Pullman, Allik, & Realo, 2009; Twenge & Campbell, 2001), while others showed that

self-esteem cannot be changed (Young & Mroczek, 2003) or even lowered (McMullin & Cairney, 2004; Robins, Trzesniewski, Tracy, Gosling & Potter, 2002). Due to the various difficulties that students face in school, it is very important to investigate the role of some of these variables, such as stress and the role that social support may play in these events

1.3 Stress

Stress has become a major concern for adolescents and may lead to negative consequences (Youngs, Rathge, Mullis & Mullis, 1990). There are various studies looking at the impact of stress on children such as Compas (1987), Compas, Connor-Smith, Saltzman, Thomsen and Wadsworth (1993; 2001) has indicated a significant relationship between adolescent's stress, mental health and their psychological well being (as cited in Fridrici & Lohaus, 2009). However stress is also considered as a normal factor in everyday life (Peirceall & Keim, 2007). According to Lazarus and Folkman (1984), an individual's perception of their inability to cope with a situation in the past, present or future is what leads to stress (as cited in Robotham, 2008). However, being able to deal with life's daily demands and stressors effectively is very important for functioning healthily (Pincus & Friedman, 2004). Schafer (1996), also suggested that stress can be positive in certain situations (as cited in Robotham, 2008), as it may help an individual by motivating the person, for example, motivating a student for their exam. However, if the level of stress is too high, it can result in negative consequences for the person.

Adolescents may experience stress due to many factors in the environment, for example, their experience of stress may be caused by academic performance, exposure to violence, family problems and so on. Children in today's society are more exposed to stress and this have a negative impact on other aspects of their lives. Research has shown that stress can reduce school performance (e.g. Fontana & Dovidio, 1984), and reduce self esteem (e.g.,

Kroger, 1980). Stress will be evaluated using the Biopsychosocial model as all three are vital for this research. The biopsychosocial model is very helpful in understanding stress in its biological form, in its psychological and social form. The biopsychosocial model is widely used in order to understand psychological problems and it is “both a philosophy of clinical care and a practical clinical guide. Philosophically, it is a way of understanding how suffering, disease, and illness are affected by multiple levels of organization, from the societal to the molecular” (Borrell-Carrio, Suchman & Epstein, 2004, p.576). It gives base to psychological problems while taking into considerations of other contributing factors such as biological and environmental influences. In order to understand how stress has damaging effects on children, it is important to know what goes on in the body when stressors are presented.

The first biological definition of stress was proposed by Selye (1956; 1974) as the “non-specific response of the body to any demand upon it” (as cited in, Russell, 2007, p. 1). The stress system consists of two main structures; the hypothalamic-pituitary-adrenal axis (HPA) and the locus caeruleus/ norepinephrine-sympathetic system (LC/ NE-SNS). These two systems are very important in responding to stressors (Pervanidou, 2008). When the stress system is activated due to the presence of a stressor, a behaviour change occurs. However, excessive activation of the stress system increases the release of cortisol via the corticotrophin-releasing hormone (CHR). Hyper activation of HPA axis has been observed in patients suffering from depression, mainly melancholic depression. The release of CHR and cortisol has been associated with obsessive compulsive disorder (e.g. Bigos, Folan, Jones, Haas, Kroboth & Kroboth, 2008), anorexia nervosa (e.g. Hotta, Shibasaki, Masuda, Imaki, Demura, Ling & Shizuma, 1986), anxiety and depression (e.g. Arborelius, Owens, Plotsky & Nemeroff, 1999). Determinants of stress vary a lot, for example, genetic background, types of stressor, severity, and chronicity. Other factors such as age, other illnesses and

development stage of the individual also matter (Pervanidou, 2008). Children, adolescents, adults and older adults experience stress differently based on their life experience. As for children suffering from stress at very young age, they may experience specific effects on the brain development (Blair, 2010). Research by Sharrer and Ryan-Wenger (2002) has shown that some children have indicated the impact of stress in physical symptoms such as headaches or stomach aches. Research has shown that high level of stress may also lead to cancer (Andersen, Kiecolt-Glaser & Glaser, 1994; Sharma, Sharp, Walker & Monson, 2008) and coronary heart disease (Sjostrom-Strand & Fridlund, 2007). The biological model of stress has shown how harmful the impact of stress can be on the body. Understanding the biological underpinnings of stress can help to design interventions to alleviate stress in applied settings.

Stress can also be linked to various other psychological symptoms. Research has shown that stress has been the leading cause of depression, lower self-esteem and the increase of anxiety. Depression, as already mentioned, has been associated with the release of cortisol and this indicates a relationship between stress and depression (Pervanidou, 2008). It has also been observed that the release of CHR and cortisol has an impact on anxiety (Kallen, Tulen, Utens, Treffers, Jong & Ferdinand, 2008) which again would suggest that stress, which is the cause of CHR and cortisol release, can be the cause of anxiety. There is much research looking at stress and its impact on the psychological well being of individuals and how psychological well being is linked to the social part of the biopsychosocial model. A study by Sharrer et al (2002) and Sorenson (1994), observed frequent report of feeling mad, worried, nervous, sad, crying and fearful as stress symptoms (as cited in Skybo & Buck, 2007). The symptoms of stress have been shown to be alleviated by effective coping methods.

1.4 Stress and Coping Model

Lazarus (2000) Stress and Coping Model is based on the interaction between an individual and the environment. For example, how a child copes with stress is dependent on the interaction between the child and its environment. The child is able to evaluate what is out there for him or her to use in order to come up with coping strategies. Without coping strategies the child will not be able to manage their own stress. Not being able to keep their stress level in check can lead to detrimental effect on the child. It could impact on the academic performance of the child, the self-esteem, self-control, problem solving ability and their social skills can be greatly affected if they are unable to effectively cope with stress (as cited in Skybo et al, 2007). There are two main types of stress that school-age children experience, which are either acute or chronic stressors. Acute stressors are related to school activities, family relationships, life transitions, and health issues (Attar, Guerra, & Tolan, 1994; Romano, 1997; Taxis, Rew, Jackson, & Kouzekanani, 2004). Chronic stressors are related to factors such as poverty and violence. Chronic stressors have a more detrimental impact on a child compared to acute stressors (Skybo et al, 2007) this can be due to the fact that a child can overcome acute stressors with the help of peer and family, whereas children suffering from chronic stressors are less likely to find the necessary social support to overcome it.

“As stressors accumulate, an individual’s ability to cope or readjust can be overtaxed, depleting their physical or psychological resources”(Misra & Castillo, 2004, p. 133). There are various sources of stress for adolescents such as bad grades, sibling fights, missing family member, playing sports and tests. These five sources were considered the top five cause of adolescent stress in a research study by Skybo et al, (2007). Furthermore according to the same study, the top common stress symptoms are hungry, nervous, headaches and tiredness. Other factors influencing stress level in children is socioeconomic status (SES) of the family.

Research by McLeod and Shanahan (1993) and McLoyd (1998) has linked income poverty with low SES to children's health and developments (as cited in Blair, 2010). Adolescents suffering from stress are affected by physical and psychological symptoms (Misra et al, 2004). Some examples by Misra et al are lack of energy, no appetite, and headaches and so on. (2004). Examples of psychological symptoms are depression, anxiety (Misra et al, 2004; Darling et al, 2007) and loneliness (Glaser, Kiecolt-Glaser, Speicher & Holliday, 1985). Furthermore stress can cause burnout (Meyerson, 1998), oral diseases (Maheshwari & Gnanasundaram, 2010) and various other diseases that may be related to stress, perhaps diseases a person wouldn't be aware of. Therefore stress causes a lot more than just decreasing academic achievement, in fact stress can cause major health issues, which in turn will create more stress. Adolescents' stress is also related to alcohol and drug consumption, research has shown that students with higher level of stress are more likely to consume alcohol and drugs (e.g. McRae-Clark et al, 2011). The current research will focus on support available for children suffering from stress and will also look at the benefits of these supports in reducing stress.

1.5 Anxiety

During the early thoughts on anxiety, Rogers (1953) suggested that anxiety forces a person to distant himself from reality so that he doesn't know how bad his own performance is (as cited in Grossman, 1969). Other psychologists in the 1960's such as Spence and Taylor (1958), Sarason (1960) and Grossman (1968) observed that in ego-involving tasks, anxiety is more likely to interfere with task performance (as cited in Grossman, 1969). Furthermore research by Sarason, Davidson Lighthall, Waite and Reubush (1960) and Hill (1972) suggests that high level of anxiety can help in simpler tasks however with problem-solving tasks which are more difficult, it was found that anxiety interferes with performance (as cited in Nottelmann & Hill, 1977). Nottelmann et al (1977) proposed that children who are highly

anxious are worried about their possible failures at the task at hand while doing the task at the same time. Children who are less anxious are able to concentrate better at the task only. This indicates that attention factors play a major role in anxiety. Other research by Hill and Eaton (1977), found that anxious children performed poorly at tasks because of lack of motivation rather than learning deficiencies. It was also found that children who are highly anxious would take their mind off the task to stare away more often than actually doing the task (Nottelmann et al, 1977). Hembree (1988) found that there are factor of gender differences in test anxiety, reporting higher levels of test anxiety amongst female rather than male (as cited in Putwain, 2007). More recent studies on test anxiety looked at the role attentional bias. For the purpose of that study, test-anxiety was the main focus as it is the most common form of anxiety in childhood (Beidel & Turner, 1988; Wigfield & Eccles, 1990), the study was based on the belief that low anxious people are more focused on the task at hand and less attention to other stimulus. Highly anxious people have their attention divided on the task at hand and also on other stimulus that are failure related, hence a poorer performance at tasks (Vasey, El-Hag & Daleiden, 1996).

The definition for test anxiety which is widely accepted is by Spielberger (1972), it is an “unpleasant state characterized by feelings of tension and apprehension, worrisome thoughts and the activation of autonomic nervous system were an individual faces evaluative achievement-demanding situation” (as cited in Ergene, 2003, p. 314). Liebert and Morris (1967) proposed that test anxiety is a construct that is viewed as having ‘worry’ and ‘emotionality’ component (as cited in Putwain, 2007). According to Putwain, worry is a cognitive component related to failure while emotionality is a physiological trait related to a person’s perception of autonomic arousal and tension (2007). There are a few models proposed for test anxiety such as the transactional model of test anxiety (Spielberger & Vagg, 1987; 1995b), the ‘Cognitive interference model’ (Sarason, 1984; Wine, 1971), and

‘Processing efficiency theory’ (Eysenck & Calvo, 1992). The transactional model of test anxiety is a situation-specific dynamic process, and this theory has been based on the framework of Lazarus (1966). This model looks at the interaction between personality traits and stressors from the environment. This helps determining anxiety state and the cognitive appraisal involved in understanding the factors between a person and situation having an impact on anxiety states (Zeidner, 1998). Spielberger and Vagg (1987; 1995b), based the transactional model on careful analysis of nature of test anxiety and in this process they identified the key elements important for test anxiety which are (a) personality and situational variables (b) emotional and cognitive processes (c) the correlates and short term consequences of test anxiety and (d) various emotional and cognitive based intervention strategies was introduced to help reduce behavioural symptoms of test anxiety (Ziedner, 1998, p. 85). The ‘cognitive interference model’ (Sarason, 1984; Wine, 1971) proposed that worry cognitions causes a person’s attention to drift away from the assessment demand (Putwain, 2007). While the ‘processing efficiency theory’ (Eysenck & Calvo, 1992), suggests that worry cognition can reduce processing efficiency, however, it does not reduce the effectiveness (Putwain, 2007).

There is however differences in culture, based on how test anxiety is experienced in different countries. There are various studies that have been carried out in many countries including Africa (e.g., Mwamenda, 1994), America (e.g., Sarason, 1984), China (e.g., Yue, 1994), Egypt (e.g., El-Safty, 1995), Germany (e.g., Hodapp & Benson, 1997), Holland (e.g., Van De Ploeg, 1993), India (e.g., Sud, 2001), Italy (e.g. Comunian, 1989) and in Japan for example, research by Araki in 1992 (as cited in Bodas & Ollendick, 2005). Studies by Seipp and Schwarzer (1996) found that highest level of test anxiety among Islamic cultures and lowest among western societies (as cited in Bodas, Ollendick & Sovani, 2008). Other research in India by Singh and Broota (1992) looked at the parental pressure, parental

education level, and occupation status which relates to higher test anxiety level. Sovani, Thatte and Nadkarni (2000), found that social interaction diminishes with failure. Research in the USA also observed 34-41% of third and fifth grade students experiencing high level of test anxiety (Ergene, 2003). A study by Carter, Williams and Silverman (2008) in the USA found that African American students' experienced cognitive and emotional facets of Test Anxiety, more specifically African American girls showed higher level of cognitive and emotional facets of Test Anxiety than African American boys. Quite recently in the UK a study by Putwain (2007) found that test anxiety among year 10 and 11 students is predicted by socio-economic status and that whether the English language was the native language or not, made no difference to the test anxiety level. There haven't been any recent studies looking at Irish students' experience of test anxiety and very little research in the UK as well. There is a need for more research in this area as test anxiety can dramatically reduce academic performance of children. Most specifically, it is very important that the impact of test anxiety is researched in Irish school. Consequently, the current research will also assess if helpline support can reduce test performance anxiety among Irish students.

1.6 Social Support

Social support has been shown to be very effective in helping children emotionally. Parents are said to be the most important support available to children. It is suggested that by talking to parents, children can regulate their emotions and coping with stress or other issues (Kassam-Adams & Fein, 2003). Poor social support has been shown to be disadvantageous to children (Ellis, Nixon, & Williamson, 2009). Several studies such as Bal, Crombez, Van Oost and Debourdeaudhuij (2003) has shown that social support is very important after traumatic experiences (as cited in Ellis et al, 2009). Various studies mainly looking at social support concentrates on the support by close family and friends. There is insufficient amount of research done on other forms of social support such as child support agencies e.g. ISPCC,

Barnardos and so on. Children make use of these services for many purposes; some use the services to report abuse, while others seek for mental support. American has reported 3.3 million cases of child abuse and 6 million allegations in 2009. 7.6% of the abuse reported is psychological maltreatment (Childhelp, 2009). Barnados reported 2,164 confirmed incidence of child abuse in 2008. This is an increase from 1,978 in 2007 (Barnados, 2008). Recently ISPCC released statistics on how many children made contact in 2010 with 837,551 calls received by Childline, however only 540, 924 calls were answered. The text service received 18, 375 and 6,891 children made contact with One2One live chats (ISPCC, 2010). Despite the high increase of children contacting Helplines, research has failed to evaluate the importance if these services and to what extent it is beneficial for the children of Ireland. There has been a lack of research looking at the role of external agencies in the academic performance of children, stress level and its impact on self-esteem. As previously mentioned, there has been a lot of research looking at social support from family and peer members. According to Bost, Cielinski, Washington and Vaughn (1994), preschool children's primary social support networks are 'household members and peers' (as cited in Bost, Vaughn, Boston, Kazura & O' Neal, 2004, p. 394). However, Franco and Levitt (1997) found that peer support was named most frequently as recreational support (as cited in Bost et al, 2004). During the adolescence period, a rapid change in behaviour is observed and this is followed by less dependency on parent and more on friends (Arnett, 2003). Another study by Bokhorst, Sumter and Westenberg (2010) found that there are no differences between the support of a friend and the support of parents. However, support from teachers was much lower than of friend and family.

There is very little amount of research which did look at the benefit of children's helpline (e.g. Emmison & Danby, 2007; Doyle, 2010; Fukkink & Hermanns, 2009; Timms & Sheehan, 2010; Butler, Potter, Danby, Emmison & Hepburn, 2010). Fukkink et al (2009)

found that chat service and telephone support both increase children's well being and decrease their burden of problems. While research by Doyle et al (2010) only found that helpline for children is a potential source of support. Research by Emmison et al (2007) looked at client-centred practice helpline for children, similar to the child-centred practice of ISPCC. However, the main focus of the research was on the call management rather than the content of the call or the outcome of the call. The research was based on National Children's Helpline and more specifically the research evaluated the opening sequences in calls. Quite recently, research by Butler et al (2010) indicated that client-centred practice in children's helpline is very valuable as a counselling practice and as a form of empowering children. It's a beneficial way of making children take control of their problems. These researches has been able to establish that children helpline is an important support available for children and that the practice has been advantageous in that it help increase well-being. However, research neglected the evaluation of helpline support in relation to specific mental health issues such as stress, test performance anxiety and self-esteem. These mental issues have had negative impact on children academically and socially, as mentioned previously. Therefore it is vital that helpline support services are evaluated to measure its effectiveness when dealing with children suffering from Stress, test performance anxiety and self-esteem.

1.7 The Current Study

The purpose of this research project is to evaluate the ISPCC services and to measure the effectiveness of the ISPCC services for children suffering from stress, test performance anxiety and self-esteem. In 2005, Citizen Child Strategy of Irish Society for the Prevention of Cruelty to Children (ISPCC) suggested that the effect of its work should be evaluated (as cited in Merriman, Robins, Canavan & Dolan, 2008). The ISPCC services are child-centred and this is quite similar to Carl Rogers' Client-Centred Therapy, "all therapeutic approaches are of course centrally interested in the client" (Kirschenbaum & Henderson, 1990, p. 21).

ISPCC therefore uses this method when dealing with children and it does not involve in giving advice, to judge, to suggest and to make interpretations. In actual fact, according to Rogers, telling someone what to do, retard the therapy (Kirschenbaum et al, 1990). So far the variables stress, test performance anxiety and self-esteem has been evaluated by looking at previous research, however there have been a lack of research on social support by external agencies such as ISPCC. Therefore this study aims at evaluating whether the ISPCC is helping children in coping with stress, test performance anxiety and low self-esteem. The hypotheses are as follows;

Hypothesis 1: Service users will indicate lower levels of stress compared to non-service users who have had a stressful life event in the past six months.

Hypothesis 2: Service users will indicate higher levels of self-esteem compared to non-service users who have had a stressful life event in the past six months.

Hypothesis 3: Service users will indicate lower levels of test performance anxiety compared to non-service users who have had a stressful life event in the past six months.

Chapter Two: Methodology

2.1 Material

In this study questionnaires and pens were used. The questionnaires consisted of 35 questions in total excluding two demographic questions. The questionnaires used are the Perceived Stress Scale (10 Item), Rosenberg's self-esteem Scale (10 Item) and Test Anxiety Questionnaire (10 Item). An additional five questions were asked focussing on the use of ISPCC services. As for the demographic questions, the children were asked their age and gender (see appendix section).

The Perceived Stress Scale (PSS) – 10 Item scale (Cohen, 1988) was designed to measure “the degree to which situations in one’s life are appraised as stressful” (Cohen, et al., 1983; p. 385). There are two other types of PSS questionnaire, the 4 Item scale and the 14 Item scale. For the purpose of the study, the 10 item scale was used for many reasons. The 4 item scale does not cover all situations of perceived stress, as for the 14 item scale, it is too many for school children to answer. The main purpose of using the 10 item scale PSS questionnaire is because of the length of questionnaire was right for the children as well as the types of question asked were simple to understand. The questionnaire suited the intended age group in the current research.

The Rosenberg's Self-esteem Scale was designed in 1965 by Rosenberg and the first sample administered this scale consisted of 5, 024 High School Juniors and Seniors from New York. It is one of the scales most widely used for studying self-esteem. This scale was used in the current research because of validity and reliability as well as its length. The questions asked are again very simple to understand and suited the selected age group of this research.

There is various Test Anxiety Scale used for measuring test performance anxiety such as Test Anxiety Inventory (TAI), Children's Test Anxiety Scale (CTAS) and so on. However for this study the Test Anxiety Questionnaire was used and it was designed by Nist and Diehl (1990). Some test anxiety scale consists of up to 40 items, while others with 20 items scale. Not only the length of the other questionnaires was unsuitable for the age group, the wordings were quite difficult compared to the Test Anxiety Questionnaire (Nist & Diehl, 1990). The questionnaire used for the current research consisted of 10 item scale and the wordings were easy for the participants. The questionnaire also used to determine if the participant suffers from a mild case or severe case of test performance anxiety.

2.2 Participants

Children were recruited from [REDACTED] Secondary School in Dublin. Permission slips were given to parents of students from [REDACTED] Secondary School. Those whose parents granted permission were then surveyed. In [REDACTED] Secondary School, the Principal gave permission to survey the students. In total, there were 99 girls surveyed from [REDACTED] Secondary School and 89 boys were surveyed from [REDACTED] Secondary School (age range: 12-18 years old). There was no compensation offered for participation. The participants were non-random naturally occurring groups. The groups were 'service-users' (SU), 'non service-users with stress' (NSUS) and 'non service-users without stress' (NSU). Some of the data collected had to be removed from the analyses as they did not match the age criteria.

2.3 Design

This study is a between groups survey design and it is a quantitative study based on psychological measures such as Perceived Stress Scale, Test Performance Anxiety Scale and Rosenberg's Self-esteem Scale. The independent variables are 'service-users' (SU), 'non

service-users with stress' (NSUS) and 'non service-users without stress' (NSU). The participants were naturally occurring groups. The dependent variables are stress, test performance anxiety and self-esteem.

2.4 Procedure

The questionnaires were administered to children by their own teachers and they were informed of their privacy and confidentiality as well as their rights to withdraw from completing the questionnaire. The participants were given the questionnaire in a control class room setting. Once the questionnaire was complete, the participants were debriefed. They were offered the number of Childline (1800 666 666), Text Service (50101) and website for one2one live chat (www.childline.ie) for more support. The participants were also given contact details of researcher for debriefing. The questionnaires were collected by the teachers and handed over to the deputy principals. They were the only person to keep hold of the data until collected by the researcher. The data collected was then inputted in SPSS for further statistical analysis to be carried out.

2.5 Data Analysis

In this study, a Univariate ANOVA with post hoc analyses was carried out to look at the difference between the groups SU, NSUS and NSU compared to the dependent variables stress, test performance anxiety and self-esteem. The post hoc analyses involved the use of Tukey HSD test. An independent samples t-test was also and a Pearson's correlation was also run to look at the relationship between the stress, test performance anxiety and self-esteem.

Chapter Three: Results

A one-way between-subjects analysis of variance (ANOVA) was conducted to compare SU (Service Users), NSUS (Non-Service Users with stress) and NSU (Non-Service Users without stress) to the dependent variables stress, test performance anxiety and levels of self-esteem. A standard alpha level of $p < 0.05$ was applied and a post hoc comparison using the Tukey HSD test was used to conduct the analyses. The purpose of using the Tukey HSD test is to compare the scores of each variable and also to find comparisons between the SU, NSUS and NSU groups. There are three hypotheses and the first one hypothesised that service users will indicate lower levels of stress compared to non-service users who have had a stressful life event in the past six months. Secondly, it is hypothesised that service users will indicate higher levels of self-esteem compared to non-service users who have had a stressful life event in the past six months. And the third hypothesis is that service users will indicate lower levels of test performance anxiety compared to non-service users who have had a stressful life event in the past six months. Some of the data set could not be used for analyses as they did not meet the age criteria.

The total number of participants in each groups for stress analysis are SU (N = 51), NSUS (N = 72) and NSU (N = 46) as indicated in table 1.

Table 1. Descriptive statistic for stress variable

	MEAN	Std. Deviation	N
SU	17.12	5.89	51
NSUS	20.46	7.04	72
NSU	14.74	5.92	46
TOTAL	17.89	6.81	169

Mean difference is significant at the level 0.05

It was hypothesised that service users will indicate lower levels of stress compared to non-service users who have had a stressful life event in the past six months. The results gained from the analyses showed a significant difference between SU, NSUS and NSU ($F(2, 166) = 11.68, p = 0.005, 1\text{-tailed}$). Post hoc comparison using the Tukey HSD test indicated that the mean score for group NSUS on stress level ($M = 20.46, SD = 0.71$) was significantly higher than SU ($M = 17.12, SD = 5.9$) and NSU ($M = 14.75, SD = 5.92$).

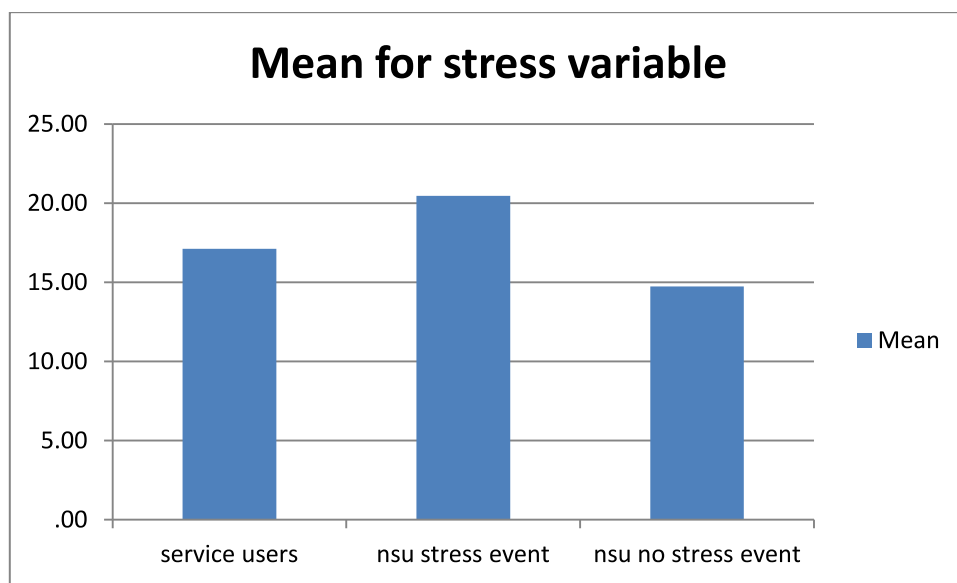


Figure 1. Mean scores for stress variables. Graph showing mean difference between SU, NSUS and NSU for stress level

The total number of participants who fully completed the self-esteem questionnaire are SU ($N = 52$), NSUS ($N = 71$) and NSU ($N = 51$) as indicated in table 2.

Table 2. Descriptive statistic for self-esteem variable

	MEAN	Std. Deviation	N
SU	21.46	6.054	52
NSUS	22.83	5.774	71
NSU	19.20	4.350	51
TOTAL	21.36	5.660	174

Mean difference is significant at the level 0.05

For self-esteem variable, it was hypothesised that service users will indicate higher levels of Self-esteem compared to non-service users who have had a stressful life event in the past six months. The results from self-esteem variable also showed a significant between groups SU, NSUS and NSU ($F(2, 171) = 6.52, p < 0.01, 1\text{-tailed}$). However the significant difference was found to be between NSUS and NSU rather than between SU and NSUS. Group NSUS had a higher mean score ($M = 22.83, SD = 5.7$) compared to group NSU ($M = 19.20, SD = 4.3$).

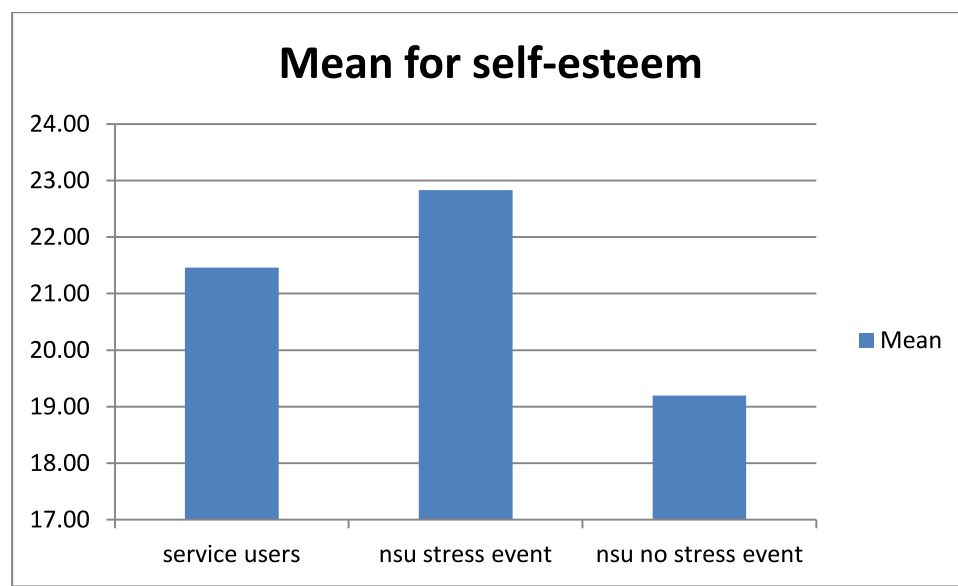


Figure 2. Mean for self-esteem variable. Graph showing mean difference between SU, NSUS and NSU for self-esteem level

The total number of participants in each groups for test performance anxiety analysis are SU ($N = 49$), NSUS ($N = 76$) and NSU ($N = 49$) as indicated in table 3.

Table 3. Descriptive statistic for test performance anxiety variable

	MEAN	Std. Deviation	N
SU	25.14	8.034	49
NSUS	25.58	8.834	76
NSU	22.20	8.443	49

Mean difference is significant at the level 0.05

And the third hypothesis is that service users will indicate lower levels of test performance anxiety compared to non-service users who have had a stressful life event in the past six months. The third hypothesis was not supported by the statistical analyses conducted on the test performance anxiety variable. The results indicated no significant difference between group SU, NSUS and NSU ($F(2, 171) = 2.53, p = 0.41, 1\text{-tailed}$). However, the result for test performance anxiety was approaching significant.

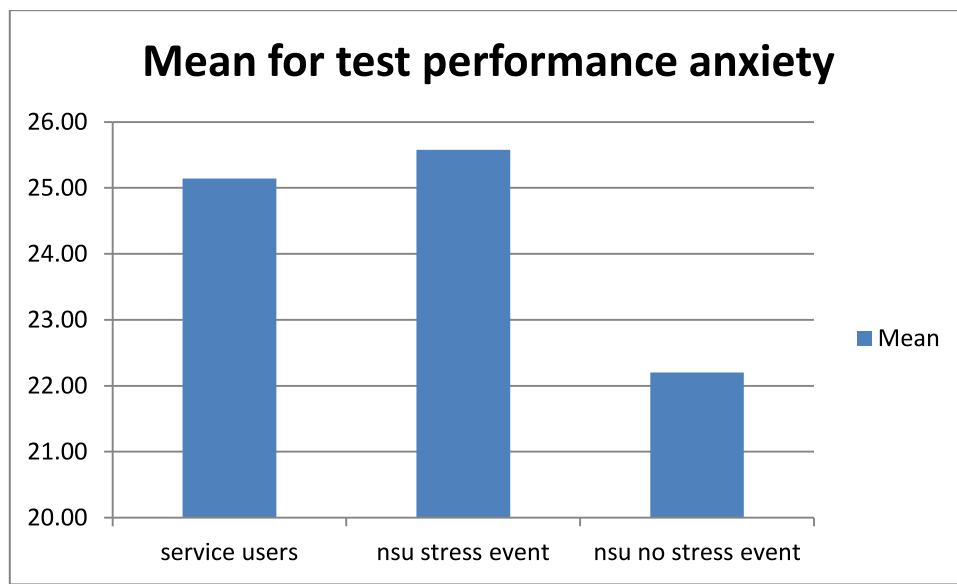


Figure 3. Mean score for test performance anxiety. Graph showing the mean difference between SU, NSUS and NSU on test performance anxiety

Table 4 (below) indicates the results gained from ANOVA on stress, test performance anxiety and self-esteem. Stress and self-esteem indicates a significant results of $p < .0005$ (stress) and $p = .001$ (self-esteem). The ANOVA results for test performance anxiety were insignificant with 0.49. However the result gained for test performance anxiety is approaching significant.

Table 4. ANOVA for all three dependent variables

Variable	Sum of Square	df	Mean Square	F	Sig.
STRESS	962.044	2	481.022	11.684	.001*
SELF-ESTEEM	392.974	2	196.487	6.525	.002*
TEST PER. ANX	367.009	2	183.504	2.536	.082

* Results for ANOVA is significant at the level 0.05

Other statistical analyses have shown interesting results. A independent sample test was carried out with the data set. The results showed that female has higher levels of stress (M = 18.66, SD = 7.06) than male (M = 16.84, SD = 6.5). Higher levels of self-esteem (M = 22.12 SD = 6.27) than male (M = 20.77, SD = 4.7). And also higher levels of test performance anxiety (M = 25.93, SD = 8.5) than male (M = 23, SD = 8.3).

Table 5. Descriptive Statistic for comparison between male and female

VARIABLE	GENDER	N	MEAN	Std Deviation
STRESS	MALE	80	16.88	6.59
	FEMALE	90	18.66	7.06
SELF-ESTEEM	MALE	81	20.77	4.70
	FEMALE	91	22.12	6.27
TEST PER. ANX	MALE	77	23.00	8.33
	FEMALE	96	25.93	8.51

Mean difference is significant at the level 0.05

The table five above displays the mean difference between male and female of the dependent variables stress, self-esteem and test performance anxiety. It is shown that female

has higher level of stress, self-esteem and test performance anxiety than male. It is also shown that male has higher level of test performance anxiety than stress, quite similar to female. From the above table 5, it is indicated that those who has higher level of stress also has a high level of self-esteem. According to the statistical analysis, this applies to both male and female.

Table 6. Correlation between variables

	<u>STRESS</u>	<u>SELF-ESTEEM</u>	<u>TEST PER.ANX</u>
<u>STRESS</u>	--	0.654**	0.526**
	171	.000	.000
		160	161
<u>SELF-ESTEEM</u>	0.654**	--	0.410**
	.000	160	.000
	160		165
<u>TEST PER. ANX</u>	0.526**	0.410**	--
	.000	.000	161
	161	165	

** Correlation difference is significant at the level 0.01

A Pearson's Correlational statistical analysis was also conducted to find a correlation between all three variables. The result showed a significant correlation between all three variables (See Table 6). Stress is significantly correlated to self-esteem ($p < 0.001$) and test performance anxiety ($p < 0.001$). There is also a significant correlation between self-esteem and test performance anxiety ($p < 0.001$).

Chapter Four: Discussion

4.1 Aim

The aim of the current research is to evaluate the ISPCC services and to measure the effectiveness of the services for children suffering from stress, test performance anxiety and self-esteem. There has been a lack of research looking at external social support for children such as ISPCC, Barnardos and so on. Mainly researches were focused on parental support and peer support (e.g. Bost, Cielinski, Washington and Vaughn, 1994; Franco and Levitt, 1997; Bokhorst, Sumter and Westenberg, 2010). Many children do not get the social support required from their family and friends, therefore the support of external agencies plays a very important role in providing support for children. Therefore it is important to evaluate the kind of support that the children are receiving. It is vital that advantages and disadvantages of the services from external agencies are evaluated to see if it is providing the appropriate help for children. The agency of interest for this study is the ISPCC and the services will be evaluated in light of research. The Citizen Child Strategy by ISPCC in 2005 suggested that future research should look into the effectiveness of the services (as cited in Merriman et al, 2008). Therefore this study is aimed at evaluating whether the ISPCC services are helping children to cope with stress, with test performance anxiety and helping them to increase their level of self-esteem.

In order to evaluate the services, a battery of measures was given to Irish children from secondary schools in Dublin. The measures included the Perceived Stress Scale, Rosenberg's self-esteem questionnaire and Test Anxiety Questionnaire. The hypotheses were that, firstly, service users will indicate lower levels of stress compared to non-service users who have had a stressful life event in the past six months. Secondly, service users will indicate lower levels of test performance anxiety compared to non-service users who have had a stressful life event in the past six months. And thirdly, service users will indicate higher

levels of self-esteem compared to non-service users who have had a stressful life event in the past six months.

4.2 Variable Results

The results gained from the analyses for stress dependent variable showed a significant difference between SU, NSUS and NSU ($F(2, 166) = 11.68, p = 0.005, 1\text{-tailed}$). As for the results from self-esteem variable, it also showed a significant difference between groups SU, NSUS and NSU ($F(2, 171) = 6.52, p = 0.01, 1\text{-tailed}$). However, the results for test performance anxiety indicated no significant differences between group SU, NSUS and NSU, therefore the hypothesis was not supported by statistical analyses ($F(2, 171) = 2.53, p = 0.41, 1\text{-tailed}$). These findings indicate that ISPCC services do help children in reducing their level of stress as the analyses showed significantly higher levels of stress for children in the NSUS group, while children in the SU group. As for the self-esteem variable it has been shown that there is a significant difference between the groups, however, the significant difference was between NSUS and NSU. The results showed that NSUS has higher self-esteem than NSU and SU. This is a very interesting result which will be discussed at a later stage. The hypothesis that service users will indicate lower level of test performance anxiety compared with non-service users who have had a stressful life even, was not supported. However, the results gained approaches significant ($p = 0.41$).

4.3 Other Statistical Analyses

Other statistical analyses carried out included a bivariate independent sample t-test and a Pearson's correlation. The Correlational analysis showed that there is a significant relationship between all three dependent variables ($p < .001$). The results from the independent sample t-test yielded very interesting findings which were inconsistent with previous literature review. A study by Puskar et al (2010) found that females had lower self-esteem than males. The results were also inconsistent with research by Kroger (1980) and

Skybo et al (2007), because their studies found that stress reduces self-esteem. The results from the current study indicate the opposite of previous research. It was found that female has higher levels of self-esteem ($M = 22.12$ $SD = 6.27$) than male ($M = 20.77$, $SD = 4.7$). It was also found that both male and female had an increase of self-esteem despite high level of stress. The results showed that female has higher levels of stress ($M = 18.66$, $SD = 7.06$) than male ($M = 16.84$, $SD = 6.5$). And also that females had higher levels of test performance anxiety ($M = 25.93$, $SD = 8.5$) than male ($M = 23$, $SD = 8.3$). However, some of the results were consistent with previous literature review; for example, Kallen et al (2008) proposed that high level of anxiety is related to high level of stress based on the production of CHR. This statement was supported by the current research as it was found that both males and females with high level of stress also had high level of anxiety. It is also consistent with the previous research by Hembree (1988) and Carter et al (2008), which stated that female has higher level of anxiety than male.

4.4 Interpretations of Results: Stress

As mentioned above two of the hypotheses were supported by the statistical analyses. The first hypothesis was that service-users will indicate lower levels of stress than non-service users who have had a stressful life event. This hypothesis was supported by the results ($F(2, 166) = 11.68$, $P = 0.01$). This finding cannot be linked back to the previous research as the whole study is quite different to previous research looking at social support from external agencies. The previous studies by Fukkink et al (2009) looked at the general well-being of children based on the use of children helpline. This study looked at a variable that was too broad, i.e. well-being, therefore cannot be related to the results found for stress level. Research by Doyle et al (2010) looked at children helpline as source of support and not evaluating its impact on specific variables. Research by Emmison et al (2007) did not research into psychological factors of using children helpline. Their main focus was call

management and not the outcome of the call. And the current research is focused on the psychological outcome having used the ISPCC services. Hence the results for the current research cannot be linked back previous ones done on external social support. Quite recently, research by Butler et al (2010) indicated that client-centred practice in children's helpline is very valuable as a counselling practice and as a form of empowering children. This study is more related to the current research, however, like the previous studies, it does not evaluate specific psychological variables, hence making the current research completely different to the previous studies.

4.5 Interpretations of Results: Self-Esteem

The second hypothesis which stated that service-users will indicate higher levels of self-esteem than non-service users who have has a stressful life event, were also supported ($F(2, 171) = 6.52, p = 0.01$). The ANOVA did indicate a significant difference between the groups. The interesting finding is that even though there is significant difference between the groups, it is found that the difference lies between NSUS and NSU rather than NSUS and SU. If the current research was consistent with previous literature in that stress reduces self-esteem, then the current results would have shown a significant difference between NSUS and SU. However the current study indicates that high level of stress is linked to high level of self-esteem. And according to the previous hypothesis which was NSUS will have higher stress than SU, was supported by the results. NSUS has higher level of stress, hence the reason for having higher level of self-esteem than SU.

4.6 Interpretations of Results: Test Performance Anxiety

The results for test performance anxiety indicated no significant differences between group SU, NSUS and NSU, therefore the hypothesis was not supported by statistical analyses ($F(2, 171) = 2.53, p = 0.41$). However, as mentioned previously, the results were approaching significant ($p = 0.41$). There are various reasons for not getting a significant

result for the third hypothesis. It could be due to the questionnaire used for this specific variable. Some student reported that the questions were a bit to understand, while others didn't know the meaning of certain words e.g. nausea. This may be one of the reasons for an insignificant result. Another very important factor to be considered is the number of contacts made to the ISPCC about academic performance. Children who uses the service could quite possible be making contacts for other issues rather than academic problems. There could be more calls or text to the ISPCC for stressful issues and so on. The typical view of the ISPCC services is that it is there for children who are physically and sexually abused. The ISPCC provides a listening service and uses a non-problem focussed technique when providing support for children. This means that a child can ring just to have a chat and that there isn't a need to have a problem to contact the ISPCC. This is something that every service user is made aware of. Despite that there could still be fewer number of children calling or texting ChildLine about current events and more specifically about test performance anxiety. Other contributing factors could be the gap between the last exam and when the questionnaire was administered. The questionnaires were collected in mid February and the last exam which the children had was in December. This two months gap may have had an impact on the answers given by the children on the Test Anxiety Questionnaire. If the questionnaire was administered to the children right after the exam, this could have had a different impact on the results.

4.7 Limitations

There are a few aspects of the current research that can be improved for future research in order to gain a more significant result overall and more specifically for the test performance anxiety variable. The first factor that could be improved for future research is the measures used for evaluating stress level and test performance anxiety. As for the Rosenberg's self-esteem questionnaire, it is a widely used measure for self-esteem and it is

well known for its validity and reliability (Rosenberg, 1965). In the present study, smaller measures were used to prevent children from getting bored when completing the questionnaire. However, the smaller measures does not fully account for all situations. Future research should look into questionnaires that consist of more than just 10-item and also which covers more aspect of the variable under evaluation. As for the PSS measure, the wording were not too difficult for the intended age group of the present study. However, as mentioned previously, the wording in the Test Anxiety Questionnaire was quite difficult for the some of the children. Mostly the younger age groups had difficulty understanding the questions. Instead the Children's Test Anxiety Scale (CTAS) would have been a better choice as it is specifically designed for children. However the length of the questionnaire is much longer with 50 items, but it covers every aspect of test performance anxiety and easily understood. This scale was originally used on children nine to twelve years of age (Wren & Benson, 2004).

One of the important factors that could be improved for future research is the design of the study. The present study is a quantitative based research. However, for this particular subject, a qualitative design would have been better suited. A child's experience and feelings about his or her own mental health after having used a service cannot always be quantified. There are many aspects to just one single psychological variable that cannot be fully covered by any single questionnaire. It can most certainly be useful in some ways, but cannot answer all possible outcomes. A qualitative design can provide more in depth findings around the feelings attached to the ISPCC services. This is the main focus of the present study, the feelings attached to using the services. However, there are many downsides to using a qualitative design, having taken that into consideration that is what led to using a quantified design of study. Firstly, the ISPCC will not give permission to interview or open ask any child if they have or have not used the service. This is due to privacy and confidentiality that

the ISPCC promises its clients. There are definitely ways around that factor, such as recruiting service users who voluntarily wish to talk about their experiences and have no objections admitting that they use the services. However, this was not possible for the current study due to the time limitations.

The present study is mainly focused on the phone and online services that the ISPCC provides. This is mainly based on the number of children made contact with the ISPCC seeking for help and also because of the easy access to a larger sample. It is one of the main reasons for the using a quantified research design. If a qualitative research method would have been used, other services could have been evaluated such as Leanbh, Teen Mentor and so on. These services are one to one help service available for children and these services are directive, unlike the online services which are non-directive. Evaluating one to one services can be more useful for a qualitative design as it is less strict in terms of privacy and confidentiality. Having said that, the children using these services are also treated with strictest confidentiality, however, in this case both the staff or volunteer and the child knows each other and that them being a service user is more in the open. Hence, it makes approval for conducting a qualitative research much easier.

There are other ways of conducting the research using a qualitative research method and keeping the identity of the service user protected at the same time. All of the questions that needed to be asked during an interview could also be asked in a questionnaire format. Difference is that instead of having closed ended questions, open ended questions can be asked. This could work quite well for using an action research method rather than a content analysis. The action research method is mainly use for improving a certain practice. This would be a more effective technique to use for this specific subject. However, the best way of conducting this research is by using both quantitative research and qualitative research. Using two types of analytical design can provide more significant results. Quantitative

questionnaires can be given to children the children before and after an interview (qualitative method) to evaluate the current state of mind.

4.8 Future Research

Other aspects of the ISPCC services should also be evaluated as the agency is constantly expanding to provide support for children. Hence, all the services should be investigated in order to provide the best service for children. There are many other services provided by the ISPCC which the current research did not examine. Future research should most definitely look into outcome of all the services and its impact on children's mental health. It is also recommended that different psychological variables to be examined such as depression, suicide, bullying, pregnancy, physical, sexual and emotional abuse. The current study recruited participants from secondary schools, however if variables such as depression, suicide, bullying and so on, is to be evaluated then participants has to be recruited from different samples and also ISPCC's own clients who uses the one to one services could be another way recruiting participants.

4.9 Conclusion

This study was set up to investigate the usefulness of ISPCC services and its impact on children suffering from stress, test performance anxiety and low self-esteem. According to the results gained from statistical analyses, it was found that the ISPCC services do help children reduce their level of stress. Despite getting a significant result for self-esteem, it did not indicate that the ISPCC services increases self-esteem and this is due to the facts that the current research found that those with high level of stress have high level of self-esteem. And it was found that the ISPCC reduces stress, hence the low level of self-esteem was found in this study. According to the results the ISPCC does not help reduce test performance anxiety and this could be due to the lack of call or text received by ISPCC in relation to test anxiety. If this is the case, therefore the ISPCC should definitely work on getting the message out

there to the children that the services are not just there for physical and sexual abuse, but also for general events or anything they wish to discuss. However, if this is not the case, then the ISPCC could look into new training implementation specifically looking at academic performance. The ISPCC could then train the staff and volunteers to manage calls differently for a better outcome for the children suffering from test performance anxiety. The findings of this research is not sufficient to evaluate such a broad topic and the ISPCC itself, as the ISPCC is constantly expanding, increasing and improving their services for the children. This research is merely a beginning for new development in research for this particular topic. The next step is to evaluate other psychological variables and more ISPCC services.

References

- Andersen, B. L., Kiecolt-Glaser, J. K., Glaser, R. (1994). A Biobehavioral Model of Cancer Stress and Disease Course. *The American psychologist*, 49, (5), 389-404.
- Arborelius, L., Owens, M. J., Plotsky, P. M., and Nemeroff, C., B. (1999). The Role of corticotrophin-releasing factor in depression and anxiety disorders. *Journal of endocrinology*. 1 -12. DOI: 0022-0795/99/0160-0001.
- Attar, B., Guerra, N., and Tolan, P. (1994). Neighborhood Disadvantage, Stressful Life Events and Adjustments in Urban Elementary-School Children. *Journal of Clinical Child Psychology*, 23, (4,) 391- 400.
- Barnados. (2008). Barnados Service Use Statistics 2008. Retrieved January 23, 2012 from http://www.barnardos.ie/assets/files/pdf/barnardos_service_use_statistics.pdf
- Beidel, D. C., and Turner, S. M. (1988). Comorbidity of Test Anxiety and Other Anxiety Disorders in Children. *Journal of Abnormal Child Psychology*, 16, 275-287.
- Bigos K.L., Folan, M.M., Jones, M.R., Haas, G.L., Kroboth, F.J., Kroboth, P. D. Dysregulation of Neurosteroids in Obsessive Compulsive Disorder. *Journal of Psychiatric Research*. In press.
- Birndorf, S., Ryan, S., Auinger, P., and Aten, M. (2005). High Self-Esteem among Adolescents: Longitudinal Trends Sex Differences and Protective Factors. *Journal of Adolescent Health*, 37, (3), 194-201.

- Blair, C. (2010). Stress and the Development of Self-Regulation in Context. *Child Development Perspectives*, 4(3), The Society for Research in Child Development. 181 – 188.
- Blyth, D. A., Simmons, R. G., and Carlton-Ford, S. (1983). The Adjustment of Early Adolescents to School Transitions. *Journal of Early Adolescence*, 3, 105-120.
- Bodas, J., and Ollendick, T., H. (2005). Test Anxiety: A Cross-Cultural Perspective. *Clinical Child and Family Psychology Review*, 8, (1), 65-84. DOI: 10.1007/s10567-005-2342-x.
- Bokhorst, C.L., Sumter, S.R., & Westenberg, P.M. (2010). Social Support from Parents, Friends, Classmates, and Teachers in Children and Adolescents Aged 9 to 18 Years: Who is Perceived as Most Supportive? *Social Development*, 19, (2), 417-426.
- Borrell-Carrió, F., Suchman, A. L., Epstein, R. M. (2004). The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry. *Annals of Family Medicine*, 2(6), 576-582. DOI: 10.1370/afm.245.
- Bost, K., Vaughn, B., Boston, A., Kazura, K., & O’Neal, C. (2004). Social Support Networks of Preschool Children Attending Head Start: A Longitudinal Investigation of Structural and Functional Network Characteristics. *Social Development*, 13, 393-412.
- Butler, C. W., Potter, J., Danby, S., Emmison, M., and Hepburn, A. (2010). Advice-implicative Interrogatives: Building “Client-centered” Support in a Children’s Helpline. *Social Psychology Quarterly*, 73 (3), American Sociological Association, 265-287. DOI: 10.1177/0190272510379838
- Burnett, P. C. (1994). Self-Concept and Self-Esteem in Elementary School Children. *Psychology in the Schools*, 31, 164-171.

- Byrne, B. M. (1984). The General/Academic Self-Concept Nomological Network: A Review of Construct Validation Research. *Review of Educational Research, 54*, 427-456
- Carter, R., Williams, S., and Silverman, K. W. (2008). Cognitive and Emotional Facets of Test Anxiety in African American School Children. *Cognition and Emotion, 22* (3), 539 – 551.
- ChildHelp. (2009). National Child Abuse Statistics. Retrieved February 13, 2012 from <http://www.childhelp.org/pages/statistics>
- Cohen, J. D., Noll, D. C., & Schneider, W. (1993). Functional magnetic resonance imaging: Overview and methods for psychological research. *Behavioral Research Methods, Instruments & Computers, 25*, 101-113
- Coopersmith, S. (1967). *The Antecedents of Self-Esteem*. San Francisco: W. H. Freeman.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, H. A., and Wadsworth, M. E. (2011). Coping With Stress during Childhood and Adolescence: Problems, Progress, and Potential in Theory and Research. *Psychological Bulletin, 127* (1), 87-127. DOI: 10.1037//0033-2909.127.1.87.
- Darling, C. A., McWey, L. M., Howard, S. N., and Olmstead, S. B. (2007). College Student Stress: the Influence of Interpersonal Relationships on Sense of Coherence. *Stress and Health, 23*, 215–229. DOI: 10.1002/smi.1139.

- Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., Moffitt, T. E., and Caspi, A. (2005). Low Self-Esteem Is Related to Aggression, Antisocial Behavior, and Delinquence. *American Psychological Society, 16*(4), 328 – 334.
- Doyle, C., Timms, D. C., and Sheehan, E. (2010). Potential Sources of Support for Children Who Have Been Emotionally Abused by Parents. *Vulnerable Children and Youth Studies, 5* (3), 230-243. DOI: 10.1080/17450128.2010.487122.
- Eccles, J. S., Midgley, C, and Adler, T. (1984). Grade-Related Changes in the School Environment: Effects on Achievement Motivation. In J. G. Nicholls (Ed) , *The development of achievement motivation* (p. 283- 331). Greenwich, CT: JAI Press.
- Ellis, A. A., Nixon, R. D. V., and Williamson, P. (2009). The Effects of Social Support and Negative Appraisals on Acute Stress Symptoms and Depression in Children and Adolescents. *British Journal of Clinical Psychology, 48*, 347 – 361.
- Emmison, M., and Danby, S. (2007). Troubles Announcements and Reasons for Calling: Initial Actions in Opening Sequences in Calls to a National Children’s Helpline. *Research on Language and Social Interaction, 40* (1), 63 -87.
- Ergene, T. (2003). Effective Interventions on Test Anxiety Reduction: A Meta-Analysis. *School Psychology International, 24* (3), 313-328.
- Erol, R. Y., and Orth, U. (2011). Self-Esteem Development from Age 14 to 30 Years: A Longitudinal Study. *Journal of Personality and Social Psychology, 101* (3), 607-619. DOI: 10.1037/a0024299.

- Eysenck, M. W., and Calvo, M. G. (1992). Anxiety and Performance: The Processing Efficiency Theory. *Cognition and Emotion*, 6, 409 - 434.
- Fontana, A. and J.F. Davidio. (1984). The Relationship between Stressful Life Events and School-Related Performances of Type A and Type B Adolescents. *Journal of Human Stress*, 3 (50).
- Frank, R. A. and Cohen. D. J. (1979). Psychosocial Concomitants of Biological Maturation In Preadolescence. *American Journal of Psychiatry*, 136, 1518-1524
- Fridrici, M., and Lohaus, A. (2009). Stress-prevention in Secondary Schools: Online Versus Face-to-Face Training. *Health Education*, 109 (4), 299 – 313.
- Fukkink, R., G., and Hermanns, J., M., A. (2009). Children's Experiences with Chat Support and Telephone Support. *Journal of Child Psychology and Psychiatry*, 50 (6), 759 -766. DOI:10.1111/j.1469-7610.2008.02024.x.
- Glaser, R., Kiecolt-Glaser, J. K., Speicher , C. E., and Holliday, J. E. (1985). Stress, Loneliness, and Changes in Herpesvirus Latency. *Journal of Behavioural Medicine*, 249-60.
- Grossman, B. D. (1969). A Study to Determine the Relationship Between Anxiety and Learning in Young Children: Final Report. US Department of Health, Education and Welfare, 1 – 37
- Harter, S. (1983). Developmental Perspectives on the Self-System. In P. H. Mussen (Ed.), *Handbook of child psychology: Socialization, personality, and social development*

(4, 275–285). New York: Wiley.

Hembree, R. (1988). Correlates, Causes, Effects, and Treatment of Test Anxiety.

Review of Educational Research, 58, 47 – 77

Hotta, M., Shibasaki, T., Masuda, A., Imaki, T., Demura, H., Ling, N., and Shizume, K.

(1986). The Responses of Plasma Adrenocorticotropin and Cortisol to Corticotropin-Releasing Hormone (CRH) and Cerebrospinal Fluid Immunoreactive CRH in Anorexia Nervosa Patients. *Journal of Clinical Endocrinology Metabolism*, 62 (2), 319-324.

Hill, K. T., and Eaton, W. O. (1977). The Interaction of Test Anxiety and Success- Failure

Experiences in Determining Children's Arithmetic Performance. *Developmental Psychology*, 13 (3), 205 – 211.

Hill, J. P., and Lynch, M. E. (1983). The Intensification of Gender-Related Role Expectations

during Early Adolescence. In J. Brooks-Gunn and A. C Petersen (Eds.), *Girls at puberty* (201-228). New York: Plenum Press.

Hwang, Y. E. (1995). Student Apathy, Lack of Self-Responsibility and False Self-Esteem are

Failing American Schools. *Education*, 115, 484 - 490.

Huang, C. (2010). Mean-Level Change in Self-Esteem from Childhood through Adulthood:

Meta-Analysis of Longitudinal Studies. *Review of General Psychology*, 14, 251–260.

doi:10.1037/a0020543

Irish Society for Prevention of Cruelty to Children. (2010). Retrieved January 16, 2012 from <http://www.ispcc.ie/news-media/childrens-issues-in-the-news/218>

Kallen, V., I., Tulen, J. H. M., Utens, E. M. W. J., Treffers, P. D. A., De Jong, F. H., and Ferdinand, R. F. (2008). Associations between HPA Axis Functioning and Level of Anxiety in Children and Adolescents with an Anxiety Disorder. *Depression and Anxiety*, 25, 131 – 141.

Kassam-Adams, N., and Fein, J. A. (2003). Posttraumatic Stress Disorder and Injury. *Clinical Pediatric Emergency Medicine*, 4 (2), 148–155.

Kirschenbaum, H., and Henderson, V. L. (1990). *Carl Rogers: Dialogues*. Constable and Company Ltd, 21- 22.

Kroger, J. (1980). Residential Mobility and Self-Concept in Adolescence. *Adolescence*, 15(60), 967–977.

Larkin, R., and Thyer, B., A. (1999). Evaluating Behavioural-Cognitive Group Counselling to Improve Elementary School Student's Self-Esteem, Self-Control and Classroom Behavior. *Behavioral Interventions*, 14, 147 – 161.

Lazarus, R. S. (1966). *Psychological Stress and the Coping Process*. New York: McGraw-Hill.

Lazarus, R. S., and Folkman, S. (1984). *Stress, Appraisal and Coping*. New York: Springer.

Lazarus, R. (2000). *Handbook of Stress, Coping, and Discrete Emotions*. Thousand Oaks, CA: Sage.

- Lochman, J. E., and Lampton, L. B. (1986). Situational Social Problem-Solving Skills and Self-Esteem of Aggressive and Nonaggressive Boys. *Journal of Abnormal Child Psychology*, *14*, 605-617.
- Maheswari, T. N. U., and Gnanasundaram, N. (2010). Stress Related Oral Diseases- A Research Study. *International Journal of Pharma and Bio Sciences*, *1(3)*, 1-10.
- McMullin, J. A., and Cairney, J. (2004). Self-Esteem and the Intersection of Age, Class, and Gender. *Journal of Aging Studies*, *(18)*, 75–90. doi:10.1016/ j.jaging.2003.09.006
- McRae-Clark, A., Carter, R., Price, K., Baker, N., Thomas, S., Saladin, M., Giarla, K., Nicholas, K., and Brady, K. (2011). Stress- and Cue-Elicited Craving and Reactivity in Marijuana-Dependent Individuals. *Psychopharmacology*, *218(1)*, 49-58.
- Meyerson, D. E. (1998). Feeling Stressed and Burned Out: A Feminist Reading and Re-Visioning of Stress-Based Emotions within Medicine and Organization Science *Organization Science*, *9(1)*.
- Merriman, B., Robins, L., Canavan, J., and Dolan, P. (2008). The Development of Monitoring Tools for ISPCC Services. Child and Family Research Centre, p. 1-53.
- Misra, R., and Castillo, Linda, G. (2004). Academic Stress among College Students: Comparison of American and International Students. *International Journal of Stress Management*, *11(2)*, Educ Publishing Foundation, 132–148. DOI: 10.1037/1072-5245.11.2.132
- Nist, S., Diehl, W. (1990) Test Anxiety Questionnaire (TAQ).
- Nottelmann, E., and Hill, K. T. (1977). Test Anxiety and Off-Task Behaviour in Evaluative Situations. *Child Development*, *48*, 225-231.

- Pervanidou, P. (2008). Biology of Post-Traumatic Stress Disorder in Childhood and Adolescence. *Journal of Neuroendocrinology*, 20(5), 632 – 638.
- Pierceall, E. A., and Keim, M. C. (2007). Stress and Coping Strategies among Community College Students. *Community College Journal of Research and Practice*, 31(9) 703 – 712.
- Pincus, E. D., and Freidman, A. (2004). Improving Children’s Coping with Everyday Stress: Transporting Treatment Interventions to the School setting. *Clinical Child and Family Psychology Review* 7, 223 – 238. DOI: 1096-4037/04/1200-0223/0
- Pullmann, H., Allik, J., and Realo, A. (2009). Global Self-Esteem Across the Life Span: A Cross-Sectional Comparison Between Representative and Self-Selected Internet Samples. *Experimental Aging Research*, 35, 20–44. doi:10.1080/03610730802544708
- Putwain, D. W. (2008). Test Anxiety and GCSE Performance: the Effect of Gender and Socio-economic Background. *Educational Practice in Psychology*, Routledge, 319-334. DOI: 10.1080/02667360802488765
- Puskar, K. R., Bernardo, L. M., Ren, D., Haley, T. M., Tark, K. H., Switala, J., and Siemon, L. (2010). Self-Esteem and Optimism in Rural Youth: Gender Differences. *Contemporary Nurse*, 34 (3), 190 – 198.
- Robins, R. W., and Trzesniewski, K. H. (2005). Self-Esteem Development across the Lifespan. *Current Directions in Psychological Science*, 14(3), 158–162.

Robotham, D. (2008). Stress Among Higher Education Student: Towards a Research Agenda. *Higher Education, 56*, 735 -746. DOI: 10.1007/s10734-008-9137-1

Romano, J. (1997). Stress and Coping: A Qualitative Study of 4th and 5th Graders. *Elementary School Guidance and Counseling, 31 (4)*, 273-283

Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.

Rosenberg, M. (1986). Self-Concept from Middle Childhood through Adolescence. In J. Suls and A. Greenwald (Eds), *Psychological perspectives on the self, 3*, 107-136). Hillsdale, NJ: Erlbaum.

Russell, A. J. (2007). Stress Milestones. *Stress, 10 (1)* 1-2. DOI: 10.1080/10253890701302934.

Sarason, S. B., Davidson, K. S., Lighthall, F. F., Waite, R. R., and Ruebush, B. K. (1960). *Anxiety in elementary school children: A report of research*. New York: Wiley

Sarason, I. G. (1984). Stress, Anxiety and Cognitive Interference: Reactions to Tests. *Journal of Personality and Social Psychology, 46*, 929–938.

Sharma, A., Sharp, D. M., Walker, L. G., Monson, J. R. T. (2008). Stress and Burnout among Colorectal Surgeons and Colorectal Nurse Specialists Working in the National Health Service. *Colorectal Disease, 10 (4)*, 397 – 406.

- Sharrer, V., and Ryan-Wenger, N. (2002). School-Age Children's Self Reported Stress Symptoms. *Pediatric Nursing, 28 (1)*, 21-27.
- Shavelson, R. J., and Marsh, H. W. (1986). On the Structure of Self-Concept. In R. Schwarzer (Ed.), *Anxiety and Cognitions* (p. 305 – 330). Hillsdale, M. Erlbaum.
- Simmons, R. G., Blyth, D. A., Van Cleave, E. F, and Bush, D. (1979). Entry into Early Adolescence: The Impact of School Structure, Puberty, and Early Dating on Self-Esteem. *American Sociological Review, 44*, 948-967.
- Singh, A., and Broota, A. (1992). Socio-Personal Variables and Examination Anxiety. *Journal of the Indian Academy of Applied Psychology, 18*, 73 - 78.
- Sjöström-Strand, A., Fridlund, B. (2007). Stress in women's daily life before and after a myocardial infarction: a qualitative analysis. *Scandinavian Journal of Caring Sciences, 21(1)*, 10-17, DOI: 10.1111/j.1471-6712.2007.00433.x
- Skybo, T., and Buck, J. (2007). Stress and Coping Responses to Proficiency Testing in School-Age Children. *Pediatric Nursing, 33 (5)*, 410 – 418.
- Sovani, A. Thatte, S. and Nadkarni, A. (2000). Perceived Sources of Examination Anxiety among School and College Students. Paper presented at Fourth Annual Conference of the Indian Association of Mental Health, Hyderabad, India.
- Spielberger, C. D., and Vagg, P. R. (1995). Test anxiety: A Transactional Process Model. In C. D. Spielberger, and P. R. Vagg (Eds.), *Test anxiety: Theory, Assessment, and Treatment* (1 - 14). Washington, DC: Taylor and Francis.

- Taxis, J., Rew, L., Jackson, K., and Kouzekanani, K. (2004). Protective Resources and Perceptions of Stress in a Multi-Ethnic Sample of School-Age Children. *Pediatric Nursing, 30* (6), 477- 487
- Trzesniewski, K. H., Donnellan, M. B., Moffitt, T. E., Robins, R. W., Poulton, R., and Caspi, A. (2006). Low Self-Esteem during Adolescence Predicts Poor Health Criminal Behavior and Limited Economic Prospects during Adulthood. *Developmental Psychology, 42* (2), 381–390.
- Twenge, J. M., and Campbell, W. K. (2001). Age and Birth Cohort Differences in Self-Esteem: A Cross-Temporal Meta-Analysis. *Personality and Social Psychology Review, 5*, 321–344. doi:10.1207/S15327957PSPR0504_3
- Vallerand, P. J., Pelletier, L. G., and Gagné, F. (1991). On the Multidimensional Versus Unidimensional Perspectives of Self-Esteem: A Test Using the Group-Comparison Approach. *Social Behaviour and Personality, 19*(2), 121-132.
- Vasey, M. W., El-Hag, N., and Daleiden, E. L. (1996). Anxiety and the Processing of Emotionally Threatening Stimuli: Distinctive Patterns of Selective Attention among High- and Low-Test-Anxious Children. *Child Development, 67*, 1173 – 1185.
- Wiggins, J. D., and Wiggins, M. M. (1992). Elementary Students' Self-Esteem and Behavioral Ratings Related to Counselor Time-Task Emphases. *The School Counselor, 39*, 377-381.

Wigfield, A., and Eccles, J. S. (1990). Test Anxiety in the School Setting. In M. Lewis and S. M. Miller (Eds.), *Handbook of developmental psychopathology*, 237-250. New York: Plenum

Wigfield, A., Eccles, J. S., Iver., M. D., Reuman, D. A., and Midgley, C. (1991). Transitions During Early Adolescence: Changes in Children's Domain-Specific Self-Perceptions and General Self-Esteem Across the Transition to Junior High School. *Developmental Psychology*, 27(4), 552 – 565.

Wiltfang, G. L., and Scarbecz, M. (1990). Social Class and Adolescents Self-Esteem: Another Look. *Social Psychology Quarterly*, Vol. 53(2), 174 – 183.

Wine, J. (1971). Test Anxiety and Direction of Attention. *Psychological Bulletin*, 76, 92-104.

Youngs, G. A., Rathge, R., Mullis, R., and Mullis, A. (1990). Adolescents Stress and Self-Esteem. *Adolescence; Summer90*, Vol. 25(98), 333. Retrieved October 17, 2011, from EBSCO HOST

Young, J. F., and Mroczek, D. K. (2003). Predicting Intra Individual Self-Concept Trajectories during Adolescence. *Journal of Adolescence*, 26, 586–600.
doi:10.1016/S0140-1971(03)00058-7.

Zeidner, M. (1998). *Test Anxiety: The State of the Art*. New York: Plenum Press.

Appendix

Dear Participant,

My name is Prakashini Banka and I am an Undergraduate Psychology student at Dublin Business School. My current research is about the Irish Society for the Prevention of Cruelty to Children (ISPCC) and for this research you will be given a questionnaire of 35 questions divided into Part A and Part B. The questions are quite general, mainly looking at how you feel about certain things that's going on in your life. **All the data collected will be kept private and confidential; therefore do not write your name on the questionnaire. If you wish to withdraw your questionnaire, you may do so at any time.**

Remember there are no right or wrong answers; it's purely your opinion.

GENDER: Male Female (Tick the appropriate)

AGE:

Part A: Please circle the appropriate answer

0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often

1. In the last month, how often have you been upset

because of something that happened unexpectedly?..... **0 1 2 3 4**

2. In the last month, how often have you felt that you were unable

to control the important things in your life?..... **0 1 2 3 4**

3. In the last month, how often have you felt nervous and “stressed”? **0 1 2 3 4**

4. In the last month, how often have you felt confident about your ability

to handle your personal problems?..... **0 1 2 3 4**

5. In the last month, how often have you felt that things

were going your way?..... **0 1 2 3 4**

6. In the last month, how often have you found that you could not cope

with all the things that you had to do? **0 1 2 3 4**

7. In the last month, how often have you been able

to control irritations in your life?..... **0 1 2 3 4**

8. In the last month, how often have you felt that you were on top of things?..... 0 1 2 3 4

9. In the last month, how often have you been angered because of things that were outside of your control? 0 1 2 3 4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? 0 1 2 3 4

1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

1. I have visible signs of nervousness such as sweaty palms, shaky hands, and so on right before a test 1 2 3 4 5

2. I have "butterflies" in my stomach before a test 1 2 3 4 5

3. I feel nauseated before a test 1 2 3 4 5

4. I read through the test and feel that I do not know any of the answers 1 2 3 4 5

5. I panic before and during a test 1 2 3 4 5

6. My mind goes blank during a test 1 2 3 4 5

7. I remember the information that I blanked on once I get out of the testing situation..... 1 2 3 4 5

8. I have trouble sleeping the night before a test..... 1 2 3 4 5

9. I make mistakes on easy questions or put answers in the wrong places..... 1 2 3 4 5

10. I have difficulty choosing answers..... 1 2 3 4 5

SA= Strongly Agree A= Agree D= Disagree SD= Strongly Disagree

1. On the whole, I am satisfied with myself..... SA A D SD

2. At times, I think I am no good at all..... SA A D SD

- 3. I feel that I have a number of good qualities..... SA A D SD
 - 4. I am able to do things as well as most other people..... SA A D SD
 - 5. I feel I do not have much to be proud of..... SA A D SD
 - 6. I certainly feel useless at times..... SA A D SD
 - 7. I feel that I'm a person of worth, at least on an equal plane with others... SA A D SD
 - 8. I wish I could have more respect for myself..... SA A D SD
 - 9. All in all, I am inclined to feel that I am a failure..... SA A D SD
 - 10. I take a positive attitude toward myself..... SA A D SD
-

Part B: Please tick the appropriate boxes

1. Have you had a stressful event during the past six months? In other words, did something happen in the past six months that caused you a lot of stress?

Yes No

2. Have you used the ISPCC services before?

Yes No

3. Which of the following services have you used?

ChildLine

Text Service

One2One Live Chat

All Services

I haven't used the above services

4. When was the first time you made contact with the ISPCC?

Never

More than a year ago

A year ago

Six months ago

Last Month

Last Week

5. How many times did you use the ISPCC services in the last month?

Zero

1 - 2

3 - 4

4 - 8

8 – 10

More than 10

Thank you for completing the questionnaire. If any of the above questions made you upset and you wish to talk to someone you can call:

ChildLine on: 1800 666 666 (24hr free call)

Text Service: Text the word “talk” to 50101 (Mon – Sun from 2pm to 10pm)

One2One Live Chat: www.childline.ie (Mon – Sun from 2pm to 10pm)

If you would like more information about the research please do not hesitate to contact my project supervisor, Dr John Hyland, at [REDACTED]

Table 1. Descriptive statistic for stress variable

	MEAN	Std. Deviation	N
SU	17.12	5.89	51
NSUS	20.46	7.04	72
NSU	14.74	5.92	46
TOTAL	17.89	6.81	169

Mean difference is significant at the level 0.05

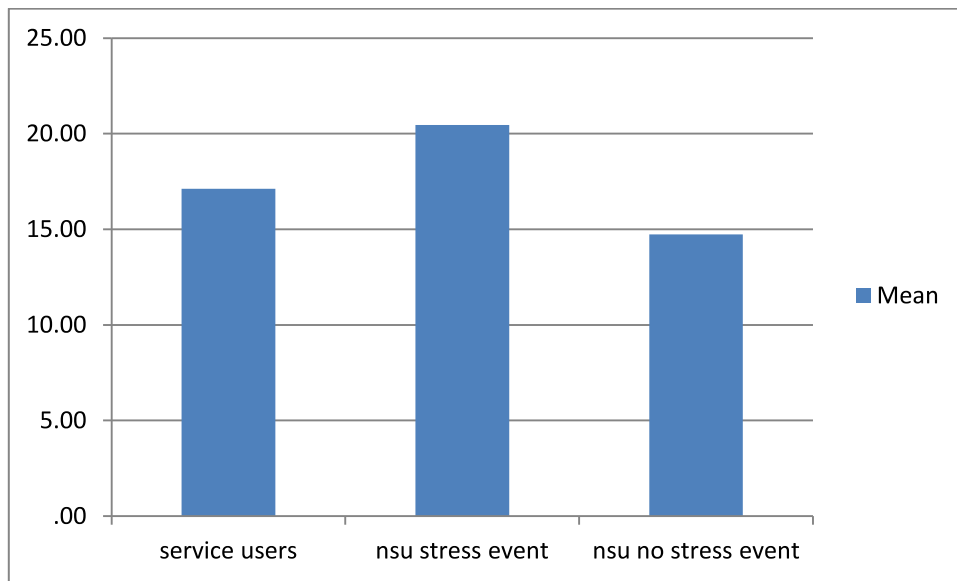


Figure 1. Mean scores for stress variables. Graph showing mean difference between SU, NSUS and NSU for stress level

Table 2. Descriptive statistic for self-esteem variable

	MEAN	Std. Deviation	N
SU	21.46	6.054	52
NSUS	22.83	5.774	71
NSU	19.20	4.350	51
TOTAL	21.36	5.660	174

Mean difference is significant at the level 0.05

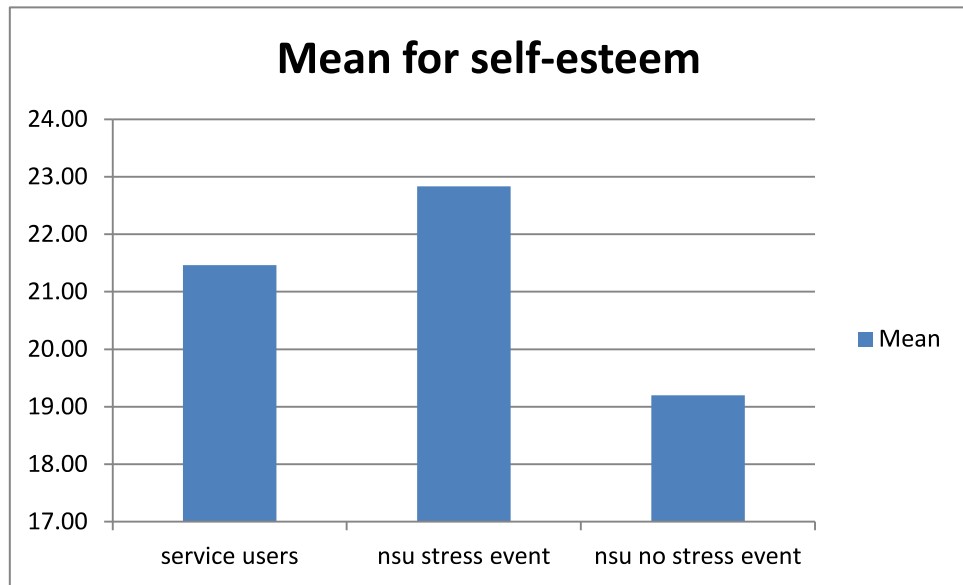


Figure 2. Mean for self-esteem variable. Graph showing mean difference between SU, NSUS and NSU for self-esteem level

Table 3. Descriptive statistic for test performance anxiety variable

	MEAN	Std. Deviation	N
SU	25.14	8.034	49
NSUS	25.58	8.834	76
NSU	22.20	8.443	49

Mean difference is significant at the level 0.05

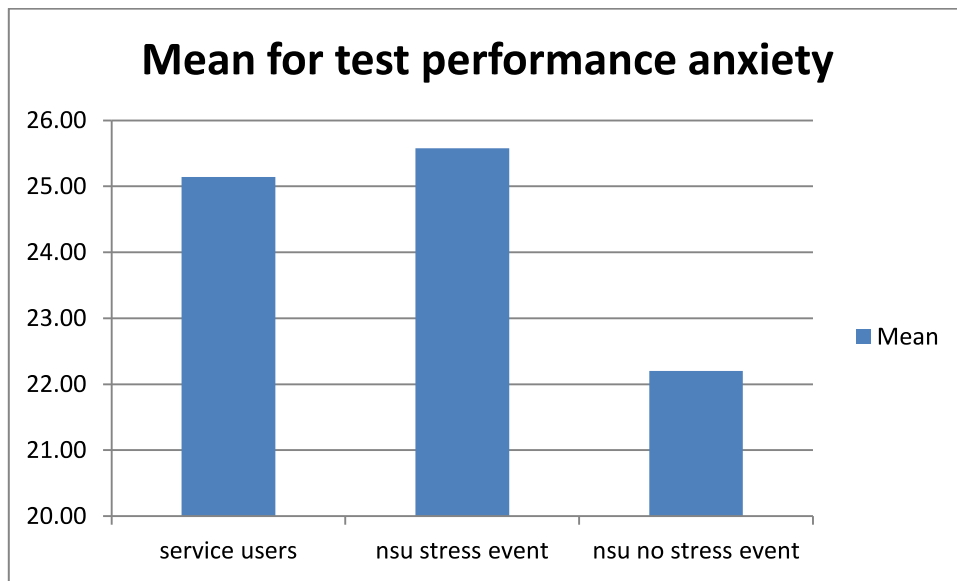


Figure 3. Mean score for test performance anxiety. Graph showing the mean difference between SU, NSUS and NSU on test performance anxiety

Table 4. ANOVA for all three dependent variables

Variable	Sum of Square	df	Mean Square	F	Sig.
STRESS	962.044	2	481.022	11.684	.000*
SELF-ESTEEM	392.974	2	196.487	6.525	.002*
TEST PER. ANX	367.009	2	183.504	2.536	.082

*Result for ANOVA is significant at the level 0.05

Table 5. Descriptive Statistic for comparison between male and female

VARIABLE	GENDER	N	MEAN	Std Deviation
STRESS	MALE	80	16.88	6.59
	FEMALE	90	18.66	7.06
SELF-ESTEEM	MALE	81	20.77	4.70
	FEMALE	91	22.12	6.27
TEST PER. ANX	MALE	77	23.00	8.33
	FEMALE	96	25.93	8.51

Mean difference is significant at the level 0.0

Table 6. Correlation between variables

	<u>STRESS</u>	<u>SELF-ESTEEM</u>	<u>TEST PER. ANX</u>
<u>STRESS</u>	--	0.654**	0.526**
	171	.000	.000
		160	161
<u>SELF-ESTEEM</u>	0.654**	--	0.410**
	.000	160	.000
	160		165
<u>TEST PER. ANX</u>	0.526**	0.410**	--
	.000	.000	161
	161	165	

* *Results for Correlation is significant at the level 0.01