



**An investigation of self-esteem, coping strategies and relationships styles among
dyslexic/non-dyslexic participants.**

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Abstract

The study provided a quantitative review among measures of self esteem, coping strategies and peer relationships for both dyslexic and non dyslexic participants. A total of 46 dyslexic and 59 non-dyslexic participants took part in the study. A combination of measures was used including Bartholomew & Horowitz's Relationship Questionnaire (1991), the Rosenberg Self-Esteem Scale (1965) and the Brief Cope. The results indicated a significant finding among dyslexic and non-dyslexic with secure relationships. The results also indicated that maladaptive coping is a strong predictor for self esteem. No significance of early diagnosis of dyslexia among self esteem levels was found. Furthermore, the study indicated no significance difference between dyslexic and non-dyslexic participants among self-esteem and peer relationships according to gender.

1. Literature Review

1.1 Introduction

International figures suggest that ‘4% to 10% of the population suffer from various degrees of dyslexia’ (McCormick, 2002, p.8). The word dyslexia derives from the Greek words, ‘dys’ meaning, hard or poor, and ‘lexis’ referring to speech or words. Dyslexia refers to a marked difficulty in reading and understanding of which one reads. The reading pattern of dyslexia is characterized by omissions, distortions, or substitutions of letters or words. However, establishing its definition has been notoriously problematic, thus creating great difficulty examining and understanding the cause and manifestation of the disability (Frith, 1999; Burden, 2005). Nonetheless, most educational professionals agree with The Report of the Task Force on Dyslexia (2001) suggesting the following scientific definition:

‘Dyslexia is manifested in a continuum of specific learning difficulties related to the acquisition of basic skills in reading, spelling and/or writing, such difficulties being unexplained in relation to an individual’s other abilities and educational experiences. Dyslexia can be described at the neurological, cognitive and behavioural levels. It is typically characterised by inefficient information processing, including difficulties in phonological processing, working memory, rapid naming and automaticity of basic skills. Difficulties in organisation, sequencing and motor skills may also be present (p.31)’.

There are various theories about what causes dyslexia. Significant research was conducted by Dr. Sally Shaywitz a professor of paediatrics at Yale University School of Medicine, showed that dyslexia is caused by a functional disruption in the brain. This was discovered by technology called functional magnetic resonance

imaging (fMRI) that allowed her to look into the brain while it is working. During one of her studies, she observed the brains of 32 non-dyslexic adults and 29 dyslexic adults while they worked on tasks that involved language. Her findings were published in the 1998 Proceedings of the National Academy of Sciences. Her research indicated that the activity patterns in the area of the brain responsible for reading in dyslexics differed from those of non-dyslexic, showing that non-dyslexic readers increased their brain activity when the tasks became more difficult whereas the brain activity of dyslexics did not increase. Furthermore, parts of their brain do not function adequately due to delayed development. Among those dysfunctional areas of the brain there is a small part located at the back of the brain called the cerebellum. The cerebellum plays a vital role in learning. It helps the brain coordinate and integrate sensory information, as well as to increase the processing speed of the brain. These results strongly indicate a neurological basis for the learning disability dyslexia.

It must be stressed that dyslexia is a 'difference', not a disease or a defect. Yet, it is a very important difference, as it has implications for many aspects of the dyslexic person's life. Dyslexia is often thought of as a problem of childhood and early learning, but in fact it is a lifelong condition. According to the Dyslexia Association of Ireland (DAI) if dyslexia is not identified and appropriate help is not received, the effects can last into adulthood. The result may well be a lifetime of under-achievement, frustration and low self-esteem. Many adults find that diagnosis helps them to understand their own strengths and weaknesses. It can also make a big difference in people's attitudes and may result in extra understanding and help. Unfortunately, dyslexia is harder to identify in adults than children because adults will usually have developed ways of coping with or hiding a learning problem.

1.2 Diagnosing Dyslexia

In the United Kingdom and Ireland, dyslexia is assessed and usually diagnosed by clinical and educational psychologists. This often involves using evidence from a number of different sources, such as a speech therapist, a teacher or a parent. Assessment may be obtained by the local education authority via the school's psychological services or, privately, through an agency specialising in such assessments (e.g. the Dyslexic Association Ireland) or an independent educational psychologist (Scott, 2004). Usually a battery of tests is administered during the assessment to analyse the extent to which the individual is affected by inherent problems often suffered by dyslexics. The main tool of diagnosis for both adults and children is the Wechsler battery of Intelligence Quotient (IQ) tests, which measure the individuals' underlying ability. For children, the Wechsler Intelligence Scale for Children Third (WISC - III) is the most common test for the diagnosis of dyslexia. Adults usually attain diagnosis from the adult form of this test, the Wechsler Intelligence Scale for Adults Fourth Edition (WAIS - IV). These scales, as well as tests of educational attainment and diagnostic skills by psychologists, assist diagnosis (Scott, 2004).

If diagnosed early, the conditions may be effectively treated and dyslexia itself managed with suitable learning skills to ensure the optimum growth of the individual. Failure to diagnose dyslexia early will affect the individual in many ways. Dyslexia can be diagnosed at any age from childhood to adulthood. However, for a person to become a well-adjusted and a productive member of society, it is essential to start treatment as soon as possible. Since the exact causes of dyslexia are still uncertain, treatment is more limited to managing the symptoms, rather than

preventing or curing the condition. Treatment of dyslexia is primarily aimed at overcoming the learning difficulties, which the individual faces. An early diagnosis of dyslexia allows educators and parents to adopt teaching methods that have been proven successful in teaching learners with dyslexia. Addressing dyslexia at an early age can help these children avoid feelings of inadequacy that might stem from failure caused by trying to force dyslexic children to learn using traditional methods. Catching dyslexia early and using appropriate methods also helps arm young learners with tools to compensate for their dyslexia, which can prove invaluable in their adult lives.

A previous study on Greek university students with dyslexia conducted by Stampoltzis & Polychronopoulou (2009) explored the personal and educational experiences of Greek students with dyslexia in higher education. Interviews with 16 individuals with dyslexia (11 male and 5 female) were conducted to investigate how they experienced peer relations, labelling, family support, university, self - esteem and how they made their future plans. Data was analysed using thematic analysis. The study indicated that as they grew older, problems were more limited to academic skills, and they developed friendships with peers. The time in which they were diagnosed as dyslexic was important because it opened the way to adaptation.

The findings of the present study seem to indicate that the recipe for a favourable outcome in self-esteem levels appears to be early diagnosis. Thus, the study suggests that early diagnosis is crucial for nearly every aspects of a dyslexic life as early diagnosis allows for professional intervention therefore assisting the individual in the difficulties they face ahead. Therefore, hypothesis 2 (H2) of this

study will determine if early diagnosis of dyslexia will have a positive effect of self-esteem.

1.3 Self- esteem

Self-esteem is thought to be the degree to which one values oneself (Fennell, 1999). Thus, it is often defined as 'the extent to which we like or approve of ourselves or how worthwhile we think we are' (Gross & McIlveen 1998, p. 402). Self- esteem is bound up with the self-concept or the picture an individual builds up of themselves (a picture that is created by experiences in school, at home and by peer groups).

Contrary to some notions from popular psychology, self-esteem refers to the full dimension of what a person considers to be ideal for themselves, and the degree of self-esteem they consider themselves to have is seen as being either high or low (Rosenberg, 1965). However, Fennell (1999) maintained that self-concept, self-esteem and personality all contribute to coping strategies which could benefit those who need them. She also suggests that having a low self-esteem could be detrimental to a person's life, in particular to their life experience and achievements. Further to this, she reports that low self-esteem can alter one's thought processes, behaviour, emotions, relationships, self-care and body state. Studies of dyslexia suggest that low or poor self-esteem is commonly encountered (Hales, 1994, Riddick, 1996; Humphrey, 2002; Alexander-Passe, 2004a, b, 2008a, b). As Barret and Jones (1996) notes 'it would be naive to assume that individuals who suffer with dyslexia would have good self-esteem given their learning difficulties'. While Riddick et al. (1999) found that adult dyslexic students are more anxious and have lower academic self - esteem than their cognitively matched peers and that intervention and assistance programmes should focus on the dyslexics' perception of their academic identity.

Gilroy (1995, p. 66) suggests 'it is obvious that past experiences [of failure] leave a deep scar and that many [adult] dyslexic students have a poor self-concept and suffer from low self-esteem'. Gilroy also notices an interesting observation that in a spontaneous, undirected, general conversation lasting 20 minutes between 5 adult dyslexic students, the following words and phrases were observed: hopeless at (7 times); useless at (5 times); could never (3 times); mess (twice); typical me (twice); never been any good at (twice). She points to 'typical' and 'never' suggesting deep-rooted poor self-image stretching back to childhood. Post-observation conversation noted 4 out of the 5 students 'often felt that they were thick'. A study conducted by Popp (1990) suggested that people with learning disabilities find that their emotional difficulties are persistent throughout their adult life. One hundred and thirty three, of a one hundred and sixty sample, adults with learning disabilities claimed that the difficulties that they encountered in school were the same as those encountered in adult life. The authors suggest that the reported worsening of emotional difficulties by 25% in adulthood (in comparison with childhood) was due to increasing work demands in this sphere of life (Gerber et al., 1990; Riddick et al., 1999).

Research conducted by Alexander-Passe (2006) used 3 standardized tests for self-esteem, coping and depression. A picture was painted of how teenage dyslexics cope and whether this affected their self-esteem and depression. Results strongly suggest gender differences towards self-esteem, with females using more emotional and avoidance-based coping, resulting in lower percentile scores in general and academic self-esteem and moderate depression. Males tend to use more task-based coping resulting in normal percentile self-esteem levels and minimal depression. Coping and the effects of coping on dyslexic children at school should not be underestimated.

Furthermore, taking the notion that “it would be naïve to assume that individuals who suffer with dyslexia would have good self-esteem given their learning difficulty” Barret & Jones 1996). It would therefore be reasonable to suggest in hypothesis 1 (H1) that dyslexic individuals will have lower global self-esteem than non-dyslexic individuals. And also taking into consideration that the research conducted by Alexander-Passe (2006) showing that females have a lower self-esteem score due to their emotional coping strategies. It will be consequently stated in hypothesis 3 (H3) that there will be a difference in the dyslexic and non dyslexic group in self esteem levels according to gender.

1.4 Peer relationships styles

Dyslexics may be physically and socially immature in comparison to their peers. This can lead to a poor self-image and a reduced amount of peer acceptance. Their social immaturity may make them awkward in social situations. They may be oblivious to the amount of personal distance necessary in social interactions or may be insensitive to other people’s body language as they often misread social cues. Dyslexia often affects oral language functioning. They may have trouble finding the right words, they may stammer, or may pause before answering direct questions. This puts them at a disadvantage as they enter adolescence, when language becomes central to their relationships with peers. Dyslexics have difficulty remembering the sequence of letter or words; they may also have difficulty remembering the order of events. Thus, due to sequencing and memory problems, the dyslexic may relate a different sequence of events each time he shares something. Teachers, parents, and psychologists may conclude that he is either psychotic or a pathological liar. Peer relationships play a crucial role in a person’s life. Friendships help develop an image of oneself as competent and valued (Bishop and Inderbitzen, 1995; Furman and

Buhrmester, 1985; Furman and Robbins, 1985). Previous literature has indicated that dyslexic children feel more isolated and excluded in their schools and that, typically, up to half was regularly teased or bullied which hugely affects their self-esteem compared to non-dyslexic mainstream school students (Humphrey & Mullins, 2002). Indicating, that peer relationships and self-esteem are strongly correlated. Also, several reviews have indicated that children with learning disabilities experience problems getting along with their peers (Bryan & Bryan, 1981; Gresham, 1981).

Gunnel Ingesson (2007) conducted interviews with 75 teenagers and young adults were performed to investigate how young people with dyslexia experienced school in terms of well-being, educational achievement, self-esteem, peer relations and belief in their future. Results from earlier studies suggest that secondary emotional problems are common. The first 6 grades in school were experienced by the interviewees as full of distress and failure for a majority. Though peer relations were often good, many had experienced bullying. As they grew older, problems were more limited to reading and writing activities.

In addition, previous research by Baezzat, Eizdifard and Pelvastegar (2009) aimed to compare the attachment styles in conduct disorder, dyslexic and regular students. 55 dyslexic and 43 conduct disorder students were chosen randomly according to multiple stage cluster sampling method after participating in identical. Then 60 regular participants were chosen purposefully to be compared with dyslexic and conduct disorder students. Data indicated that dyslexic participants have an insecure attachment in compare with regular students. While the non-dyslexic students have a secure attachment, but dyslexic student have avoidant insecure attachment. Therefore, due to research conducted by Baezzat, Eizdifard and Pelvastegar (2009) and because of the turbulent relationships (such as bullying) a

dyslexic individuals goes through during their life hypothesis 1 (H1) there will be a significant difference between dyslexic and non-dyslexic participant's on peer relationship styles. While past research indicated conflicts results on whether peer relationships differ according to gender such as Bugay & Tezer (2010) suggests a significant main effect for gender and attachment styles (Secure, Fearful, Preoccupied, Dismissing), Kidd, Hamer & Steptoe contradict previous findings no significant difference between gender and peer relationship styles. It is for this reason the researcher is interested in conducting the 4th hypothesis (H4) there will be significant difference between dyslexic and non-dyslexics participants among relationship styles.

1.5 Coping Strategies

Coping is often defined as 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing' (Folkman & Lazarus, 1991, p.91). There are about 400 to 600 coping strategies that have been identified. However, the main two coping strategies generally refer to adaptive coping and maladaptive coping, which are the strategies that reduce stress levels and maladaptive coping strategies such as avoidance. This type of strategy increase stress.

Adaptive strategies decreases stress, as the strategy is a positive form of coping. It often occurs when the person accepts both the facts and the accompanying emotions, and then tries to act on the basis of both. They are adaptive in the sense of promoting psychological adjustment to new circumstances and stimulating actions appropriate to the new reality. Wszeborowska & Lipinska (1997) found dyslexics were

successfully proactive at overcoming hurdles, which requires high levels of self-confidence and self-esteem.

Maladaptive coping (increase stress) refers to techniques which deny, minimise, and delay dealing with stressors. One of the maladaptive coping strategies is avoidance coping which is focused on avoiding the stressor or one's reaction to it; for example, withdrawing from others, denying the stressor exists, and disengaging from one's thoughts and feelings regarding the stressor (Littleton et al., 2007).

Maladaptive based coping often deflects attention from low academic ability and under-performance and teachers see these avoidance strategies very differently, with perceptions such as laziness and lack of parental support (Alexander-Passe, 2004a, b, 2006, 2008a, 2009). There is a growing body of evidence to suggest that children with dyslexia avoid tasks which highlight their difficulties. Alexander-Passe (2006) noted that avoidance techniques can be as simple as constantly breaking the tips of pencils, so as to spend the maximum time sharpening them and consequently less time at the desk doing work., although dyslexics (especially females) tend to prefer less obtrusive ways to avoid academic work, by rarely putting up their hands or sitting at the back of classes to be invisible (i.e. not picked by teachers to take part in the class).

The coping strategies adopted during childhood often continue to be used in adulthood e.g. the tendency to dissociate often remains with the child as he/she grows into adulthood. Using 'childhood' coping strategies impairs the development of more appropriate or adaptive social, cognitive, and emotional coping mechanisms for adult life as well as the sense of self required for the successful negotiation of life difficulties (Briere, 2002). Dyslexics often react to their difficulties by withdrawing emotionally, or conversely becoming aggressive, and compensating by obtaining negative attention from others (Thomson & Hartley, 1980, p. 19). Supporting

Butkowsky and Willows, Hales (1994a) suggest there is strong evidence to imply that dyslexics are more disturbed by criticism. Hales found dyslexics experienced considerable amounts of criticism at school, especially before their condition was diagnosed. Pollock and Waller (1994) found that dyslexic children were perceived as immature in their vocabulary choice and mode of expression by school teachers and examination board markers, as they preferred using words they knew how to spell. But, if they did use words where the spelling was uncertain, they felt accused of being careless and risked lower self-esteem.

A study conducted by Heiman and Kariv (2004) examined the coping strategies among 130 undergraduate college and university students with learning disabilities (LD) and 146 students without learning disabilities (NLD). Students completed self-reported instruments designed to measure stress, support and coping strategies. The findings revealed that students without LD reported higher work stress, higher combined stress and more social support than did students with LD. Students without LD were more task orientated and perceived more support than students with LD, while students with LD used more emotional coping strategies than NLD students. Differences were also obtained regarding age and gender. The study highlights the importance of further investigations with a larger sample and the support sources of students with LD, and suggests developing task oriented coping strategies designed especially for students with LD.

Taking the notion that dyslexic individuals use more maladaptive coping strategies (which includes emotion and avoidance) than non-dyslexic participants. It is reasonable to suggest hypothesis 1 (H1) there will be a significant difference between dyslexic and non-dyslexic participant's on coping strategies.

Within the literature review there are many studies such as Burns (1979) which links self-esteem, coping strategies and peer relationships styles. Furthermore, it would be interesting to detect if the main variable self-esteem acted as a predictor to coping strategies and peer relationships styles this is therefore the researchers 5th hypotheses (H5).

It is clearly evident that there is a lack of current studies within this area of research. In addition, there is little to no research on dyslexic participants in comparison to non-dyslexic in the Irish population. This study will positively contribute to future research. The purpose of this investigation is to study the relationship of dyslexic and non-dyslexic individuals regarding self-esteem, coping strategies, peer relationships and early diagnosis. To recap, the hypotheses are as follows:

H1. There will be a significant difference between dyslexic and non-dyslexic participant's on self-esteem, peer relationship styles and coping strategies.

H2. Self-esteem will be significantly higher among dyslexic participants with early diagnosis of dyslexia than those with late diagnosis.

H3. There will be significant difference between dyslexic and non-dyslexic participants among self-esteem according to gender.

H4. There will be significant difference between dyslexic and non-dyslexic participants among peer relationship styles.

H5. Coping strategies and relationship styles will both correlate with self esteem levels.

2. Methodology

2.1 Materials

The questionnaire booklet which included a cover sheet (see Appendix I) was given to each participant. The cover sheet outlined the study's intentions, the participants' right to withdraw, and the fact that their anonymity would be maintained. It also contained the contact details of the researcher. The first sheet of the questionnaires (Appendix II), establishes age, gender, determining if the participant has been diagnosed with dyslexia and age of diagnosis. The rest of the questionnaire booklet consists of the following materials: the Rosenberg self-esteem scale, the Brief Cope and the Relationship Questionnaire (RQ). The Rosenberg Self-Esteem Scale (RSE; Rosenberg 1965) is an attempt to achieve a one-dimensional measure of global self-esteem. It was originally designed to be a Guttman scale however it was used as Likert scale, which means that the RSE is scored by a 10 question scale answered by 4 responses from Strongly agree=3, Agree=2, Disagree=1, Strongly=0. The items 1,3,4,7 and 10 are positive questions whereas the items 2,5,6,8, and 9 are negative questions meaning they will be recoded as (3-0, 2-1, 1-2, 0-3). The 10 items are answered on a four point scale ranging from strongly agree to strongly disagree. The original sample for which the scale was developed in the 1960s consisted of 5,024 high school juniors and seniors from 10 randomly selected schools in New York State and was scored as a Guttman scale. The scale generally has high reliability: test-retest correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88. The RSE demonstrates a coefficient of reproducibility of .92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability. Validity demonstrates concurrent, predictive and construct validity using known groups.

The Brief COPE scale was also used (see Appendix IV). The scale is a 28-item self-report measure of both adaptive and maladaptive coping skills. The Brief COPE was developed based on concepts of coping from Lazarus and Folkman (1984). The scale was designed to divide into 14 subscales: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion, self-blame. These 14 subscales were then categorised into two groups adaptive and maladaptive coping. The Brief COPE uses a Likert type scale 1 = I haven't been doing this at all, 2 = I've been doing this a little bit, 3 = I've been doing this a medium amount, 4 = I've been doing this a lot. This paper validates the Brief COPE Scale in Malaysian women with breast cancer. Test-retest evaluation was undertaken at two/three weeks and ten weeks following surgery. Internal consistencies ranged from 0.25 to 1.00. Meanwhile, the Intra class Correlation Coefficient (ICC) ranged from 0.05 to 1.00. Sensitivity of the scale was indicated by the mean differences as observed in most of the domains with Effect Size Index (ESI) ranged from 0 to 0.53.. Brief COPE Scale showed fairly good reliability and validity.

The third questionnaire within the questionnaire booklet, Bartholomew & Horowitz's (1991) relationship questionnaire (RQ) is a single item measure made up 4 short paragraphs each describing a prototypical attachment pattern Secure, Fearful, Preoccupied and Dismissing. The 2 questions apply in close and general adult peer relationships. Participants are asked to rate their degree of correspondence to each prototype on a 7 point scale consisting of 1= Not at all like me 2= hardly ever like me, 3= often not like me, 4=somewhat like me 5= quite like me, 6= frequently like me, and 7= very much like me. Bartholomew & Horowitz's conducted a study where four prototypic attachment patterns were established by using combinations of a person's

self-image and image of others. Two studies were conducted in study 1 an interview was held to yield continuous and categorical ratings of the 4 attachment styles. Inter correlations of the attachment ratings were consistent with the proposed model. Attachment ratings were validated by self-report measures of self-concept and interpersonal functioning. Each style was associated with a distinct profile of interpersonal problems, according to both self- and friend-reports. In Study 2, attachment styles within the family of origin and with peers were assessed independently. Results of Study I were replicated. Therefore proposed model was shown to be reliable and valid (Bartholomew & Horowitz's 1991).

2.2 Apparatus

For the purpose of research, the researcher's personal computer and SPSS statistical program were used.

2.3 Participants

The convenience sample consisted of 105 participants in total. As described below in additional detail, the questionnaire booklet was distributed to a class of 46 Dublin Business College students, in which 4 of them had a diagnosis of dyslexia. Inchercure a college of further education was contacted at which a questionnaire booklet was distributed to a class of 15. Also, the researcher created a questionnaire online as stated below (See Appendix II) it was than posted on Facebook the social network website. It was posted on the experimenters' home page and the dyslexia Facebook page. It was so emailed to dyslexic students within Dublin Business School. In total 44 participants answered the questionnaire online of which 34 of them have previously been diagnosed with dyslexia. Therefore, 46 (43.8%) participants had a previous diagnosis of dyslexia and 59 (56.2%) participants were non dyslexic. In total

48 (45.7%) were male and 57 (54.3%) were female. There were 25 (11.5%) male and 21 (9.66%) females in the dyslexic group. Whereas 23 (13.57%) males and 36 (21.24%) females were in the non-dyslexic group. There were 65 (61.9%) participants who fell into the first category which was 18-25 years, 29 (27.6%) participants fell into the second category which is 26-40 and 11 (10.5%) participants fell into the 40+ category. Those who answered yes as being a participant with dyslexia fell into 4 categories of age of diagnosis. The first category – 8 years had in total 14 (13.3%) participants, the second category which was 9-15 years had 11(10.5%) participant's, the third category of diagnosis ranged from 16 – 25 years at which 16 (15.2%) participants fell under this category. And the fourth category ranged from ages 26+ had 5 (4.8%) participants fall into this category.

2.4 Design

The current study was a cross sectional between participants design. The 2 correlational groups consist of dyslexia diagnosis group and a non-dyslexia diagnosis control group. The 2 predictor variables being examined include gender and age of diagnosis of dyslexia. The criterion variables consisted of self-esteem, coping strategies and relationship styles. Convince sampling was used to lessen the experimental bias between the two groups.

2.5 Procedure

The researcher contacted Inchercur College of Further Education to see if they were willing to participate in the study. They agreed, doing so a class within the college was approached, they were verbally addressed about the nature of the study. The participants were informed that the research investigates whether differences exist in the psychological development of persons with/without a diagnosis of

dyslexia. The cover sheet (Appendix I) was read aloud to the participants, and they were encouraged to ask any questions about the experiment. The cover sheet contained the experimental brief and instructions for administration. The participants were reminded about their right to withdraw at any time during the experiment, and they were reassured that each data from the questionnaires was completely anonymous. The participants were assured that the data collected through the questionnaire would be destroyed on completion of the analyses. The researcher remained present for the duration of the study. The data was then collected from those who wanted to take part and thanked for their participation.

The questionnaire booklet containing the three questionnaires' was created online using docs.google.com this online questionnaire was then uploaded on the researcher's personal Facebook page and the dyslexia Facebook page (see link on appendix VI). Carol Clifford the disabilities co-ordinator within Dublin Business School was contacted via email to see if she could assist in finding the dyslexic population with Dublin Business School. She agreed to send emails to the dyslexic sample within Dublin Business School thus attaching the online questionnaire link and a brief description on the research (see link on appendix VI).

The researcher then approached a lecturer called Dr. Ciaran McMahon within Dublin Business School to ask permission to distribute the questionnaires. Again in the same fashion as Inshcure College of Further Education the participants were informed that the research is investigating whether differences exist in the psychological development of persons with/without a diagnosis of dyslexia. The cover sheet (Appendix I) was read aloud to the participants, and they were encouraged to ask any questions about the experiment. The cover sheet contained the experimental brief and instructions for administration. The participants were reminded

about their right to withdraw at any time during the experiment, and they were reassured that each questionnaire was completely anonymous. The participants were assured that the data collected through the questionnaire would be destroyed on completion of the analyses. The data was then collected from those who agreed to participate and the participants were thanked

2.5 Data Analysis

All data was collected and analysed using SPSS PASW statistics 18. The data was then inputted this involved assigning variable names, specifying type of variable (numeric, string), giving labels to data, where applicable, giving labels to different values of the data, assigning a code for missing values, and specifying level of measurement. After data was inputted the next step was to recode and compute. Recoding involves making changes to scores. For example, the Rosenberg self-esteem questionnaire involves recoding also known as reverse-coding (3-0, 2-1, 1-2, 0-3) on questions 2,5,6,8, and 9.

Data was then computed to find total scores of the variables. The explore procedure was then used to produce summary statistics and graphical displays. However, more importantly the explore procedure was used to identify any, outliers. Furthermore, data screening indicates unusual values, extreme values, gaps in the data, or other peculiarities. Exploring the data determines whether the statistical techniques that the researcher is considering to use are appropriate. The exploration may indicate that you need to transform the data if the technique requires a normal distribution. Furthermore, a t test was conducted for H1 (there will be a significant difference between dyslexic and non-dyslexic participant's on self-esteem, peer relationship styles and coping strategies.) For H2 a one way ANOVA (self-esteem will

be significantly higher among dyslexic students with early diagnosis of dyslexia than those with late diagnosis). A two way ANOVA was conducted for H3 (to explore whether the dyslexic and non-dyslexic groups will statistically differ on self-esteem levels according to gender). For H4 (to explore whether the dyslexic and non-dyslexic groups will statistically differ on relationships styles according to gender) a two way ANOVA test was conducted four times. In addition, a correlation and regression model was conducted for H5 (coping styles and relationship styles will both correlate with self esteem levels).

Results

Every participant completed all measures, producing a full complement of data of 105 participants. There were two groups in this study a dyslexic group which had 46 (43.8%) participants and a non-dyslexic group, with 59 (56.2%) participants. Further details on frequencies of variables are represented on Table 1.

Table1: Frequencies of all Participants

Variables	Group	N	%
Dyslexia	Male	25	11
	Female	21	9.7
	Total	46	43.8
Non Dyslexia	Male	23	13.6
	Female	36	21.2
	Total	59	56.2
Age of Diagnosis	-8yrs	14	13.3
	9-15yrs	11	10.5
	16-25yrs	16	15.2
	26+	05	4.8
Total Male		48	45.7
Total Female		57	54.3

Hypothesis 1

The aim of the current study explored the impact of significant difference between dyslexia participants and non-dyslexia participants on self-esteem, peer relationship styles and coping strategies. An independent t test was conducted for H1. The results indicated that the dyslexic and non-dyslexic participants were found not to be statistically significant in relationship styles as fearful relationships styles $t(103) = .998, p = .321$, two – tailed, preoccupied relationships styles $t(103) = -.543, p = .588$, two tailed, dismissive relationships styles $t(103) = .787, p = .433$, two – tailed. The dyslexic and non-dyslexic group was also found not statistically significant among coping styles as adaptive coping demonstrated $t(103) = -.554, p = .581$, two tailed and maladaptive coping style portrayed $t(103) = 1.514, p = .133$, two tailed.

However, as shown on Table 2 the descriptive statistics (which describes the basic features of the data in the study for all tests conducted) shows that the dyslexic group scored lower self-esteem levels ($M = 18.15, SD = 6.09$) than the non-dyslexic group ($M = 20.40, SD = 5.79$). However, the difference was not large enough for the result to be significant $t(103) = -1.935, p = .056$, two tailed. Thus, the result was approaching significance. The dyslexia and non-dyslexia group showed a statistically significant results for secure relationships style $t(103) = -4.676, p = .000$, two tailed with dyslexic participants scoring lower secure relationship style ($M = 3.89, SD = 1.96$) than non-dyslexic participants ($M = 5.59, SD = 1.76$).

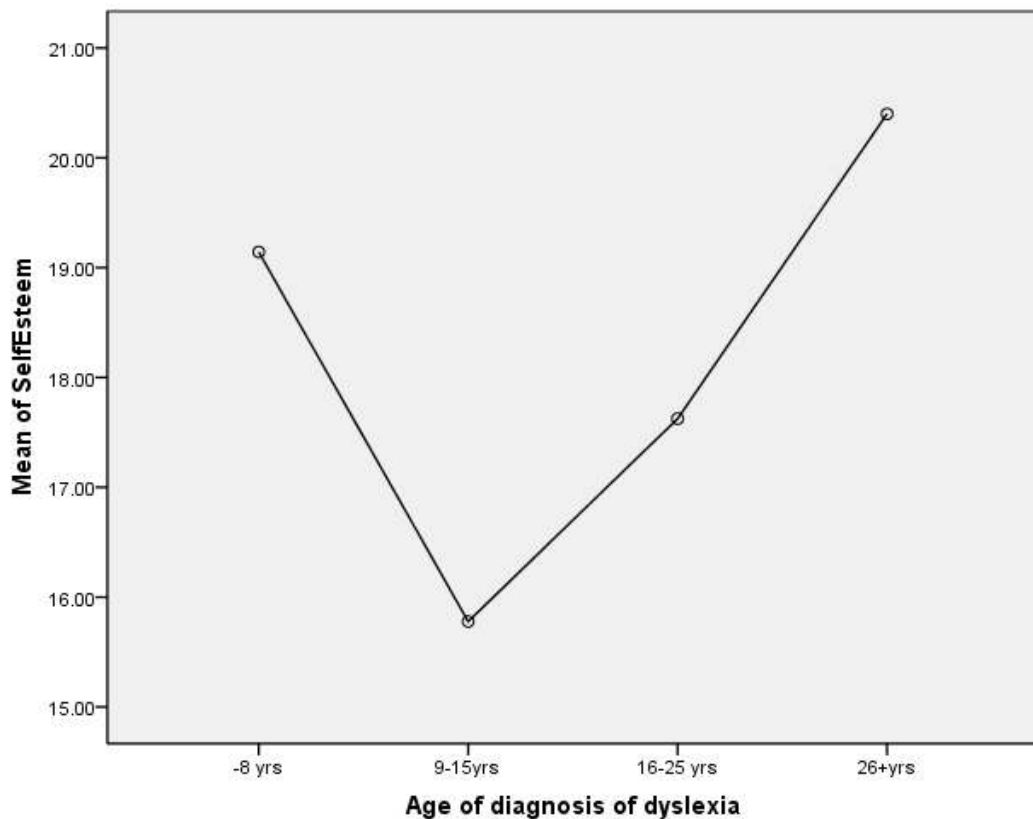
Table 2: Descriptive statistics and group differences of measured variables.

Variables	Group	N	M	SD	<i>t</i>	<i>p</i>
Self Esteem	Dyslexic	46	18.15	6.09	-1.935	.056
	Non Dyslexic	59	20.40	5.79		
Secure Rel.	Dyslexic	46	3.89	1.96	-4.676	.000
	Non Dyslexic	59	5.59	1.76		
Fearful Rel.	Dyslexic	46	4.48	2.04	.998	.321
	Non Dyslexic	59	4.08	1.98		
Preoccupied Rel.	Dyslexic	46	3.63	1.76	-.543	.588
	Non Dyslexic	59	3.83	1.96		
Dismissive Rel.	Dyslexic	46	4.30	1.80	.787	.433
	Non Dyslexic	59	4.00	2.08		
Adaptive Cope	Dyslexic	46	32.63	8.20	-.554	.581
	Non Dyslexic	59	33.55	8.60		
MaladaptiveCope	Dyslexic	46	28.13	7.86	1.514	.133
	Non Dyslexic	59	26.08	5.99		

Note: p significant at .05 level.

Hypothesis 2

For the second aim a one-way ANOVA was used to test for age of dyslexia diagnosis (-8yrs, 9-15yrs, 16-25yrs, and 26 +) among self-esteem levels. Graph 1 successfully demonstrates the mean distribution of age of diagnosis. There was no significant difference among self-esteem and age of diagnosis. ($F(3, 40) = .830, p > .05$). All descriptive statistics for H2 are shown on Table 3. Tukey post-hoc comparisons of age of diagnosis showed no significant findings. All of the following results don't have a statistically significant difference of $p > .05$; -8 years $M = 19.14$, 95% CI [16.38, 21.90], 9-15 years $M = 15.78$, 95% CI [11.43, 20.12], 16-25 years $M = 17.63$, 95% CI [13.49, 21.76] and 26+ years $M = 20.40$, 95% CI [16.05, 24.76].



Graph 1: Self esteem mean plots of age of diagnosis

Table3: Descriptive statistics and group differences of measured variables.

Variables	Group	Dyslexic		NonDyslexic	
		M	SD	M	SD
Self Esteem	Male	17.88	5.96	21.09	5.51
	Female	18.48	6.38	19.972	6.00
Secure Rel.	Male	3.64	1.75	5.83	1.53
	Female	4.19	2.18	5.44	1.90
Fearful Rel.	Male	4.76	2.17	3.61	1.85
	Female	4.14	1.88	4.39	2.02
Preoccupied Rel.	Male	3.52	1.50	3.09	2.00
	Female	3.76	2.05	4.31	1.80
Dismissive Rel.	Male	4.36	1.87	3.96	2.16
	Female	4.24	1.76	4.03	2.06
Age of Diagnosis	-8yrs			19.14	4.79
	9-15yrs			15.78	5.65
	16-25yrs			17.62	7.75
	26+ yrs			20.40	3.51

Note: p significant at .05 level.

Hypothesis 3

A two way ANOVA was conducted to explore whether the dyslexia and non-dyslexia group will statistically differ according to gender on self-esteem. While dyslexic males scored lower ($M = 17.88$, $SD = 5.96$) than dyslexic females ($M = 18.48$, $SD = 6.38$). Non dyslexic males scored higher ($M = 21.09$, $SD = 5.51$) than non-dyslexic females ($M = 19.97$, $SD = 6.00$) as illustrated on Table 3. However, there was no interaction effect on self-esteem and gender ($F(1,101) = .048$, $p > .05$). There was also no statistically significant interaction effect for dyslexia and non-dyslexic's according to gender ($F(1,101) = .518$, $p > .05$).

Hypothesis 4

A two way ANOVA test was used to find a significant difference between dyslexic and non-dyslexic participants among peer relationship styles (which includes secure, fearful, preoccupied and dismissive relationships) A two way ANOVA was conducted four times for this single hypothesis as a result $\alpha = .01$. All descriptive statistics for H4 is shown on Table 3. The test indicated that there was no statistically significance for secure relationships as interaction effect for gender was ($F(1,101) = .052$; $p > .01$). There was also no significant interaction effect between dyslexia and non-dyslexic participants regarding a secure relationship according to gender ($F(1,101) = 1.591$; $p > .01$).

The interaction effect between dyslexia and non-dyslexic participants regarding a fearful relationship according to gender was not statistically significant ($F(1,101) = 3.094$; $p > .01$). There was no statistically significant effect for dyslexia/non dyslexia or for gender on fearful relationships ($F(1,101) = 0.42$; $p > .01$).

The interaction effect between dyslexia and non-dyslexic participants regarding a preoccupied relationship and gender was not statistically significant (F

(1,101) = 1.786; $p > .01$). There was also no statistically significant main effect for gender ($F(1,101) = 3.994$; $p > .01$).

The interaction effect between dyslexia and non-dyslexic participants regarding a dismissive relationship and gender was not statistically significant ($F(1,101) = .060$; $p > .01$). There was also no significant main effect for gender regarding a dismissive relationship $F(1,101) = .004$; $p > .01$). Therefore, there was no statistically significant result for dyslexia and non-dyslexia participant on relationship styles according to gender.

Hypothesis 5

The fifth aim of this project was interested in developing a predictive model to explain self-esteem levels, coping strategies and relationship styles towards dyslexic and non-dyslexic individuals. In order to develop the most parsimonious model possible, all variables of interest (those theoretically related to the outcome variable) were correlated with self-esteem towards individuals with and without dyslexia. Only those variables statistically significant associated with the variable were retained for inclusion in the regression model. As described on Table 3 secure relationship ($r = .36$), fearful relationship ($r = -.34$), and maladaptive coping ($r = -.67$) were statistically significant related ($p < 0.05$) to self-esteem and therefore retained for inclusion in the regression model.

Table 3 *Correlations of measured variables*

Variables	1	2	3	4	5	6	7	8
1. Self esteem	---							
2. Secure Relationship	.36*	---						
3. Fearful Relationship	-.34*	-.53**	---					
4. Preoccupied Relationship	.01	-.24	.342*	---				
5. Dismissive Relationship	-.53	.08	-.14	-.07	---			
6. Adaptive Coping	.10	.03	-.11	-.12	.01	---		
7. Maladaptive Coping	-.67**	-.40**	-.32*	-.06	-.04	.29	---	

Note: ** Correlation is significant at the .01 level (2-tailed), * Correlation is significant at the .05 level (2-tailed)

As there was no theoretical indication for the order of entry of the independent variables into the regression equation, standard multiple regression analysis was employed. The theoretical model with four predictor variables (secure relationship, fearful relationship, and maladaptive coping) explained 47% of variance in respondent's self-esteem towards individuals dyslexic/non dyslexic ($F(3, 45) = .468$, $p < .01$). Table 4 indicates that there is no predictor between self-esteem and secure relationships as ($\beta = .063$, $p > .05$). While fearful relationship also indicated no correlation as ($\beta = .111$, $p > .411$). The strongest predictor of self-esteem was maladaptive coping strategies ($\beta = -.609$, $p < .05$). This indicates that the high maladaptive coping strategies will result in low self-esteem levels and low maladaptive coping strategies will result in high self-esteem.

Table 4: *Standard multiple regression of selected variables*

	<i>R</i>	<i>R</i> ²	<i>adjR</i> ²	<i>t</i>	<i>β</i>	<i>p</i> <i>value</i>
Model:	.684	.468	.430			
Secure Relationship				.458	.063	.649
Fearful Relationship				-.830	-.111	.411
Maladaptive Coping				-4.914	-.609	.000

Note: b indicates Standardised Slopes of predictors with associated *p* values, * significant at .05 level

Discussion

The purpose of this study was to provide a quantitative review of the relationship among measures of self esteem, coping strategies, relationship styles for both dyslexic and non dyslexic participants with demographic variables being gender and age of diagnosis. There is an abundance of research linking each of the variables which provided a foundation for the hypotheses that have been adopted.

4.1 Summary of Findings

The first hypothesis sets out to demonstrate a significant difference between dyslexic and non-dyslexic participant's on self-esteem, peer relationship styles and coping strategies by using the Rosenberg Self-Esteem scale, the Brief Cope measure and the Relationship Questionnaire (RQ). No significance was found among dyslexic and non-dyslexic participants in self-esteem, fearful relationships, preoccupied relationship, dismissive relationship, adaptive coping strategies and maladaptive coping strategies. The findings from this hypothesis contradict past research, this may be due to past studies sample as most studies are on learning disabilities which includes dyslexia and many other learning disabilities.

However, the dyslexic group scored lower self-esteem levels ($M = 18.15$, $SD = 6.09$) than the non-dyslexic group ($M = 20.40$, $SD = 5.79$). However, the difference was not large enough for the result to be significant $t(103) = -1.935$, $p = .056$, two tailed. Thus, the result was approaching significance. Research suggests that low or poor self-esteem is commonly encountered (Hales, 1994, Riddick, 1996; Humphrey, 2002; Alexander-Passe, 2004a, b, 2008a, b). As Barret and Jones (1996) note 'it would be naive to assume that individuals who suffer with dyslexia would have good self-esteem given their learning difficulties'. Unfortunately, this finding contradicts research however, considering the result was approaching significance may be due to

the small sample of this study. Therefore, if the sample was larger the result would of most likely of being found to be statistically significant.

The dyslexia and non-dyslexia group showed a statistically significant results for secure relationships style $t(103) = -4.676$, $p = .000$, two tailed with dyslexic participants scoring lower secure as dyslexic participants have less secure relationship styles ($M = 3.89$, $SD = 1.96$) than non-dyslexic participants ($M = 5.59$, $SD = 1.76$). Akin to previous literature Baezzat, Eizdifard and Pelvastegar (2009) non dyslexic individual have more secure relationships and in general better overall relationships styles than dyslexic participants. Thus, dyslexic participants have a significantly lower secure relationship attachment than non dyslexic participants.

The second research objective was to explore the association between the criterion variable age of diagnosis and self esteem using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). A one-way ANOVA was used to test for self-esteem levels among age (-8yrs, 9-15yrs, 16-25yrs, and 26 +) of diagnosis of dyslexia. There was no significant difference among self-esteem and age of diagnosis ($F(3, 40) = .830$ $p > .485$). Therefore, early diagnosis had no effect of levels of self esteem. The findings for age of diagnosis and self esteem levels were inconsistent with past literature. Research has suggested that individuals with early diagnosis of dyslexia have higher levels of self esteem because the time in which they were diagnosed as dyslexic was important because it opened the way to adaptation indicating that the recipe for a favourable outcome in self-esteem levels appears to be early diagnosis (Stampoltzis & Polychronopoullou 2009). Perhaps the reason for the hypothesis not being consistent with previous studies is possibly due to diagnosis of dyslexia having a negative effect on a person's self esteem due to the stigma attached to the diagnosis.

The third hypothesis investigates if males will have a significantly higher self esteem than female individuals. A two-way between groups ANOVA analysis of variance was conducted. Surprisingly there was little difference between the status between male and female dyslexics. Interestingly, the results postulated that there was a difference between the scores of males and females on the self - esteem measure, with females having slightly higher levels of self esteem. The interaction effect on self-esteem between dyslexia and non-dyslexic's gender was not statistically significant ($F(1,101) = .518, p > .473$). While research such as Alexander-Passe (2006) suggests that males use different coping strategy that females resulting in males having higher levels of self esteem than females. Evidence for gender differences between dyslexic males and females is conflicting (Passé, 2006; Riddick et al.1999), However the results from the present study would suggest that there are very subtle differences, and they need further investigation.

The fourth hypothesis sets out to demonstrate a significant difference between dyslexic and non-dyslexic participants among relationships styles according to gender. A two-way between groups ANOVA analysis of variance was conducted four times to explore the impact on relationships (secure, fearful, preoccupied and dismissive) on dyslexic and non dyslexic participants. Past reseach is very much mixed on gender and peer relationship styles while Bugay & Tezer (2010) suggests a significant main effect for gender and attachment styles (Secure, Fearful, Preoccupied, Dismissing), Kidd, Hamer & Steptoe contradict previous findings as they report no significant difference between gender and peer relationship styles.

The fifth and final aim of this study investigates whether self esteem, coping styles and relationship styles will all positively correlate. A correlation was conducted

this indicated that secure relationship, fearful relationship, and maladaptive coping are all variables that were statistically significant as they all are associated with the self esteem. Thus, these variables were retained for inclusion in the regression model.

Secure relationship indicates that there is no predictor between self-esteem and secure relationships as $\beta = .063$, $t = .458$, $p < .649$. While fearful relationship also indicated no correlation as $\beta = -.111$, $t = -.830$, $p > .411$. The strongest predictor of self-esteem was maladaptive coping strategies $\beta = -.609$, $t = 4.914$, $p > .000$. Therefore, the data concludes that a negative (maladaptive) coping strategy affects levels of self esteem. Thus, poor maladaptive coping strategies will result in low self esteem. Research by Alexandre-Passe (2006) strongly reports the findings of the final hypothesis that coping strategies affects levels of self esteem.

Furthermore, the study was marginally successful for instance significance was found in the first aim, which sets out to demonstrate a significant difference between dyslexic and non-dyslexic participant's on self-esteem, peer relationship styles and coping strategies. However, significance was only found on secure relationships. And finally the fifth aim was also partially accurate while self esteem, coping styles and relationship styles did not all correlate. However, self esteem and maladaptive coping strategy did negatively correlate. Unfortunately, the other aims failed to find significance this may be due to the limitations of the study.

4.2 Limitations of Study

The present study had several characteristics that may have limited the generalizability of the results. Firstly, the sample size was relatively small in comparison to other studies examining a similar sample to this study. In order to have confidence that your survey results are representative, it is critically important that you have a large number of randomly-selected participants in each group you survey.

For a 95% confidence level (which means that there is only a 5% chance of your sample results differing from the true population average), a good estimate of the margin of error (or confidence interval) is given by $1/\sqrt{N}$, where N is the number of participants or sample size (Niles, 2006). Therefore, approx 100 participants will allow for a marginal error of 10%. If you increase the sample size to 100 people, your margin of error falls to 10%. For example, if 60% of the participants reported a fear of heights, there would be a 95% probability that between 50 and 70% of the total population have a fear of heights. Now you're getting somewhere. If you want to narrow the margin of error to $\pm 5\%$, it would be necessary to have a sample size of 500 randomly-selected participants before you can start having any confidence in your results. The sample that was obtained was a varied selection from the general population. It would have been interesting to see the results if there were more participants; however, there are still certain things to learn from this study, although it utilised a small sample. Nevertheless, it would be interesting to implement a study of this kind on a larger population number, as more graphic results could be observed.

Another limitation of the study consists of the age of participants as there was not an even sample of age as 65 (68.3%) participants fell into the age bracket of 17-25, 29 (30.5%) participants fell into the second bracket of 26 – 40 and 11 (11.6%) participants fell into the age category of 41+. Although age of participants was not examined directly it will still affect other tested variables such as self esteem as it is suggested by Orth, Robins & Trzesniewski (2010) that self-esteem declines sharply among older adults while middle-aged are most confident. A lack of evenly age distribution was due to convenience sampling as most participants were from Dublin Business School where most students fall into the bracket age of 18 to 25 with only a few mature students. Also, the questionnaire was posted on Facebook the social

network website this is at a great disadvantage to the older age bracket as many social networking sites are targeted at a younger population. In turn it was difficult finding an older sample of dyslexic participants as dyslexia has only been a diagnosable disorder for the past two decades, many studies neglect an older population that may experience dyslexic disabilities, and yet may not have been diagnosed.

The study intended to examine two groups dyslexic and non dyslexic however there are two fundamental limitations to this criterion. Firstly, it does not account for other associated disorders that a dyslexic may have (for example, Attention Deficit Hyperactivity Disorder (ADHD) or dyspraxia, etc.), which could have a larger or smaller effect on the variables tested, and it excludes those who may be dyslexic and who have not been diagnosed. In future if one had more resources and the expertise, one should screen for dyslexia and thus possibly increase the sample size, and would then know the detail of the participants' diagnoses.

4.3 Positive Strengths of Study

While there are several limitations there are also many positive aspects to the study. There is a long held view that males are disproportionately represented among dyslexic individuals (Critchley 1970). There is also a higher incidence of males with developmental language disorders (Aram & Nation 1982; Eisenberg 1966; Silva 1980, Tallal et al. 1989). In a family study of reading disability, Hallgren (1950) reported that the male to female ratio among index cases was 3.1 to 1. Furthermore, DeFries (1989) also reported that male to female gender ratios in children with reading disability typically exceed those of their affected relatives still show a higher representation of reading disabled males. In the general learning disabled population, more male than female children with learning and reading disabilities are identified

and placed in special education (Lambert & Sandoval 1980). However, Scott (2004) suggests that due to the acknowledgement that girls and women internalise their difficulty, the diagnostic proportions are becoming more equal and that the female response to dyslexia will be better researched. Regardless of conflicting reports gender difference for dyslexia was similar in both males and females in this study with 25 (54.34%) males and 21 (45.7%) females. Therefore, the gender difference was small enough to create precise results.

The control group (non-dyslexic participants) is another positive strength to the study. A control group allows for comparisons of concepts. Control groups are often used in discussion of natural experiments however, they are also a great benefit to any other types of research as trying to control variables and attributes in the data is essential so that the conclusions and results drawn are valid. Controls are also needed to eliminate alternate explanations of experimental results. For example, suppose a researcher feeds an experimental artificial sweetener to sixty laboratory rats and observes that ten of them subsequently die. The underlying cause of death could be the sweetener itself or something unrelated. Other variables, many of which may not be readily obvious, may interfere with the experimental design. For instance, perhaps the rats were simply not supplied with enough food or water, or the water was contaminated and undrinkable, or the rats were under some psychological or physiological stress, etc. Eliminating each of these possible explanations individually would be time-consuming and difficult. Furthermore, in this study the non-dyslexia group act as a control group therefore allowing results of the dyslexic participants be compared with non-dyslexic there by facilitating more accurate and valid results.

4.4 Further Research

Firstly, future research should consider exploration into other, more specific aspects of self - esteem, like academic self - esteem. Burden (2008) suggests that the use of Rosenberg's self-esteem scales (1965) to measure self-esteem in correlational studies can actually tell us little about why any particular individual or group feels the way that they do about a certain field or endeavour. This is a perfectly legitimate concern. Burden (2008, p.6) suggests that although many studies hypothesise that "having learning difficulties of a dyslexic nature leads to low self-esteem", we cannot assume that this is a *causal* relationship without evidence. Burden's (2008) review suggests that one should move away from the idea of investigating global self-esteem or self-perception, and that research should be focusing on three things: dyslexics' perception of efficacy, whether they experience a sense of learned helplessness, and if they have an accurate insight into their learning attributions.

In addition, it would be interesting to examine academic self esteem in a dyslexic setting (such as a school) and then comparing the results to a control group. This was the researchers first intention unfortunately getting permission from special dyslexic schools was a lengthy processes at which led to the extermination of the study resulting to the current study. Therefore, the researcher suggest future research on dyslexic individuals over coming there academic failures. This research would be incredibly useful to school such as Catherine McAuley Primary School for dyslexic children as it would allow teachers to be aware of their students' personal needs.

Furthermore, the researcher would be inclined to re-examine dyslexic self esteem levels as the study showed that it was approaching significance indicating that a larger sample would show a significant finding. It would then be rather intriguing if research was conducted on whether low self-esteem on dyslexic individuals effects criminal behaviour. While previous research touches on the subject In Morgan's

1997(cited by Passé, 2006) study of delinquent/ criminal dyslexics, he found that when dyslexic children failed to keep up in school, their self-esteem dropped as they began to question their academic abilities. This has been found to affect the development of their global self-esteem, and this effect transfers into adulthood (Scott, 2004). This topic in an Irish population would not alone be incredibly interesting but beneficial to preventing criminal behaviour.

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Appendix

Appendix 1

Dear Participant,

My name is Lisa Roantree I am currently a final year psychology student at Dublin Business School. All research conducted is done for the purpose of meeting course requirements. The following questionnaires relate to my final year research project investigating whether differences exist in the psychological development of persons with/without dyslexia. All answers are strictly confidential so please be as truthful as possible. The questionnaire should not take more than 10minutes to complete. All responses will be treated with the strictest confidence and are anonymous. You may withdraw from participation at any time. If you have any further questions, feel free to email me at [REDACTED]

Appendix 2

Please circle the following options

Gender:

Male

Female

What age category are you?

17-25

26-40

40+

Have you ever been diagnosed with dyslexia?

Yes

NO

If circled yes at what age were you diagnosed?

-8yrs

9-15yrs

16-25yrs

16+yrs

Below is a list of statements dealing with your general feelings about yourself.

If you strongly agree, circle **SA**.

If you agree with the statement, circle **A**.

If you disagree, circle **D**.

If you strongly disagree, circle **SD**.

- | | | | | | |
|-----|--|----|---|---|----|
| 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 |

These items deal with ways you've been coping with the stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing in general to cope with stressful events. Obviously, different people deal with things in different ways, but think about what you usually do when you are under a lot of stress. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

- 1 = I haven't been doing this at all
- 2 = I've been doing this a little bit
- 3 = I've been doing this a medium amount
- 4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things.

—

2. I've been concentrating my efforts on doing something about the situation I'm in.

—

3. I've been saying to myself "this isn't real."

—

4. I've been using alcohol or other drugs to make myself feel better.

—

5. I've been getting emotional support from others.

—

6. I've been giving up trying to deal with it.

—

7. I've been taking action to try to make the situation better.

—

8. I've been refusing to believe that it has happened.

—

9. I've been saying things to let my unpleasant feelings escape.

—

10. I've been getting help and advice from other people.

—

11. I've been using alcohol or other drugs to help me get through it.

—

12. I've been trying to see it in a different light, to make it seem more positive.

—

13. I've been criticizing myself.

—

14. I've been trying to come up with a strategy about what to do.

—

15. I've been getting comfort and understanding from someone.

—

16. I've been giving up the attempt to cope.

—

17. I've been looking for something good in what is happening.

—

18. I've been making jokes about it.

—

19. I've been doing something to think about it less, such as going to movies,

—

watching TV, reading, daydreaming, sleeping, or shopping.

—

20. I've been accepting the reality of the fact that it has happened.

—

21. I've been expressing my negative feelings.

—

22. I've been trying to find comfort in my religion or spiritual beliefs.

—

23. I've been trying to get advice or help from other people about what to do.

—

24. I've been learning to live with it.

—

25. I've been thinking hard about what steps to take.

—

26. I've been blaming myself for things that happened.

—

27. I've been praying or meditating.

—

28. I've been making fun of the situation.

—

Appendix 5

PLEASE READ THE DIRECTIONS.

1. Following are descriptions of four general relationship styles that people often report.

Please read each description and **CIRCLE** the letter corresponding to the style that *best* describes you or is *closest* to the way you generally are in your close relationships.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

2. Please rate each of the following relationship styles according to the *extent* to which you think each description corresponds to your general relationship style.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships, It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Not at all

Somewhat

Very

	like me		like me			much	
							like me
Style A.	1	2	3	4	5	6	7
Style B.	1	2	3	4	5	6	7
Style C.	1	2	3	4	5	6	7
Style D.	1	2	3	4	5	6	7

THANK YOU

Appendix 6

<https://docs.google.com/spreadsheet/viewform?formkey=dHNvcWhLXzBfWW1tbnJmdldLczFO>

[MEE6MQ](#)