

■ How Dyslexic Teenagers Cope: An Investigation of Self-esteem, Coping and Depression

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Research into how dyslexics cope and the effects of their coping has received little attention in the 100 years since dyslexia has been recognized. Why is this? Well it is not an easy area to investigate, partly as most qualitative studies have looked only at coping strategies of specific dyslexics. These are individual and are unsuitable for generalizations to larger populations.

This study takes a different approach to the problem. By using three standardized tests for self-esteem, coping and depression, a picture is painted of how teenage dyslexics cope and whether this affects their self-esteem and depression.

Results strongly suggest gender differences, 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.

This study takes the view that coping and the effects of coping by dyslexic children at school should not be underestimated. It also suggests that such issues will aid educationalists in the remedial process. Copyright © 2006 John Wiley & Sons, Ltd.

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INTRODUCTION

When dyslexics enter school, they enter a world where their abilities and strengths are different from those around them. What may be easy to their peers is very difficult or impossible for them. Thus when

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they recognize this difference, stress begins. Thomson (1996) isolated two types of reactions to stress at school in dyslexics. Firstly, 'under'-reactions, where the dyslexic withdraws and manifests extreme anxiety, e.g. trembling and sweating when asked to read. These dyslexics have low self-opinions of themselves and generalize every aspect of their life as a failure. Secondly, these individuals have 'over'-reactions to stress, e.g. being seen as successful in other areas, being the class clown, hiding their failure under a 'couldn't care less' attitude and manifesting silly behaviour. This can also lead to aggression, with extreme cases leading to delinquency.

This study investigates teenagers with dyslexia with standardized tests in self-esteem, coping and depression to gain knowledge of not only how they cope, but the effects of their coping (self-esteem and depression).

SELF-ESTEEM

Low Self-esteem

Morgan's (1997) study of delinquent/criminal dyslexics found that, when dyslexic children fail to keep up at school, their self-esteem drops as they begin to question their academic abilities (develop inferiority complexes). There are suggestions that both unrecognized and recognized dyslexics receiving insufficient or inappropriate support can feel devalued at school and turn to deviant behaviour. This is a response to their sense of low self-esteem induced by school and as a way of gaining recognition from their peers (Kirk & Reid, 2001; Scott, 2004). Riddick *et al.*, (1999) and Peer and Reid (2001, p. 5) suggests 'frustration leads very often to antisocial or deviant behaviour' among dyslexics, especially those with low self-esteem.

Some pupils might disrupt a class because they interpret the class work as threatening, and use attention seeking to protect self-esteem, according to Molnar and Lindquist (1989). They suggest that if the teacher, in class with pupils, can help re-interpret the nature and purpose of class work (keeping the child's self-esteem), the child's behaviour will change. But most teachers, Molnar and Lindquist believe, hand out reprimands, as this is the only skill teachers know to quickly influence a child's present and future behaviour. Low self-esteem will also mean the development of a poor or negative self-image. Such beliefs can become a self-fulfilling prophecy of expecting to fail (Riddick, 1996). Morgan and Klein (2001) note that childhood experiences of being labelled 'thick' and public humiliation caused by failing often result in choices which reinforce low self-esteem.

High Self-esteem

Dyslexic children with high self-esteem display more confidence and will volunteer answers or try out new subjects/tasks than lower self-esteem children. These high self-esteem children expect to succeed and attribute success to their skill/ability, according to Riddick *et al.* (1999) and Burden (2005). Coopersmith (1967) also found that dyslexic teenagers with high self-esteem were usually more successful in both academic and social environments compared to

teenagers with low self-esteem. Wszeborowska-Lipinska (1997) investigated successful dyslexics who reached university education in Poland. To reach such a level, the study found that successful dyslexics had higher self-esteem than their peers.

COPING (TASK/EMOTIONAL/AVOIDANCE)

In the study of coping, Endler and Parker (1999) suggests that three areas (task, emotion and avoidance) should be investigated, as each play a part in coping.

Task-Based Coping

Coopersmith (1967) found that successful dyslexic teenagers were active, expressive individuals. Wszeborowska-Lipinska (1997) investigated successful dyslexics and found that successful dyslexics were pro-active to overcome hurdles, which required high levels of self-confidence. Scott *et al.*, (1992) study found key factors to success among dyslexic to be: encouragement of talents and hobbies (from peers, etc.) and a search for self-worth. Reiff *et al.*, (1997) study of successful dyslexics also found that persistence and stubbornness were assets. McLoughlin *et al.*, (2002) found hard work and determination to be underlying factors in success at school. All these traits: expressive, pro-active, search for self-worth, persistence, stubbornness and determination are descriptions of task-based coping strategies.

Emotional-Based Coping

Trying hard or asking for help and not receiving any, can cause children enormous frustration (Edwards, 1994). Parents and teachers see bright and enthusiastic children who are not successfully learning to read and write. Ryan (1994) comments that no one knows how hard the dyslexic is really trying, and each year their peers surpass them in reading skills, their frustration increases.

It is important for teachers to recognize the frustration that dyslexics feel at school in the classroom: an inability to express their ideas in written form; an inability to read books of interest (rather than for their reading age) and having to work considerably harder than their peers to attain the same achievement level (Thomson, 1996).

The negative experiences of school, as found by dyslexic teenagers in Edwards (1994) had associated reactions of lack of confidence, self-doubt/denigration, and sensitivity to criticism, behavioural problems, truancy/school refusal and competitiveness disorders.

In Butkowsky and Willows' (1980) study, average to good readers attributed their success to their ability, while poor readers attributed their lack of success to luck. Poor readers however tended to blame themselves by attributing failure to their own incompetence, and success to environmental factors, e.g. luck.

Correlations to 'learnt helplessness' (Burden, 2005; Diener & Dweck, 1978; Miller & Norman, 1978) can also be made.

Dyslexics often react to their difficulties by withdrawing emotionally, or conversely becoming aggressive, compensating... by obtaining negative attention from others (Thomson & Hartley, 1980, p. 19).

Supporting Butkowsky and Willows, Hales (1995) suggests there is strong evidence to suggest that dyslexics are more disturbed by criticism. Hales found dyslexics experience considerable amounts of criticism at school, especially before their condition is diagnosed. All these traits: frustration, lack of confidence, self-doubt, sensitive to criticism, behavioural problems, competitiveness disorders, self-blame, aggressiveness are all descriptions of emotion-based coping strategies.

Avoidance-Based Coping

In large schools, avoidance of competing or reaching potential goes unnoticed, compared to smaller schools. This extreme non-participation through lack of confidence is a recurring characteristic in dyslexics (Scott, 2004). Avoidance strategies deflect 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.

Edwards (1994, p. 61) also noticed that some dyslexics suffer from competitiveness disorders, with many withdrawing both academically and socially:

Gareth only tries hard if he thinks he can win. If not he merely gives up... . Nevertheless, he had to be very sure of his good standard of work before making himself vulnerable again.

Anxiety causes humans to avoid whatever frightens them, and dyslexia is no exception. However, Ryan (1994) notes that teachers misinterpret this avoidance as laziness. In fact he notes that the avoidance is more related to anxiety and confusion than apathy. Reid (1988) found when pupils feel 'unwanted, rejected, uncared for and disillusioned ... they start to manifest their disaffection by staying away, disrupting lessons, or underachieving'.

If academic success cannot give dyslexics self-worth, then they begin to withdraw from classroom activities (negative environments), according to Morgan (1997). There is a growing body of evidence to suggest that children with dyslexia avoid tasks, which highlight their difficulties. Avoidance techniques can be as simple as constantly breaking the tips of pencils, so as to spend 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).

Riddick (1996, p. 131) suggests:

by secondary age all children claim that they avoid difficult to spell words and over half of them claim that they put off or avoid doing writing.

In a study of dyslexic school children (primary and secondary), Riddick (1996, p. 130) found pupils commenting that they:

daily avoided using difficult words to spell, wrote less (avoiding making mistakes) and put off starting work as coping strategies.

In fact, out of 45 noted strategies found by Riddick, avoidance was featured in 35 of them. The other 10 were characterized by asking classmates to help. These findings were similar to Mosely's (1989) study concerning adults and children with general spelling difficulties. Pollock and Waller (1994) found that dyslexic children were perceived as immature (in their vocabulary choice and mode of expression) by schoolteachers and examination board markers, as they preferred using words they knew how to spell. But, if they did use words where the spelling is uncertain, they were accused of being careless and risking lower self-esteem. Thus word avoidance has attractive advantages to young dyslexics—they think it is better to be seen as immature than to risk embarrassment.

Another aspect of school refusal is shown by those individuals who develop psychosomatic disorders or other illnesses to avoid school: 'I used to pretend I was sick, make myself puke, and say I don't wanna go today', one dyslexic teenager commented (Edwards, 1994, p. 110). A powerful example of psychosomatic pain is the following story of a 12-year-old dyslexic: Trevor developed a pain in his right leg requiring crutches. To him it felt like a rare disease. The hospital doctor concluded that he was dyslexic but intelligent, was therefore frustrated, and that the frustration was expressed as pain in the right thigh, which occurred about once every 6 months and could last 10 days at a time (Edwards, 1994). Strangely enough, this same teenager was reluctant to be truant, as he felt there would be 'repercussions and (that it) was pointless anyway' (p. 39).

This suggests a main difference between normal truants and dyslexics avoiding school (social conscience). Another 12-year-old called Gareth used to get into fights with larger or other (dyslexic) kids to get off school. The injuries were for mutual avoidance reasons, not anger, and usually meant 2–3 days off school.

DEPRESSION

Riddick (1996) found dyslexic primary and secondary school children reported themselves as disappointed, frustrated, ashamed, fed up, sad, depressed, angry and embarrassed by their dyslexic difficulties. Depression is a frequent complication in dyslexia, according to Burden (2005), Ryan (1994) and Scott (2004). Although most dyslexics are not clinically depressed, children with this type of learning difficulty are at higher risk of intense emotional feelings of pain and sorrow. Evidence suggests that dyslexics commonly manifest low self-esteem, explaining why many dyslexics (especially female) internalize such sorrow and pain. Depression in school-aged children may be manifested by their being more active in order to cover up painful feelings (extrovert) or their being

loath to enjoy anything from their day (introvert). Both types will manifest negative thoughts about themselves and see the world in a very negative way. To date no study has investigated depression with standardized instruments on dyslexic populations.

INTRODUCTION TO STUDY

The literature review highlighted certain emotional and behavioural aspects of how the dyslexic/learning disabled school-aged pupil copes with school, especially self-esteem, avoidance and depression.

So three types of tests were regarded as required:

- A test for self-esteem: ideally looking at parental and academic forms.
- A test for avoidance: ideally to be compared with other types of coping, both positive and negative.
- A test for depression: ideally suitable for teenagers.

Three standardized tests were selected:

- CFSEI—the culture-free self-esteem inventory (Form A) (Battle, 1992).
- CISS—the coping inventory for stressful situations (adolescent version) (Endler & Parker, 1999).
- BDI-II—Beck depression inventory (Beck *et al.*, 1996).

WHAT'S IN THESE TESTS?

The CFSEI

The CFSEI was designed by Battle (1992) to investigate four types of self-esteem (general, social, academic and parental). According to Battle they are explained as:

- Social self-esteem refers to individuals' perceptions of the quality of their relationships with peers (i.e. self-esteem from friends).
- Academic self-esteem (i.e. school-related self-esteem) refers to individuals' perceptions of their ability to succeed academically (i.e. self-esteem from teachers and school).
- Parental self-esteem refers to individuals' perceptions of their status at home—including their subjective perceptions of how their parents or parent-surrogates view them (i.e. self-esteem from parents).
- General self-esteem refers to individuals' overall perceptions of their worth (i.e. self-esteem from themselves).

Factor Analysis and Validity and Gender Considerations

The 60 items of Form A were subjected to multiple factor analysis using a varimax rotation and then subjected to alpha (kr 20) analysis of internal consistency ($n = 117$ boys and girls in grades 7, 8 and 9). Alpha coefficients for the five factors were as follows: general 0.71; social 0.66, academic 0.67, parents 0.76 and lie 0.70.

Content validity was built into the CFSEI by: (a) developing a construct definition of self-esteem and (b) writing items intended to cover all areas of the construct. The construct definition as measured by the CFSEI is: self-esteem refers to the perception the individual possesses of his or her own worth. An individual's perception of self develops gradually and becomes more differentiated as he or she matures and interacts with significant others. Perception of self-worth, once established, tends to be fairly stable and resistant to change (Battle, 1992). Battle (1992, 1981) found only insignificant gender differences.

The CISS

The CISS was designed by Endler and Parker (1999) to investigate multi-dimensional coping. It investigates three main types of coping (task-orientated, emotion-orientated, and avoidance-orientated). Distraction and social diversion are sub-scales to avoidance-orientated coping. According to Endler and Parker (1999), the scales are explained as:

- Task-orientated strategies are those that prioritize question information and analyse past attempts to improve subsequent attempts to deal with stressful situations or environments.
- Emotion-orientated strategies including internalizing (e.g. drug abuse, alcoholism, psychic disorders or suicide) or externalizing stressful (destructive acts against society) situations so that they blame themselves or others.
- Avoidance-orientated strategies include avoiding tasks by numerous different means (sometimes extremes): visiting friends rather than doing homework or gaining weight to avoid games.
- Distraction strategies include doing things to distract you from tasks, e.g. not noticing errors to avoid making corrections (i.e. avoiding even noticing tasks).
- Social diversion strategies include avoiding socializing to avoid having friends and avoiding situations where literacy will be tested, e.g. paying by cash rather than writing cheques (i.e. withdrawing).

Factor Analysis and Gender and Validity Considerations

The data from $n = 313$, 13–15-year-olds (152 males and 161 females) and $n = 504$, 16–18-year-olds (270 males and 234 females) were subjected to multiple factor analysis using a varimax rotation and then subjected to alpha (kr 20) analysis of internal consistency. Alpha coefficients for the five factors were as follows: (13–15-year-old males) task 0.92; emotion 0.82, avoidance 0.85, distraction 0.78 and social diversion 0.79. In addition (13–15-year-old males) task 0.91; emotion 0.90, avoidance 0.83, distraction 0.76 and social diversion 0.84.

The construct validity for the adolescent form is supported by studies examining the CISS in relation to psychopathology, self-perception, and loneliness. The emotion-orientated coping is highly related to psychological distress, psychopathology, and somatization. Task-orientated and avoidance-orientated coping, according to Endler and Parker (1999) are unrelated to these negative variables. The CISS was found to show significant gender differences.

The BDI

The BDI-II was designed by Beck *et al.*, (1996) and is the third generation of the BDI scale. In the last 35 years of its use, the BDI has become one of the most widely accepted instruments for assessing the severity of depression in diagnosed patients and for detecting possible depression in apparently normal populations (Archer, Maurish, Imhof, & Piotrowski, 1991; Piotrowski & Keller, 1992). The BDI-II investigates the following main factors to classify depression:

- Major affective disorders.
- Depressive disorders, not otherwise specified.
- Dysthymic disorders.
- Adjustment disorders with depressed mood or mixed emotional features.

Factor Analysis and Gender and Validity Considerations

The means, standard deviations, percentages symptomatic and correlated items for the outpatient and for the college samples (Beck *et al.*, 1996) indicate significant differences; these would suggest the BDI-II differentiates between depressive and non-depressive groups. The factors of the BDI-II were subjected to multiple factor analysis using varimax rotation. Coefficients alpha for the outpatients sample 0.92 ($n = 500$ mean age 37.20 years S.D. 15.91) and for the college student sample 0.93 ($n = 120$ mean age 19.58 years S.D. 1.84). The mean coefficient alpha is 0.86 (Beck *et al.*, 1996). When the BDI-II was administered to outpatients ($n = 317$ females and $n = 183$ male); the authors found a mean difference with respect to sex (females: mean 23.61 S.D. = 12.31 and males: mean 20.44 S.D. = 13.28) [$t(498) = 2.29, p < 0.01$]. With college students ($n = 67$ female and $n = 53$ male) there was also a significant mean difference with respect to sex (females: mean 14.55 S.D. = 10.74 and males: 10.04 S.D. = 8.23) [$t(118) = 2.53, p < 0.05$] (Beck *et al.*, 1996).

The BDI-II was developed for the assessment of symptoms corresponding to criteria for diagnosing depressive disorders listed in the Diagnostic and Statistical Manual of Mental Disorders—4th ed. (DSM-IV) (American Psychiatric Association, 1994). Validity questions are resolved by its high correlation to the DSM-IV criteria. The BDI was found to show significant gender differences.

Why These Particular Tests

The CFSEI has recently been used in a study of dyslexics and stress. Riddick *et al.* (1999) used the CFSEI Mk2 test in conjunction with anxiety scales on 16 dyslexic adults (with controls). They found that the dyslexic group had significantly lower self-esteem than controls, although no significance was found with the anxiety scales. (The adult form of the CFSEI was used, so the data cannot be easily compared with the data from this study.) Thomson (1996) tested three groups of pupils at the East Court School and found over an 18-month period that the CFSEI was able to identify how pupils' social and academic self-esteem levels improved following specialist teaching methods designed for dyslexics. Burns (1986) has argued that there are clear links between children's self-concept

and their academic performance, having found correlations between children with poor academic performance, low motivation and poor self-concept. As the designer of the CFSEI was a special needs teacher, the test was originally designed for use as a tool for children with special educational needs, such as dyslexics.

The CISS has been used only once before with dyslexic samples. Hartley and Watkins (2001) used it to investigate stress and dyslexia in higher education. The study used an $n = 21$ sample of dyslexic higher education students who were receiving support from the University of Liverpool's Student Support & Welfare Service. (There was an age matched non-dyslexic control group, $n = 19$.) Hartley and Watkins found higher levels of task-orientated coping amongst the dyslexics than amongst the non-dyslexics, but similar levels for emotional-orientated and avoidance-orientated coping. These results must be viewed in light of the biased sample, in that the dyslexics were receiving help from university support services and thus all were being taught coping strategies. The results suggest that dyslexics can be taught task-related coping strategies by (university) support service tutors, although emotional and avoidance defensive strategies were still prevalent amongst this group. (Avoidance was seen as a helpful strategy.)

The BDI-II is well trusted for assessing depression, and both the CFSEI and the CISS have been correlated against it. Little is known about the depressing effects of being dyslexic at school as no study has actually investigated depression among dyslexics, especially among teenage dyslexics (except as anecdotes). If the assumptions of other researchers (Riddick, 1996; Ryan, 1994) and of this project are correct, then a scale such as the BDI-II for measuring depression would be of use for defining the internalizing of avoidance and other coping methods, as well as for assessing levels of self-esteem.

These Tests Have Been Used Together Before

The CFSEI and the BDI-II have been investigated together (Battle, 1992) on a high school sample, grades 10–12 ($n = 26$ with mean ages 16.0, $n = 15$ males and $n = 11$ females). High inverse correlations between self-esteem and depression were found, indicating that such variables are highly related among adolescents. Students with higher self-esteem (CFSEI) scores tended to score lower on depression (BDI-II). The data suggests that depression in adolescents is associated with low self-esteem. The CFSEI and the BDI-II were also used to investigate an adult sample ($n = 43$ males and $n = 86$ females), where the correlation found between self-esteem and depression was -0.55 (males = -0.53 , females = -0.56). Such data suggests that, when self-esteem increases; depression decreases and vice versa (Battle, 1992).

The CISS and the BDI-II have also been studied together with undergraduates ($n = 229$ males and $n = 476$ females) (Endler & Parker, 1999). Results indicate high correlations between the BDI-II depression scale and the CISS emotion scale for both males and females. There was a negative correlation between the BDI-II depression scale and the CISS task scale for both males and females. The two CISS avoidance sub-scales (distraction and social diversion) were generally unrelated to the BDI-II depression scale.

Sample

A sample was recruited from flyers included in dyslexia association newsletters, referrals from an educational psychologist and volunteers at a London 6th Form College. Out of the $n = 72$ recruited, $n = 62$ were chosen. From the $n = 19$ (27% response) returned, these included 12 males (mean academic year 11.17, S.D. 1.03) and seven females (mean academic year 11.86, S.D. 0.38).

Scoring

Scoring was as recommended by the instrument manuals.

RESULTS

CFSEI

Tables 1 and 3 indicate the mean raw and percentile mean scores for the CFSEI for this teenage dyslexic sample, compared to the results from other studies. A high score equals high self-esteem and a low score equals low self-esteem for each sub-score. A high lie score (out of 10) denotes truthfulness. A closer look at Table 1 indicates scores for the Lie scale, scores are significantly higher among this sample's males, than female population. As 5 is the average score for this scale, the higher male score in this sample suggests a greater need to cover up (avoid telling others about) their learning difficulties, e.g. teachers, friends, etc. Table 2 denotes the scoring guide for the CFSEI (sub-scale total self-esteem).

Gender

This teenage dyslexic sample results indicate significant differences between the genders. In the majority of cases, the male sample scored significantly higher in both raw scores and percentiles. The only exception is parental self-esteem percentiles, where the scores seem to be comparable. The normative data only suggests mild gender differences using the CFSEI.

Main Study Compared to Other Studies

Total self-esteem: The teenage dyslexic's raw data scored higher than the unsuccessful sample but lower than the successful sample from Battle (1992). The teenage dyslexic's raw data is also lower in total self-esteem than both the dysfunctional and functional samples from Battle (1992). As found with the successful and unsuccessful sample, the main study raw data scores were higher than least depressed but lower than the most depressed samples from Battle (1996). There are no data from Thomson (1996) for comparison with this sub-scale.

General self-esteem: The teenage dyslexic's raw data is lower than both dysfunctional and functional samples in general self-esteem, as indicated by Battle (1992). Teenage dyslexics' raw scores are higher than the most depressed but lower than the least depressed from Battle (1992). From percentile data available from Thomson (1996), one can see that the teenage dyslexic's score is considerably lower than each of the three time periods of specialist teaching.

Table 1. Culture free self-esteem inventory—Form A—raw mean scores (S.D.)

Sample	Total SE	General SE	Social SE	Academic SE	Parental SE	Lie
Teen dyslexics (ALL) <i>n</i> = 19	34.4 (8.5)	13.9 (3.8)	6.4 (2.6)	6.1 (2.6)	7.4 (2.3)	7.1 (1.8)
Teen dyslexics—males <i>n</i> = 12	37.5 (7.5)	15.3 (2.9)	6.8 (2.5)	7.0 (2.1)	7.6 (2.5)	8.1 (1.8)
Teen dyslexics—females <i>n</i> = 7	24.2 (8.5)	8.9 (4.7)	5.0 (2.6)	4.1 (2.5)	5.6 (2.9)	5.2 (2.9)
Dyslexic study 3 (Riddick <i>et al.</i> , 1999)						
Dyslexic adults <i>n</i> = 16	19.76	10	6			5
Non-dyslexic adults <i>n</i> = 16	25.95	14	7			7
Non-dyslexic study 1 (Battle, 1992)						
Successful <i>n</i> = 97	36.44 (8.19)					
Unsuccessful <i>n</i> = 90	30.23 (7.59)					
Non-dyslexic study 2 (Battle, 1992)						
Dysfunctional <i>n</i> = 61	35.47 (9.07)	14.48 (3.60)	6.05 (2.42)	6.58 (2.55)	7.71 (2.48)	
Functional <i>n</i> = 61	37.80 (7.92)	15.48 (3.14)	6.11 (2.390)	7.31 (2.42)	8.28 (1.77)	
Non-dyslexic study 3 (Battle, 1992)						
Least depressed <i>n</i> = not known	40.79 (5.45)	16.33 (3.03)	6.08 (1.45)	8.58 (1.118)	9.00 (1.44)	
Most depressed <i>n</i> = not known	27.48 (7.13)	10.48 (13.14)	4.24 (2.22)	6.32 (1.89)	6.84 (2.25)	
Non-dyslexic study 5 (Battle, 1992)						
Normative sample <i>n</i> = 1679	37.98 (8.33)	15.87 (3.68)	7.29 (2.21)	6.97 (2.30)	7.88 (2.39)	

Table 2. Classification of CFSEI scores for the total self-esteem sub-scale

Score	Classification
47+	Very high
44–46	High
34–43	Intermediate
25–33	Low
24–	Very low

Table 3. Culture free self-esteem inventory—Form A—percentile mean scores (S.D.)

	Total SE	General SE	Social SE	Academic SE	Parental SE
Teen dyslexics (ALL) $n = 19$	33.3 (23.8)	33.3 (25.9)	40.2 (28.7)	41.3 (29.3)	41.9 (24.6)
Teen dyslexics—males $n = 12$	39.3 (26.1)	38.2 (26.5)	44.8 (32.1)	49.4 (30.3)	42.0 (25.7)
Teen dyslexics—females $n = 7$	23.0 (15.9)	24.9 (24.3)	32.3 (21.5)	27.3 (23.3)	41.9 (24.4)
Dyslexic study 2 (Thomson, 1996)					
Initial interviewees $n = 15$		50	32	45	87
After 6 months $n = 15$		50	64	77	87
After 18 months $n = 15$		60	84	77	87

Social self-esteem: The teenage dyslexic's raw scores are higher than both the dysfunctional and functional samples for social self-esteem, as well as the least depressed and most depressed, as indicated in Battle (1992). Turning to Thomson (1996), the teenage dyslexic's percentile scores are higher than the initial interviewees, but considerably lower than samples after 6 and 18 months with specialist teaching methods.

Academic self-esteem: The teenage dyslexic's raw score is lower than both dysfunctional and the functional samples for social self-esteem, as well as least depressed and the most depressed, from Battle (1992). From the percentile data one can see teenage dyslexics scores being lower than each of the three samples that experienced specialist-teaching methods, as found by Thomson (1996).

Parental self-esteem: The teenage dyslexic's raw scores are both lower than the dysfunctional and functional samples in parental self-esteem, as indicated by Battle (1996). The teenage dyslexic's raw scores are higher than that of the most depressed but lower than the least depressed from Battle (1992). From the percentile data teenage dyslexic's score lower than each of the three samples that experienced specialist-teaching methods, as found by Thomson (1996).

CISS

Tables 4 and 5 show the mean raw and percentile scores for the CISS from the teenage dyslexic's sample, compared to the results from other studies. A high score indicates more coping skills than a low score on that sub-scale.

Table 4. Coping inventory for stressful situations—raw mean scores (S.D.)

	Task	Emotion	Avoidance	Distraction	Social diversion
Teen dyslexics (ALL) <i>n</i> = 19	54.2 (10.0)	47.9 (14.7)	44.6 (12.6)	20.0 (7.2)	16.9 (5.6)
Teen dyslexics—males <i>n</i> = 12	55.4 (10.0)	42.8 (14.4)	39.3 (9.5)	18.1 (5.2)	14.2 (4.8)
Teen dyslexics—females <i>n</i> = 7	52.1 (10.6)	56.9 (11.0)	53.9 (12.5)	23.3 (9.3)	21.6 (3.2)
Dyslexic study 1 (Hartley & Watkins, 2001)					
Dyslexic students <i>n</i> = 21	51.8 (11.2)	45.3 (13.3)	44.6 (10.9)	—	—
Self-reported non-dyslexics <i>n</i> = 19	52.9 (9.1)	42.8 (10.7)	51.3 (9.8)	—	—
Non-dyslexic study 4 (Endler & Parker, 1999)					
Psychiatric patients (males <i>n</i> = 164)	55.63 (13.70)	47.92 (11.84)	47.31 (12.19)	22.15 (6.76)	16.23 (5.17)
Psychiatric patients (females <i>n</i> = 138)	50.75 (12.56)	52.62 (11.77)	46.33 (10.5)	21.33 (6.33)	16.72 (5.25)
Psychiatric patients (<i>n</i> = 302)	53.19	50.27	46.82	21.74	16.475
Early adolescent (males <i>n</i> = 152)	45.90 (12.97)	40.49 (9.76)	46.43 (11.73)	22.53 (6.47)	15.49 (4.99)
Early adolescent (females <i>n</i> = 161)	48.85 (11.44)	46.55 (10.92)	50.72 (11.21)	15.83 (5.21)	18.37 (4.79)
Early adolescents (<i>n</i> = 313)	47.375	43.52	48.575	19.18	16.93
Late adolescent (males <i>n</i> = 270)	49.34 (11.06)	39.62 (11.93)	44.91 (10.98)	20.19 (6.04)	15.83 (5.21)
Late adolescent (females <i>n</i> = 234)	49.56 (10.55)	48.38 (11.27)	49.41 (10.45)	21.96 (6.40)	18.14 (4.71)
Late adolescents (<i>n</i> = 504)	49.45	44.0	47.16	21.075	16.985

Table 5. Coping inventory for stressful situations—percentile mean scores (S.D.)

	Task	Emotion	Avoidance	Distraction	Social diversion
Main study (ALL) <i>n</i> = 19	64.7 (25.6)	61.3 (35.4)	44.3 (29.0)	42.4 (29.5)	50.0 (28.4)
Main study—males <i>n</i> = 12	70.1 (23.7)	56.1 (39.0)	34.8 (23.1)	34.5 (23.2)	39.6 (29.3)
Main study—females <i>n</i> = 7	55.4 (27.8)	70.3 (28.8)	60.7 (32.4)	55.9 (35.9)	67.9 (16.0)

Gender

Endler and Parker (1999) found significant gender differences in the CISS (see Tables 4 and 5) and this is no different from this teenage dyslexic sample. The pattern from the teenage dyslexics seems to indicate that males score higher in task-orientated coping than females but lower in emotional-orientated, avoidance-orientated, distraction and social diversion strategies.

The teenage dyslexic's percentile data indicates that males scored higher average (70 percentile) than females (55 percentile) in task-orientated coping. The females however scored higher than males in emotion-orientated coping (70 percentile), avoidance-orientated coping (61 percentile), distraction (56 percentile) and social diversion (68 percentile) strategies. Lastly, the males scored average in emotion-orientated coping (56 percentile) but significantly below average in avoidance-orientated coping (35 percentile), distraction (35 percentile) and social diversion (40 percentile) strategies.

Main Study Compared to Other Studies

Task-orientated coping: The teenage dyslexics scored higher than both the self-reported non-dyslexics and the dyslexics' from Hartley and Watkins (2001) on task-orientated coping. The teenage dyslexic's sample also scored higher than all standardized data (psychiatric as well as early and late adolescents) for task-orientated coping, according to the test authors (Endler & Parker, 1999). The teenage dyslexic's also scored significantly higher than the standardized scores for both early and late adolescents. This would suggest that the teenage dyslexic sample use more task-orientated coping than would be expected, as confirmed in the percentile data for the main study being 65 percentile, thus higher than the normative average.

Emotional-orientated coping: Again the teenage dyslexic's sample scored higher than both the self-reported non-dyslexics and the dyslexics from Hartley and Watkins (2001). They also scored higher than the early and late adolescents standardized data, but not the psychiatric patients who scored significantly higher (Endler & Parker, 1999). This would suggest that these teenage dyslexics use more emotion-orientated coping than would be expected, as confirmed in the percentile data for the main study being 61%, thus higher than the normative average.

Avoidance-orientated coping: Interestingly, considering how the teenage dyslexics scored on task-orientated and emotion-orientated coping, the teenage dyslexic's scored comparably to Hartley and Watkins's (2001) dyslexic sample for avoidance-orientated coping, but significantly lower than the non-dyslexic sample. The teenage dyslexic's also scored lower than all standardized data

(psychiatric as well as early and late adolescents), according to the test authors (Endler & Parker, 1999). Percentile data for the teenage dyslexic's is 44%, thus slightly lower than the normative average.

Distraction-orientated coping: There is no data from Hartley and Watkins (2001) for this sub-scale. The teenage dyslexic's scored higher than early adolescents, but lower than psychiatric and late adolescents from standardized data (Endler & Parker, 1999). Percentile data of 42% is thus slightly lower than the normative average.

Social diversion orientated coping: There is no data from Hartley and Watkins (2001) for this sub-scale. The teenage dyslexics score is on par with all standardized data compared to samples of psychiatric as well as early and late adolescents (Endler & Parker, 1999), these confirmed by the percentile data, with the teenage dyslexics scoring 50%, thus the normative average.

BDI

Table 6 shows the mean raw scores for the BDI-II for this sample, compared to studies from other samples. High scores indicate higher levels of depression.

Scoring and Marking

Each item of the BDI-II is rated on a four-point scale ranging from 0 to 3 with a maximum score of 63. See Table 7 for the scoring guide.

Table 6. Beck depression inventory—raw mean scores (S.D.)

	Raw score
Teen dyslexics (ALL) $n = 19$	11.3 (11.0)
Teen dyslexics—males $n = 12$	6.2 (5.6)
Teen dyslexics—females $n = 7$	20.1 (12.8)
Non-dyslexic study 5 (Beck <i>et al.</i> , 1996)	
Hospital outpatients ($n = 500$)	22.46 (12.75)
College students ($n = 12$)	12.56 (9.93)
Mood disorders ($n = 264$)	26.57 (12.15)
Major depression, single episode ($n = 62$)	28.05 (11.75)
Major depression, recurrent ($n = 103$)	29.45 (11.74)
Anxiety disorders ($n = 88$)	19.38 (11.46)
Adjustment disorders ($n = 80$)	17.29 (12.33)
Non-dyslexic study 6 (Beck <i>et al.</i> , 1996) $n = 127$	
Non-depressed	7.65 (5.9)
Mildly depressed	19.14 (5.7)
Moderately depressed	27.44 (10.0)
Severely depressed	32.96 (12.0)
Non-dyslexic study 7 (Beck <i>et al.</i> , 1996) $n = 620$	
Female college students	14.55 (10.74)
Male college students	10.04 (8.23)
Female hospital outpatients	23.61 (12.31)
Male hospital outpatients	20.44 (13.28)

Table 7. Depression scoring guide to the BDI-II

Range	Score
Minimal depression	0–13
Mild depression	14–19
Moderate depression	20–28
Severe depression	29–63

Gender

There is a very significant difference between genders with the teenage dyslexics scores. The males' mean score of 6.2, which equals to minimal depression on the BDI-II, while the female mean score is 20.1, which equals to moderate depression on the BDI-II scale. Concerning gender differences, the authors (Beck *et al.*, 1996) also found a significant mean difference with respect to gender. With college students and hospital outpatients, see Table 6, there was also a significant mean difference of scores, with respect to gender from both samples; the females scored significantly higher. The female scores were very similar to those with anxiety and adjustment disorders and those mildly depressed.

Main Study Sample Compared to Other Studies

Compared to Beck *et al.* (1996), the teenage dyslexics scored higher than the standardized data for non-depressives but lower than the data for mild depressives. Thus, teenage dyslexics could be seen as having slightly higher than normal levels of depression. The teenage dyslexics also scored comparable depression levels to college students but significantly lower than levels for adjustment and anxiety disorders. It should be noted that a number within this dyslexic teenage sample scored high depression scores, thus severe depression cannot be ruled out among such a sample.

DISCUSSION

CFSEI

The CFSEI raw scores for this teenage dyslexic sample suggest that they are moderately depressed in total, general and parental self-esteem. However, this sample had lower academic self-esteem than both the most and least depressed normative samples, but higher social self-esteem than the most and least depressed normative samples. This teenage dyslexics sample also scored lower than the successful, but higher than the unsuccessful samples from Battle (1992).

Different patterns exist with the dysfunctional and the functional CFSEI samples: the teenage dyslexics scored lower than the dysfunctional and the functional sample in general, academic and parental self-esteem, but higher than both the dysfunctional and the functional samples in social self-esteem, and higher than the dysfunctional but lower than the functional samples in total self-esteem, as found by Battle (1992).

The teenage dyslexic's CFSEI percentile scores were lower than the three Thomson (1996) dyslexic's samples for general, academic and parental

self-esteem. The teenage dyslexics also scored higher than Thomson's (interviewees) sample in social self-esteem but lower in the other two samples from the same study.

CISS

Patterns from the CISS raw scores suggest that these teenage dyslexics use more task and emotion-orientated coping but less avoidance-based coping than the early and late adolescents standardized data would indicate. The use of distraction and social diversion as coping styles were on par with the standardized data.

The CISS percentile means scores suggest the teenage dyslexics raw scores are on the higher side of average on task and emotion-orientated coping, average on social diversion coping and on the lower side of average on avoidance and distraction-orientated coping.

BDI-II

Patterns from the BDI-II raw scores suggest that this teenage dyslexic sample have generally normal depression ratings, although when broken down via gender a different pattern appears. Males have minimal depression but females have moderate depression, with the female scores similar to those with adjustment and anxiety disorders. Thus, it could be concluded that these female dyslexic teenagers internalize their frustrations, whereas the dyslexic males from this sample, use other means (externally, possibly using aggression, as found by Thomson and Hartley (1980) and Svensson *et al.*, (2001)) to deal with their frustrations.

CONCLUSIONS

This paper first begun with a review of the 'under' and 'over' reactions of stress that dyslexics experience at mainstream school, according to Thomson (1996). A literature investigation was made into self-esteem and the two types of reaction identified by Thomson, looking at different task, emotion and avoidance-based coping and their manifestations.

A search was then made into different standardized instruments to investigate self-esteem, avoidance and depression, these resulted in the use of the CFSEI (Battle, 1992), CISS (Endler & Parker, 1999) and the BDI-II (Beck *et al.*, 1996). These instruments were used on a dyslexic teenager sample of nineteen (12 males and seven females).

The CFSEI (self-esteem) data seem to firstly suggest than dyslexic males and females score differently, indicating that they cope differently to their dyslexia and their experiences of being dyslexic at school. Females in this sample generally scored lower than their male counterparts in all sub-scales of self-esteem, with general and academic self-esteem in particular. (With academic self-esteem referring to individuals' perceptions of their ability to succeed academically and general self-esteem referring to individuals' overall perceptions

of their worth.) This would suggest female dyslexics should be given special attention from teachers with a view to improving their low self-esteem. The males from this study seem to score as per normative data, thus they must cope in different ways, and hopefully this is evident in the CISS data.

The CISS (coping) data also indicate that gender differences are evident. The females from this teenage dyslexic sample seem to use significantly more emotional (70 percentile) and avoidance (61 percentile) based coping, favouring social diversion (68 percentile) over distraction avoidance (56 percentile), than their males. Interestingly, the males scored very low (35 percentile) on avoidance, which would suggest they cope in very different ways compared to female dyslexics in this study.

The BDI-II (depression) data suggests the female teenage dyslexics from this study suffer significantly more depression (their scores rated as 'moderate depression') to their male counterparts (rated as 'minimal depression'). Such results suggest the females in this sample are affected significantly different than teenage dyslexic males.

Putting all the data together from the three standardized tests, the results suggest that teenage dyslexic females especially suffer from low general and academic self-esteem, strongly use emotional and avoidance-based coping, resulting in moderate depression. Their male counter-parts seem to score normal academic self-esteem or just below normal general, social and parental self-esteem. They use task-based coping with little use of emotional and avoidance coping, resulting in minimal depression.

THE NEXT STEP

Counselling has been noted before as a good way to bridge the (emotional and avoidance) effects of dyslexia supplementing remedial education (Hales, 2004; McLoughlin *et al.*, 1994; Miles & Miles, 1999; Ott, 1997; Scott, 2004). To date, the role of counselling has been given a low priority in the remedial treatment of dyslexic children. This neglects the secondary emotional shock and despair that dyslexic children can feel, not least because of direct criticism from their teachers. That said, however, Edwards (1994) has found that some children are more receptive to counselling than others.

Lawrence (1985, p. 194) postulates that children who:

receive remedial help with the skill of reading will show higher gains if this help is supplemented by a therapeutic approach aimed at enhancing self-esteem.

Work on an individual counselling approach was consistently more successful than using a traditional remedial approach alone. Lawrence found that counsellors do not need to be highly trained professionals—any adult who can be warm and sympathetic with limited training could fulfil this role.

Hales (2001) suggests that counselling 'involves treatment of the person, not just the remediation of the difficulty' and suggests the dyslexic (and especially the undiagnosed dyslexic) at mainstream school needs to deal with:

- Being made to feel strange, different or inadequate.

- Being made to think they are thick or stupid.
- Knowing however much they review for a test, they will forget all memory of the learnt words or facts before they even enter the test room/classroom.
- Knowing that whatever homework they present will be seen as untidy and rushed.

However the view of Peer and Reid (2001, p. 5) should be noted; they suggest that:

even the best counselling will not help the child whose underlying difficulties have not been identified and addressed.

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