

# Considering the role of traditional and specialist schools: do school experiences impact the emotional well-being and self-esteem of adults with dyslexia?

*Blace Arthur Nalavany, Lena W. Carawan and Lashaunda J. Brown*

**While increasing attention is being paid to the influence of specialist and traditional school settings on the emotional well-being and self-esteem of children with dyslexia, there appears to be a need for more attention to how different educational settings may impact adulthood. To respond to this gap, this study by assistant professors Blace A. Nalavany and Lena W. Carawan, and graduate student Lashaunda J. Brown, all at East Carolina University, explores how the role of traditional and specialist school settings may have long-term effects in adulthood. The findings reveal that educational experiences have a compelling impact on the emotional health and self-esteem of adults with dyslexia. Implications reveal that there are important lessons to learn from specialist schools that can benefit traditional school settings.**

**Key words:** adults with dyslexia, special or traditional school, emotional experience and self-esteem.

There appears to be heightened interest in the relationship between individuals with dyslexia and their self-esteem. Although self-esteem and self-concept are distinctly different in meaning, Burden (2008) argues that aspects of self-esteem along with self-concept and self-worth are used synonymously throughout much of the literature. Self-esteem is the evaluative component of self-concept. Whereas self-concept denotes the perceptions that individuals ascribe to themselves with regard to behavioural performance, self-esteem refers to positive or negative evaluations or feelings about those perceptions (Burden, 2008). We consider self-esteem to be a multi-faceted construct, tapping into one's overall self-worth, social competence, problem-solving ability, intellectual ability, and self-competence and worth relative to others (Nugent & Thomas, 1993). Self-esteem indicates the degree to which one experiences oneself as worthy and capable; low self-esteem produces feelings of unworthiness, inadequacies and deficiencies (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). Self-esteem plays a fundamental role in psychosocial adjustment and functioning in adulthood (Benyamini, Leventhal &

Leventhal, 2004; Hunt & Guindon, 2010; Orth, Robins, Trzesniewski, Maes & Schmitt, 2009).

The empirical literature suggests that children, adolescents and adults with dyslexia are at risk of low self-esteem (Burden, 2008). Although there are multiple protective and risk factors that may positively and/or negatively impact self-esteem, such as family support, the presence of co-morbid emotional and behavioural disorders, and intra-personal qualities (Morrison & Cosden, 1997), the provision of appropriate educational settings is considered to be one of the most salient factors in impacting the self-esteem of students with dyslexia (Jones & Heskin, 2010; Riddick, 2006). Evidence suggests that many children with dyslexia in mainstream schools do not receive optimum educational support and consequently struggle to keep up with their non-dyslexic peers (Riddick, 2006). In contrast, there is an increasing consensus within the field that the educational and socio-emotional needs of students with dyslexia can be better served in specialist private or independent school environments. What remains less clear is whether the benefits to the self-esteem of children and adolescents who were placed in specialist school provisions are enduring through adulthood. Our study sought to address this gap in the literature by evaluating the emotional well-being and self-esteem of adults with dyslexia who attended specialist or traditional schools in the US. We are also responding to the additional calls for targeted research focused on adults with dyslexia (Boetsch, Green & Pennington, 1996; Ingesson, 2007).

We believe that a point of clarification is necessary due to the potential for misunderstanding of terms that may be used differently by educators in the US and the UK. Because the two countries have influenced the school policies of each other, concepts such as 'mainstream/inclusion or traditional school' and 'specialist or independent school/unit' have similar meanings in both countries (McLaughlin & Rouse, 2000). Therefore, the use of these concepts in this article is relevant to readers from both countries. Although we use these terms interchangeably, we are aware of the 'passionate discussion' between advocates of mainstream versus specialist schooling, often referred to as the 'inclusion debate' (Kavale & Forness, 2000). Mainstream/inclusion education

was designed to meet the needs of all students, including students with learning difficulties and other educational challenges, in the least restrictive environment (McLaughlin & Rouse, 2000). Although there were a number of assumptions within the concept of mainstreaming, a major assumption addressed the belief that 'separate education was inherently discriminatory and inequitable' (Kavale & Forness, 2000). Within this debate, we agree with Kavale and Forness's (2000) call for additional empirical evidence to shed more light on the best educational practices for students with learning difficulties. With this in mind, what follows is a review of the empirical literature on relationships between school placement and the socio-emotional adjustment of children and adults with dyslexia.

### **Literature review**

The literature review was based on a systematic research synthesis (Rothman, Damron-Rodriguez & Shenassa, 1994) of the available empirical research on how specialist and traditional school settings may have an impact on the social-emotional well-being of adults with dyslexia. Over 20 online databases and journals that specialise in dyslexia/learning difficulties research were utilised. This comprehensive search yielded no research on the socio-emotional outcomes of adults with dyslexia who attended specialist schools; therefore, our review summarises the experiences of adults with dyslexia who attended traditional schools. To better understand how different educational settings might impact later life, we provide a brief review of the child-focused literature.

#### *Educational setting in childhood*

The impact of mainstream school settings on children with dyslexia can be summarised by two themes. First, children with dyslexia in mainstream schools are more likely to be bullied and teased than children without dyslexia (Edwards, 1994; Glazzard, 2010; Riddick, 1996; Singer, 2005) and report feelings of ostracism and stigmatisation when leaving the regular classroom to receive special education services (Demchuck, 2001; Mattson & Roll-Pettersson, 2007). Second, children and adolescents vocalise a host of emotions to describe their experiences, including disappointment, frustration, embarrassment, shame, sadness, depression, anger, and feelings of low self-esteem (Demchuck, 2001; Glazzard, 2010; Riddick, 1996). Being humiliated by insensitive teachers and having their reading and writing challenges publicly exposed contributed to pupils' negative emotions and self-esteem (Glazzard, 2010).

If attendance in mainstream environments is troubling for some children, the question must arise whether attendance in a specialist school is more beneficial. Recent studies have found that specialist schools or units for children with dyslexia may have compelling benefits for the child's emotional experience, self-concept and self-esteem (Burden & Burdett, 2005; Humphrey, 2002; Humphrey & Mullins, 2002a, 2002b; Jones & Heskin, 2010; Nugent, 2007, 2008; Zambo, 2004). The findings of this small but growing body of research can be summarised by three themes. Firstly, the mainstream school setting was the source of negative emo-

tional and social experiences and low self-esteem for the child, possibly due to being misunderstood by teachers and peers. Secondly, specialist settings which include specially trained teachers and peers who share the same learning difficulties appear to have a positive effect on children's social and emotional adjustment. However, it is important to consider that even when their experiences changed for the positive in the private school, Zambo (2004) found that shameful and painful experiences that occurred in the previous mainstream setting leave 'scars [that] last forever'. Thirdly, Nugent (2007) found that parents of children in specialist schools were significantly more likely to report that their children were very happy than parents of children in mainstream resource teaching.

### **Adults' recollections of school experiences**

A common theme appears consistently in the literature: an association between profoundly negative traditional school experiences and a jeopardised sense of emotional well-being, culminating as feelings of low self-esteem. The sources of such painful experiences in traditional school settings parallel findings from the child-focused literature. Many adults with dyslexia recall their early school experiences as a collection of hurtful, embarrassing and scary experiences. Adults with dyslexia report frustration in succeeding at language-based tasks, problems in being recognised as having dyslexia, inadequate opportunities for help, and little, if any, validation (Undheim, 2003). They are often reminded of their deficiencies in language-based tasks by teachers who lack understanding of dyslexia, and they are teased by peers (Denhart, 2008). Recollections of upsetting experiences of school and the related emotional impact these experiences seem to exert on adults with dyslexia have been consistently reported in the extant literature, conducted across several countries including the Netherlands (Hellen-doorn & Ruijsenaars, 2000), Sweden (Ingesson, 2007), the UK (Dale & Taylor, 2001; Gibson & Kendall, 2010; Hughes & Dawson, 1995; Riddick, 1996, 2003), Greece (Stampolizis & Polychronopoulou, 2009), Malaysia (Ong, Ong, Ong, Konting, Aduce & Pant, 2009), Norway (Undheim, 2003) and the US (Nalavany, Carawan & Rennick, 2011; McNulty, 2003).

Research by McNulty (2003) illuminates the findings of this body of research. McNulty reported that many adults with dyslexia describe their early school experiences as 'traumatic'. Recollections of feeling different, stupid, lazy, inferior and ashamed are often rooted in these distressing school experiences and can leave emotional scars through adulthood (Hughes & Dawson, 1995; Ingesson, 2007; McNulty, 2003; Riddick, 2003). At the extreme, the origins of internalising problems, including anxiety and depression, may be linked to such distressing early school experiences (Denhart, 2008; Gardynik & McDonald, 2005; Mugnaini, Lassi, La Malfa & Albertini, 2009; Whitehouse, Spector & Cherkas, 2009).

### **The current study**

It is important to note that none of the cited research in the previous section evaluated a current UK traditional school

ethos called ‘dyslexia friendly schools’ (Coffield & O’Neill, 2004). The lack of research is not surprising since dyslexia-friendly schools are a relatively new phenomenon. Dyslexia-friendly schools provide a milieu similar to specialist schools. For example, both specialist schools and dyslexia-friendly schools attempt to create an environment whereby the educational, social and emotional well-being of students with dyslexia is intentionally addressed. Some differences in the two settings are that specialist schools are privately funded in most countries, cater only to children with dyslexia and/or other learning difficulties, and sometimes include both boarding and/or day students. Dyslexia-friendly schools, on the other hand, provide a dyslexia-inclusive environment housed in traditional school settings. Thus, the experiences of adults described in the literature and presented in the current study represent past experiences of school which may not be reflective of the potential benefits dyslexia-friendly schools may offer (Riddick, 2006). We agree with Riddick (2006), however, that future research is needed to evaluate the long-term efficacy of dyslexia-friendly schools.

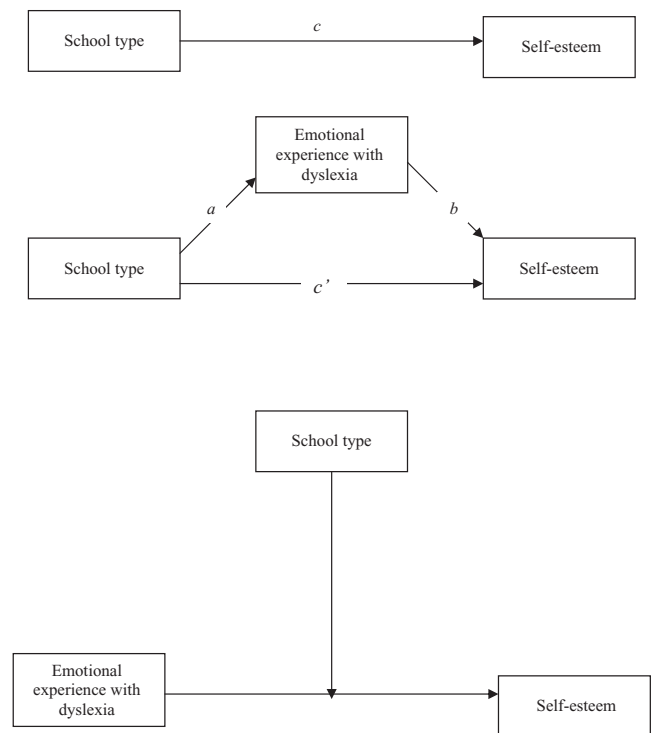
There is an inadequate body of knowledge that compares and contrasts emotional well-being and self-esteem of adults with dyslexia and the type of school they attended. The consistency of the findings in the aforementioned systematic research synthesis suggests, as LaBarbera (2008) contends, ‘that attendance at a specialized school enhances the self-esteem of students with learning disabilities’. The primary aim of the current study was to investigate whether this claim is also plausible in adulthood. To do so, we tested two primary models. Firstly, we hypothesise that the effect of school placement is transferred or mediated through adults’ emotional experience with dyslexia (Figure 1). Emotional experience with dyslexia is conceptualised as a host of emotions associated with dyslexia including exhaustion, stress, anxiety, sadness, depression, self-consciousness and feelings of being overwhelmed. Specifically, we propose that specialist school attendance directly decreases the potentially distressing emotional experience with dyslexia which subsequently enhances self-esteem. Secondly, we examine whether specialist school placement buffers or serves a protective function between distressing emotional experience with dyslexia and self-esteem (Figure 1).

## Methods

### Survey development and procedures

This study involved a cross-sectional, web-based survey of adults with dyslexia. The purpose of the project was to identify the experiences that facilitate or hinder adults with dyslexia in living successful and satisfying lives. We systematically followed proposed guidelines for web-based survey research (Dillman, 2000) and web-based survey research for individuals with disabilities (Cook, Grey, Fitzgibbon, Batteiger, Caras, Dansky & Priester, 2007). The website included a URL link to the survey, a video and narrative overview of the study, biographies of the researchers and contact information, summary of Phase 1, and project updates. Adults aged 21 years and over with diagnosed or self-reported dyslexia were eligible for the Univer-

**Figure 1: Conceptual model for the simple-mediation model (top) and moderation model (bottom) proposed (excluding control variables)**



sity Institutional Review Board approved study and were recruited with non-random sampling methods due to the difficulty of gaining access to this population (Gerber, 2009).

First, we attempted to recruit respondents through various social-media optimisation methods, such as Facebook. Additionally, announcements were placed in various newsletters, organisations that advocate on behalf of adults with dyslexia, a video on YouTube and the website’s homepage, and alumni who were enrolled in a private school exclusively for adolescent boys with dyslexia. To access the survey, participants clicked on a link on the website’s homepage. This led them to an introductory webpage and informed consent information. Participants who wished to keep their responses anonymous did not fill out the contact information at the end of the survey. Survey completers could choose to enter a lottery to win one of ten \$25 prizes.

### Participants

A total of 250 individuals responded to the survey. Of these, 228 participants completed the survey while 22 individuals partially completed it. This represents a 91.2% completion rate (Eysenbach, 2004). We omitted one participant who was under the age of 21 and three participants who did not provide their birth data. The findings described herein are only from those who completed the survey ( $n = 224$ ). Of these, 95 (42.4%) were alumni of a specialist school exclusively for children/adolescents with dyslexia/ learning difficulties while 129 (57.6%) were alumni of traditional



schools. The majority of the participants (83.1%) responded 'yes' to having a specific diagnosis of dyslexia while all participants self-identified as having dyslexia. Moreover, all students who attended a private school exclusively for dyslexia/ learning difficulties were presumed to have had a formalised diagnosis of dyslexia/ learning difficulties at the time of their placements.

## Measures

### *Emotional experience with dyslexia*

The development of the Emotional Experience with Dyslexia (EED) indicator is reported elsewhere (Nalavany et al., 2011). Items were rated on a seven-point scale ranging from (1) 'strongly disagree' to (7) 'strongly agree'. In summary, based on the confirmatory factor analysis and reliability analysis, 20 items were summed to represent an EED indicator, whereby higher scores reflect elevated levels of stress, anxiety, sadness, depression, exhaustion and self-consciousness and other emotionally-based experiences associated with dyslexia. The EED indicator demonstrated excellent internal consistency yielding an alpha coefficient of 0.95. Example items are: 'Coping with dyslexia leads to exhaustion', 'Even as an adult I experience sadness about my dyslexia', 'I have concerns, worries, and anxieties about others understanding what I'm trying to communicate', and 'I experience a lot of anxiety and stress regarding my dyslexia'.

### *Self-esteem*

Self-esteem was measured using the Self-Esteem Rating Scale (SERS) (Nugent & Thomas, 1993). The SERS is a 40-item instrument designed to provide a measure of self-esteem as a multi-faceted concept capable of assessing problematic as well as positive dimensions of self-esteem in adults. The SERS has excellent psychometric properties. The items are rated on a seven-point Likert scale, with total scores ranging from -120 to +120. Positive scores reflect higher self-esteem. The items focus on a range of areas that are important as they relate to dyslexia, including overall self-worth, social competence, problem-solving ability, intellectual ability, and self-competence and worth relative to others (for example, 'I feel confident in my ability to learn new things'; 'I feel that other people are smarter than I am'). The Cronbach's alpha reliability of this measure was 0.97.

### *Control variables*

In order to rule out alternative explanations for self-esteem, we include several covariates in the models. Perceived family support (PFS) was measured by the Provisions of Social Relations (Turner, Frankel & Levin, 1983) family support dimension. Six items (such as 'My family lets me know they think I am a worthwhile person') are rated on a five-point scale ranging from (1) 'not at all like me' to (5) 'very much like me'. The items were summed, with higher scores reflecting more family support. The Cronbach's alpha reliability of this measure was 0.88. We also control for attention deficit disorder (ADD), attention deficit/hyperactivity disorder (AD/HD), a current diagnosis of depression or anxiety, age (in years), and gender.

### *Data analytic strategy*

Descriptive statistics (that is, measures of central tendency and variability) are reported for all study variables. Independent samples *t*-tests were calculated between the specialist school and traditional school groups for all continuous variables. A chi-square test was used to observe the association of a current diagnosis of anxiety/depression with school type.

### *Mediation*

We explored EED as an important mediator between school type and self-esteem by testing a simple-mediation model. A simple-mediation model tests the extent to which a variable, called a mediator (that is, EED), accounts for the association between the independent variable (that is, school type) and the outcome variable (that is, self-esteem) (Preacher & Hayes, 2004). A mediator model answers 'how' and 'why' the association between an independent variable and an outcome variable comes to be. In evaluating mediation, it is important to differentiate between various effects and their consequent weights. According to Figure 1, the *total effect* (unstandardised regression coefficient or weight of *c*) of an independent variable (that is, school type) on a dependent variable (that is, self-esteem) is derived from a *direct effect* (weight *c'*) of the independent variable (school type) on the dependent variable (self-esteem) and a mediated or *indirect effect* (weight *ab*) of the independent variable (school type) on the dependent variable (self-esteem) through the hypothesised mediator (EED). Weight *a* denotes the direct effect of the independent variable (school type) on the mediator (EED) while weight *b* signifies the direct effect of the mediator (EED) on the dependent variable (self-esteem), when removing the influence of the independent variable (school type) and any control variables.

We used a non-parametric resampling method called bootstrapping to evaluate the indirect effect (Hayes, 2009; Preacher & Hayes, 2004). We used an SPSS macro (available for download on [quantpsy.org](http://quantpsy.org)) that accompanies the papers by Preacher and Hayes (2008) and allows for the inclusion of control variables. The point estimate of the indirect effects is statistically significant when zero is not contained in the 95% confidence interval (Preacher & Hayes, 2004). This corresponds to an alpha level for significance at 0.05. We described the extent of mediation by examining the unstandardised indirect effect (Hayes, 2009) and by calculating the proportion mediated, which is the ratio of indirect effect to total effect (Shrout & Bolger, 2002).

### *Moderation*

We used hierarchical moderated regression (HMR) to examine the main and interaction effects of the control variables, EED (independent variables), and the moderator variable, school type (specialist or traditional school) on self-esteem. The purpose of the HMR analysis was to determine whether school type moderated, or served as a protective and/or risk factor, in the relationship between EED and self-esteem (Figure 1). HMR is recognised as the most appropriate method to detect the presence or absence

of main and moderating effects (Fairchild & McQuillin, 2010). We performed HMR using the following procedure: gender, age, ADD, AD/HD, anxiety/depression and PFS were entered in step 1 to control for their effects; the independent variable, EED, was entered in step 2, and the moderation variable, school type, at step 3 to examine their main effects, and finally the interaction term (EED X school type) was entered at the last step of the equation. Support for a moderator effect is noted in the last block by a statistically significant change in adjusted  $R^2$  (that is,  $\Delta R^2$ ) due to the interaction variable and a significant unstandardised beta weight. An alpha level of 0.05 and changes in  $\Delta R^2$  greater than or equal to 0.01 were used to evaluate the significance of the moderator effect (McClelland & Judd, 1993). If a significant interaction was found, we conducted post hoc analyses to evaluate at which level of the moderator the effect was significant (that is, school type as a protective and/or risk factor) and graphed the results. The regression slopes were produced by using estimated values for self-esteem calculated from 1 standard deviation (SD) above the mean and 1 SD below the mean for EED. For the moderation and meditation analyses, specialist school was coded '1' while traditional school was coded '0'.

## Results

### Descriptive and bivariate analyses

Table 1 displays the results of the analyses to determine group differences between school types. In summary, traditional school attendees (26.4%) were significantly more likely to have a current diagnosis of anxiety/depression ( $\chi^2 = 4.39$ ,  $df = 1$ ,  $p < 0.05$ ) as compared to specialist school attendees (14.7%). Specialist school alumni were significantly more likely ( $\chi^2 = 69.70$ ,  $df = 1$ ,  $p < 0.001$ ) to be male (95.8%) as compared to traditional school attendees (41.9%). Specialist school alumni reported significantly less emotional distress with regard to their dyslexia and had significantly higher levels of self-esteem as compared to traditional school alumni ( $t = -5.92$ ,  $df = 222$ ,  $p < 0.001$ ,  $t = 5.85$ ,  $df = 222$ ,  $p < 0.001$ , respectively). There were no differences in current age between traditional school and specialist school alumni.

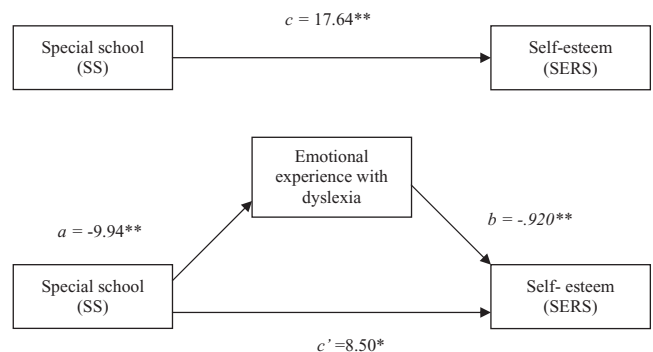
### Mediator analysis

Although tests of mediation are not contingent upon independent tests of total and direct effects (Hayes, 2009), the results of these analyses are depicted in Figure 2 but not described in the text.

The bootstrapping results revealed that the indirect effect (that is, the difference between the total and direct effects) of school type on self-esteem through EED was significant, with a point estimate of 9.13 and a 95% confidence interval excluding zero ( $CI_{.95} = 2.54, 17.09$ ). This indirect effect held over and beyond the influence of the control variables. Put differently, for specialist school alumni, self-esteem increases by 9.13 units (or between 2.54 and 17.09 units given the confidence interval) as compared to traditional school alumni since specialist school attendance tends directly to promote less distressing EED which in turn positively affects self-esteem, while holding the control variables constant. Examination of the proportion of effects mediated shows that 52.0% of the total effect of private school on self-esteem is mediated by EED.

**Figure 2: Model of the mediational role of emotional experience with dyslexia in the relationship between school placement and self-esteem**

**Notes: 1; special school. 0; traditional school. SS; special school. SERS = Self-Esteem Rating Scale. \*  $p < 0.05$ , \*\*  $p < 0.01$ .**



**Table 1: Descriptive and bivariate statistics by educational background**

Variables	Traditional school	Specialist school
	n = 129	n = 95
Age (in years)	48.3 (14.0)	50.1 (15.3)
Gender*	58.1% female; 41.9% male	4.2% female; 95.8% male
AD/HD (yes)	7.8%	5.3%
ADD (yes)	20.2%	13.7%
Anxiety/depression (yes)*	26.4%	14.7%
Family support**	23.95 (5.85)	26.47 (4.76)
Emotional experience with dyslexia***	96.09 (26.78)	74.79 (26.41)
Self-esteem***	38.42 (41.58)	68.48 (32.59)

**Note:** Mean (standard deviation); \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

### Moderation analysis

As hypothesised (see Table 2), a significant EED X school type emerged. The interaction term accounted for an additional 1% of the variance, suggesting that school type moderated the relationship between EED and self-esteem ( $b = 0.270$ ,  $p < 0.05$ ). The nature of this significant interaction was probed using the procedures described above and is depicted in Figure 3. The results revealed that the specialist school tends significantly to buffer the effects of distressing EED (high EED), resulting in higher self-esteem. Conversely, the traditional school tends significantly to exacerbate the effects of EED, resulting in significantly lower levels of self-esteem. Self-esteem scores for the low EED condition (less distressing emotions) are nearly equal for both school backgrounds.

### Discussion

To the best of our knowledge, this is the first study that examines how attendance in specialist school settings may

later impact emotional well-being and self-esteem in adulthood. The results of the bivariate analyses suggest that adults with dyslexia who attended specialist schools were significantly less likely to be clinically diagnosed with anxiety or depression, and they experienced significantly less emotional distress with regard to their dyslexia, and significantly higher levels of self-esteem, than their peers who did not attend such specialist schools. The findings in this adult-focused study are consistent with the conclusions of previous research cited in the literature review which contends that attendance at a specialised school enhances the socio-emotional adjustment of children with dyslexia.

Our findings demonstrate first the importance of emotions as an important mechanism that explains the link between school setting and self-esteem. Adults with dyslexia who attended specialist schools tended to have higher self-esteem because specialist school attendance directly decreased negative emotional experience with dyslexia. This process subsequently facilitated positive self-esteem. This finding held even when gender, age, a current diagnosis of ADD, AD/HD, anxiety/depression, and perceived family support were taken into account. Overall the specialist school milieu provides a possible explanation for this finding. This setting includes teachers adequately trained to meet the academic and emotional needs of students with dyslexia, together with a community of peer support, and appears to have a direct influence on positive emotional experiences of dyslexia well into adulthood. This supportive environment may promote the development of healthy self-esteem indirectly through positively affecting emotional experience. When adults' emotional experience with dyslexia is less poignant in their lives via the support received from specialist school settings, self-esteem is directly enhanced. These findings are consistent with the extant research that describes the emotional distress and low self-esteem that appear to encapsulate the present-day experiences of adults with dyslexia who attended traditional school (Nalavany et al., 2011; Dale & Taylor, 2001; Gibson & Kendall, 2010; Hellendoorn & Ruijsenaars, 2000; Hughes & Dawson, 1995; Ingesson, 2007; McNulty, 2003; Riddick, 2003; Riddick, Sterling, Farmer & Morgan, 1999; Stampoltzis & Polychronopoulou, 2009; Undheim, 2003).

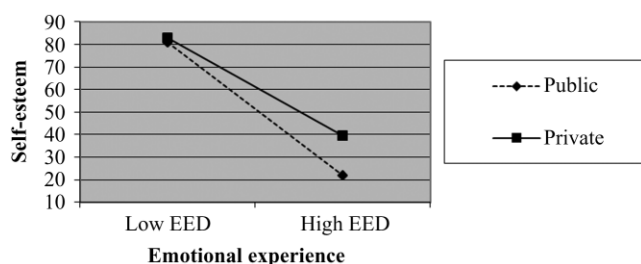
**Table 2: Hierarchical moderated regression analysis predicting self-esteem (N = 224)**

Step/predictor	B	R <sup>2</sup>	ΔR <sup>2</sup>
Step 1			
Gender (male)	12.57**		
Age	0.22		
ADD (1 = yes)	-8.93		
AD/HD (1 = yes)	1.89		
Anxiety/depression (1 = yes)	-23.95***		
Perceived family support	3.09***		
		0.365	0.365
Step 2			
Emotional experience with dyslexia	-0.95***		
		0.620	0.255
Step 3			
School type (1 = specialist school)	8.50*		
		0.627	0.010
Step 4			
Emotional experience with dyslexia x school type	0.270*		
		0.634	0.010

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

**Figure 3: Plot for school type as a protector and risk factor in the relationship between emotional experience with dyslexia (EED) and self-esteem (Self-Esteem Rating Scale)**

Note: Low EED; 1 SD below the mean. High EED; 1 SD above the mean. \*  $p < 0.05$ .



Overall the specialist school is seen as a community of support. This community includes as the cornerstone a philosophical approach that appears directly to influence positive emotional experiences which promote higher self-esteem. At the heart of this philosophical approach is an expectation of success of all students and an emphasis on ability over outcome (Burden, 2008) as well as the importance of well-trained teachers and positive peer interactions. Long, MacBlain and MacBlain (2007) emphasise that it is essential that teachers address not only the educational needs, but also the personal, social, and emotional needs of students with dyslexia. In addition to specialised academic training, such teachers might possess qualities that Lawrence (1996) argues are essential to building the self-esteem of pupils: being non-judgmental, being genuine, and being empathic. Supportive teachers, those who convey acceptance, genuineness,

and empathy, may directly facilitate positive emotional experiences (for example, by showing sensitivity when asking the student to read aloud, by encouraging the student, by being empathic to past negative school experiences, by positive reframing of dyslexia) and emotions (such as confidence, a sense of calm, and happiness) in students with dyslexia.

It is possible that the development of adaptive emotional strategies in adulthood were cultivated in a specialist setting. In their research, Goldberg, Higgins, Raskind and Herman (2003) found that those adults with learning difficulties who were deemed 'successful' developed creative strategies to overcome emotional challenges, which included an awareness of situations that might trigger anxiety, seeking professional help, asking for assistance, compartmentalising emotions so that negative repercussions would not occur, ignoring critical people, making goals achievable by planning ahead, reconciling family and peer-related problems, and changing tasks occasionally so stress would not mount.

In addition to supportive teachers and parents, peers are instrumental sources of emotional support and self-esteem for children and adolescents (Burnett & McCrindle, 1999). In contrast to traditional school settings, in specialist school settings the peer dynamic appears to be quite different as their main reference group includes other children who are experiencing similar academic, social and emotional tribulations. Specialist school settings may afford students the same emotional support that child/adolescent-focused psychoeducational counselling groups (for example, grief, divorce, medical problems, abuse) offer: 'a shared sense of "being in the same boat" with empathically linked "fellow sufferers"' (Lomonaco, Scheidlinger & Aronson, 2000). It may be possible that the early peer support found in specialist schools played an important role in creating a foundation for positive emotional experiences and self-esteem that continue into adulthood.

Secondly, our findings suggest that school context serves as either protective or risk function in the association between emotional experience with dyslexia and self-esteem. Perhaps because such profoundly negative early school experiences are likely to be traumatising and leave emotional scars through adulthood (McNulty, 2003), it is not surprising that the traditional school environment served as a risk factor by exacerbating negative emotional experience with dyslexia, which in turn negatively affected self-esteem. Conversely, specialist settings served a protective or buffering role in the development of negative emotional experience with dyslexia, thereby enhancing self-esteem.

#### **Limitations and future directions**

Caution should be exercised when interpreting the findings, as this study has several limitations. The first concern is the generalising of these findings due to sample biases inherent in online surveys. We sought participants using a single website and non-random procedures. We are unable to determine the degree to which our sample is representative of the general population of adults with dyslexia. Moreover, because the majority of the specialist school participants were alumni of

a single private school of adolescent boys with dyslexia, it can be argued, for example, that the findings are a function of this particular school's philosophy in meeting students' educational and socio-emotional needs. Future research targeting a more heterogeneous sample of specialist school alumni would strengthen the findings of this study. Nonetheless, a sample size of 224 adults with dyslexia is considerably larger than that used in most of the current research on the psychosocial aspects of adult dyslexia/learning difficulties. The completion rate of 90% is also indicative of the advantages of this method in researching adults with dyslexia. Secondly, this is not a longitudinal study since we did not measure the variables across time. As such, all the current data can show is that there is a positive difference between adults who attended specialist settings and those who attended traditional school settings as children/adolescents. Whether or not the specialist school directly influenced self-esteem through its effect on emotional experience or served a protective factor in later adulthood can only be inferred from this data. Researchers are encouraged to conduct future longitudinal studies that will determine the role specialist schools may play in enhancing emotional well-being and self-esteem through the life course. In addition, given the gap in the extant literature on specialist schools, there is a significant need to increase our understanding of the facilitators and barriers of family access to specialist schools.

#### **Implications**

It is clear that life with dyslexia can be complex, with far-reaching effects. Education for this group is not just about 'the 3 R's' but about the emotional impact of gaining an education when one has dyslexia. Not only does dyslexia not go away after childhood, but the memories of negative school experiences often persist into adulthood as well. Even if the students attended a specialist school, they have often already encountered negative emotional experiences before they were ever identified as having dyslexia. Additionally, our research suggests that students who attend these specialist schools can benefit from practices that consider not only the academic but the emotional experiences and self-esteem of students. Our research suggests that this positive community support may validate emotional experiences and promote self-esteem.

While the literature and our research suggests that specialist schools provide a positive educational experience for students with dyslexia, we support Humphrey's (2002) argument that for traditional schools 'The challenge is to create an environment where the children can feel valued and secure', while receiving an education from specially trained teachers who are prepared to meet the educational, social and emotional needs of students with dyslexia.

Our findings have an important implication for public policy and research as it relates to the traditional school system. Federal law in the US, through the Individuals with Disabilities Improvement Act, requires an education for children that will prepare them for 'successful post-school employment or education' (20 United States Code Section 1400 © 14). In addition, the No Child Left Behind Act of 2001



called for highly qualified teachers who are state certified and also possess degrees in their area of instruction (Sipple & Castro, 2010). Yet there is an overwhelming need for more and better training for educators who teach students with dyslexia. In addition, public schools in the US should make a different kind of commitment to this population (McLaughlin & Rouse, 2000). Other countries have begun addressing the issue of new and better public education for students with dyslexia. For example, the UK is focusing on developing and implementing 'dyslexia-friendly' schools within the traditional school setting. The policy document on the subject of the Durham local education authority's (Coffield & O'Neill, 2004) experience promoting dyslexia- and developmental coordination disorder-friendly schools illustrates the amount of insight, work and care that goes into creating a 'dyslexia-friendly' school. Central to the policy is the call to 'recognize the need to ensure that all staff has high expectations of all individuals in order to raise pupils' confidence, self-esteem and achievements' (Coffield & O'Neill, 2004) and faculty training that includes but is not limited to a one-year Postgraduate Certificate course, an 11-session introductory course, as well as one day in-service training.

In conclusion, our findings suggest that there are potential long-term emotional and self-esteem benefits for adults with dyslexia who attended specialist schools. In addition, we believe that there are important lessons to learn from specialist schools that can benefit traditional school settings. Creating an environment that offers appropriate academic, emotional and social experiences can ultimately promote self-esteem and should be the expectation of every student in every school. Certainly, this can be the most compelling outcome of all.

---

#### Acknowledgments

Financial support of this study was provided by East Carolina University through the following means: Division of Research and Graduate Studies, Dean Judy Siguaw, College of Human Ecology, Director Shelia Bunch, School of Social Work. We thank the anonymous reviewers for their helpful comments in revising this manuscript. We also wish to specially thank all of the adults with dyslexia who participated in this study.

---

#### References

- Benyamini, Y., Leventhal, H. & Leventhal, E. A. (2004) 'Self-rated oral psychosomatic symptoms as an independent predictor of self-rated general psychosomatic symptoms, self-esteem and life satisfaction', *Social Science & Medicine*, 59, 1109–1116.
- Boetsch, E. A., Green, A. G. & Pennington, B. F. (1996) 'Psychosocial correlates of dyslexia across the life span', *Developmental and Psychopathology*, 8, 539–562.
- Burden, R. (2008) 'Is dyslexia necessarily associated with negative feelings of self-worth? A review and implications for future research', *Dyslexia*, 10, 188–196.
- Burden, R. & Burdett, J. (2005) 'Factors associated with successful learning in pupils with dyslexia: a motivational analysis', *British Journal of Special Education*, 32, 100–104.
- Burnett, P. C. & McCrindle, A. R. (1999) 'The relationship between significant others' positive and negative statements, self-talk and self-esteem', *Child Study Journal*, 20 (1), 39–48.
- Coffield, M. & O'Neill, J. (2004) 'The Durham experience: promoting dyslexia and dyspraxia friendly schools', *Dyslexia*, 10, 253–264.
- Cook, J. A., Grey, D. D., Fitzgibbon, G., Batteiger, D., Caras, S., Dansky, H. & Priester, F. (2007) 'Challenges in defining respondent populations in a Web survey of individuals with psychiatric disabilities', in T. Kroll, D. Kerr, P. Placek, J. Cyril and G. Hendershot (eds) *Towards Best Practices for Surveying People with Disabilities*. New York: Nove Science Publishers.
- Dale, M. & Taylor, B. (2001) 'How adult learners make sense of their dyslexia', *Disability & Society*, 16, 997–1008.
- Demchuck, L. J. (2001) 'Children's perceptions and attitudes about special education', *Dissertation Abstracts International, Section A, Humanities and Social Sciences*, 61(11-A), 4282.
- Denhart, H. (2008) 'Deconstructing barriers: perceptions of students labeled with learning disabilities in higher education', *Journal of Learning Disabilities*, 41, 483–497.
- Dillman, D. A. (2000) *Mail and Internet Surveys: the tailored design method*. Toronto: John Wiley & Sons.
- Edwards, J. (1994) *The Scars of Dyslexia*. London: Cassell.
- Eysenbach, G. (2004) 'Improving the quality of web surveys: the checklist for reporting results of internet e-surveys (CHERRIES)', *Journal of Medical Internet Research*, 6 (3), [online at <http://www.jmir.org/2004/3/e34/>].
- Fairchild, A. J. & McQuillin, S. D. (2010) 'Evaluating mediation and moderation effects in school psychology: a presentation of methods and review of current practice', *Journal of School Psychology*, 48, 53–84.
- Gardynik, U. M. & McDonald, L. (2005) 'Implications of risk and resilience in the life of the individual who is gifted/learning disabled', *Roeper Review*, 27 (4), 206–214.
- Gerber, P. J. (2009) 'Transition and adults with learning disabilities', in J. M. Taymans (ed.) *National Institute for Literacy, Learning to Achieve: a review of the research literature on serving adults with learning disabilities*. Washington, DC: National Institute for Literacy.



- Gibson, S. & Kendall, L. (2010) 'Stories from school: dyslexia and learners' voices on factors impacting on achievement', *Support for Learning*, 25 (2), 187–193.
- Glazzard, J. (2010) 'The impact of dyslexia on pupils' self-esteem', *Support for Learning*, 25 (2), 63–69.
- Goldberg, R. J., Higgins, E. L., Raskind, M. H. & Herman, K. L. (2003) 'Predictors of success in individuals with learning disabilities: a qualitative analysis of a 20-year longitudinal study', *Learning Disabilities Research & Practice*, 18, 222–236.
- Hayes, A. F. (2009) 'Beyond Baron and Kenny: statistical mediation analysis in the new millennium', *Communication Monographs*, 76, 408–420.
- Hellendoorn, J. & Ruijsenaars, W. (2000) 'Personal experiences and adjustment of Dutch adults with dyslexia', *Remedial and Special Education*, 21, 227–239.
- Hughes, W. & Dawson, R. (1995) 'Memories of school: adult dyslexics recall their school days', *Support for Learning*, 10 (4), 181–184.
- Humphrey, N. (2002) 'Teacher and pupil ratings of self-esteem in developmental dyslexia', *British Journal of Special Education*, 29 (1), 29–36.
- Humphrey, N. & Mullins, P. M. (2002a) 'Personal constructs and attribution for academic success and failure in dyslexia', *British Journal of Special Education*, 29 (4), 196–203.
- Humphrey, N. & Mullins, P. M. (2002b) 'Self-concept and self-esteem in developmental dyslexia', *Journal of Research in Special Educational Needs*, 2 (2).
- Hunt, B. & Guindon, M. H. (2010) 'Alcohol and other drug use and self-esteem in young adults', in M. H. Guindon (ed.) *Self-Esteem across the Lifespan: issues and interventions*. New York: Routledge/Taylor & Francis Group.
- Ingesson, S. G. (2007) 'Growing up with dyslexia: interviews with teenagers and young adults', *School Psychology International*, 28, 574–591.
- Jones, R. S. & Heskin, K. J. (2010) 'Self-concept and learning disability: an experimental analysis', *Insights on Learning Disabilities*, 7 (1), 49–55.
- Kavale, K. A. & Forness, S. R. (2000) 'History, rhetoric, and reality: analysis of the inclusion debate', *Remedial and Special Education*, 21, 279–296.
- LaBarbera, R. (2008) 'Perceived social support and self-esteem in adolescents with learning disabilities at a private school', *Learning Disabilities: A Contemporary Journal*, 6 (1), 33–34.
- Lawrence, D. (1996) *Enhancing Self-esteem in the Classroom*. London: Paul Chapman.
- Lomonaco, S., Scheidlinger, S. & Aronson, S. (2000) 'Five decades of children's group treatment: an overview', *Journal of Child & Adolescent Group Therapy*, 10, 77–96.
- Long, L., MacBlain, S. & MacBlain, M. (2007) 'Supporting students with dyslexia at the secondary level: an emotional model of literacy', *Journal of Adolescent and Adult Literacy*, 51 (2), 124–134.
- Mattson, E. V. & Roll-Pettersson, L. (2007) 'Segregated groups or inclusive education? An interview study with students experiencing failure in reading and writing', *Scandinavian Journal of Educational Research*, 51 (3), 239–252.
- McClelland, G. H. & Judd, C. M. (1993) 'Statistical difficulties of detecting interactions and moderator effects', *Psychological Bulletin*, 114, 376–90.
- McLaughlin, M. J. & Rouse, M. (eds) (2000) *Special Education and School Reform in the United States and Britain*. London: Routledge.
- McNulty, M. A. (2003) 'Dyslexia and the life course', *Journal of Learning Disabilities*, 36, 363–381.
- Morrison, G. M. & Cosden, M. A. (1997) 'Risk, resilience, and adjustment of individuals with learning disabilities', *Learning Disability Quarterly*, 20 (1), 43–60.
- Mugnaini, D., Lassi, S., La Malfa, G. & Albertini, G. (2009) 'Internalizing correlates of dyslexia', *World Journal of Pediatrics*, 5, 255–264.
- Nalavany, B. A., Carawan, L. W. & Rennick, R. (2011) 'Psychosocial experiences associated with confirmed and self-identified dyslexia: a participant-driven concept map of adult perspectives', *Journal of Learning Disabilities*, 44, 63–79.
- Nugent, M. (2007) 'Comparing inclusive and segregated settings for children with dyslexia: parental perspectives from Ireland', *Support for Learning*, 22 (2), 52–59.
- Nugent, M. (2008) 'Services for children with dyslexia: the child's experience', *Educational Psychology in Practice*, 24 (3), 189–206.
- Nugent, W. R. & Thomas, J. W. (1993) 'Validation of the Self-Esteem Rating Scale', *Research on Social Work Practice*, 3, 191–207.
- Ong, P. H., Ong, P. T., Ong, P. L., Konting, M. M., Aduce, S. A. Z. & Pant, V. (2009) 'Dyslexia among undergraduates in Malaysian universities: a mixed-methods study of prevalence, academic performances, academic difficulties and coping strategies', *International Journal of Diversity in Organization*, 9 (1), 43–55.
- Orth, U., Robins, R. W., Trzesniewski, K. H., Maes, J. & Schmitt, M. (2009) 'Low self-esteem is a risk factor for depressive symptoms from young adulthood to old age', *Journal of Abnormal Psychology*, 118, 472–478.
- Preacher, K. J. & Hayes, A. F. (2004) 'SPSS and SAS procedures for estimating indirect effects in simple mediation models', *Behavior Research Methods, Instruments, & Computers*, 36, 717–731.
- Preacher, K. J. & Hayes, A. F. (2008) 'Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models', *Behavior Research Methods*, 40, 879–891.
- Riddick, B. (1996) *Living with Dyslexia: the social and emotional consequences of specific learning difficulties*. London: Routledge.
- Riddick, B. (2003) 'Experiences of teachers and trainee teachers who are dyslexic', *International Journal of Inclusive Education*, 7 (4), 389–402.
- Riddick, B. (2006) 'Dyslexia friendly schools in the UK', *Topics in Language Disorders*, 26 (2), 144–156.

- Riddick, B., Sterling, C., Farmer, M. & Morgan, M. (1999) 'Self-esteem and anxiety in the educational histories of adult dyslexic students', *Dyslexia*, 5, 227–248.
- Rosenberg, M., Schooler, C., Schoenbach, C. & Rosenberg, F. (1995) 'Global self-esteem and specific self-esteem: different concepts, different outcomes', *American Sociological Review*, 60, 141–156.
- Rothman, J., Damron-Rodriguez, J. & Shenassa, E. (1994) 'Systematic research synthesis: conceptual integration methods of meta-analysis', in J. Rothman and E. J. Thomas (eds) *Intervention Research: design and development for human service*. New York: Haworth.
- Shrout, P. E. & Bolger, N. (2002) 'Mediation in experimental and nonexperimental studies: new procedures and recommendations', *Psychological Methods*, 7, 422–445.
- Singer, E. (2005) 'The strategies adopted by Dutch children with dyslexia to maintain their self-esteem when teased at school', *Journal of Learning Disabilities*, 38, 411–423.
- Sipple, J. W. & Castro, H. (2010) 'Major issues in American schools', in P. A. Meares (ed.) *Social Work Services in Schools*. Boston, MA: Allyn & Bacon.
- Stampoltzis, A. & Polychronopoulou, S. (2009) 'Greek university students with dyslexia: an interview study', *European Journal of Special Needs Education*, 24 (3), 307–321.
- Turner, R. J., Frankel, B. G. & Levin, D. M. (1983) 'Social support: conceptualization, measurement, and implications for mental health', *Research in Community Mental Health*, 3, 67–111.
- Undheim, A. M. (2003) 'Dyslexia and psychosocial factors. A follow-up study of young Norwegian adults with a history of dyslexia in childhood', *Nordic Journal of Psychiatry*, 57, 221–226.
- Whitehouse, A. J. O., Spector, T. D. & Cherkas, L. F. (2009) 'No clear genetic influences on the association between dyslexia and anxiety in a population-based sample of female twins', *Dyslexia*, 15, 282–290.
- Zambo, D. (2004) 'Using qualitative methods to understand the educational experiences of students with dyslexia', *Qualitative Report*, 9 (1) [online at <http://www.nova.edu/ssss/QR/QR9-1/zambo.pdf>].

*Address for correspondence:*

Blace Arthur Nalavany  
School of Social Work  
College of Human Ecology  
East Carolina University  
Greenville, NC 27858  
USA  
Email: [nalavanyb@ecu.edu](mailto:nalavanyb@ecu.edu)

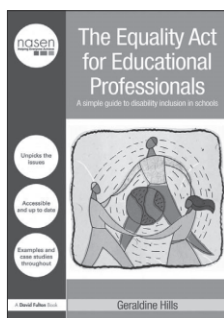
*Article submitted: July 2011*

*Accepted for publication: November 2011*

David Fulton Books

nasen  
Helping Everyone Achieve

# New David Fulton/ Nasen Books



## The Equality Act for Educational Professionals

A simple guide to disability and inclusion in schools

By **Geraldine Hills**

**'A much needed resource in supporting schools, centres, day nurseries and community childcare provision to understand the complexity of the issues surrounding SEN... A valuable tool'** – Gerri Ross, Head of Old Moat Sure Start Children's Centre, UK

December 2011: 96pp:  
Pb: 978-0-415-68768-3: **£29.99**

15% Discount  
for Nasen  
members\*

Under the Equality Act (2010), all schools and service providers have a legal obligation to make provision for disabled pupils, staff and school users. If you're feeling confused and concerned about the content and implications of the Disability Duty Act (1995) and the more recently released Equality Act (2010), and how it affects your setting, this essential book will help you unpick the issues in a user-friendly and easily accessible way.



## Creating Multisensory Environments

Practical Ideas for Teaching and Learning

By **Christopher Davies**

Multi-sensory environments in the classroom provide a wealth of stimulating learning experiences for all young children whose senses are still under development. This book is a highly practical guide to low-cost, easy to assemble multi-sensory environments. With a step-by-step guide to each activity, these creative learning environments focus on multi-sensory experiences and encourage creative thinking and learning, and development of social and emotional skills.

December 2011: 136pp: Pb: 978-0-415-57330-6: **£18.99**

## Brilliant Ideas for Using ICT in the Inclusive Classroom

By **Sally McKeown** and **Angela McGlashan**

How can you use ICT to boost the achievement of all your pupils? This practical teachers' guide will help you to unlock the enormous potential of new technology in order to enhance pupils' learning, particularly for young people with additional needs. Written by two of the UK's leading technology experts, this invaluable new resource will enable you to use ICT effectively to make lessons more accessible, motivating and fun. With 50 illustrated case studies and 20 starter activities, it has been specifically designed to help develop your pupils' key skills, such as problem solving, developing concepts and communicating to different audiences.

September 2011: 128pp: Pb: 978-0-415-67254-2: **£26.99**

### Easy Ways to Order:

Post: Education Marketing, 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4NR | Tel: 01235 400524 | Fax: 0207 017 6699 | Web: [www.routledge.com/teachers](http://www.routledge.com/teachers)

\*Nasen member discount - please quote **NASENDCI** when purchasing at [www.routledge.com](http://www.routledge.com)