A Study of Teacher Stress and Teaching Efficacy in a Sample of Special Education Teachers in Barbados

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Abstract
This study examines Barbadian special education teachers’ levels of efficacy and stress associated with teaching students with special education needs in the island. The study utilised a mixed methods approach and multiple case study strategy of four schools in the island. Teachers’ Perceived Teaching and General Self-Efficacy were measured using Gibson and Dembo’s (1995) Teaching Efficacy Scale and Teacher Stress was measured using Schutz and Long’s (1988) Teacher Stress Inventory. The research questions that were investigated were: what are teachers’ levels of efficacy across the four case sites? What are teachers’ levels of stress across the four case sites? Findings on the Teaching Efficacy scale revealed that teachers showed a high degree of Perceived Teaching Efficacy, but low levels of General Teaching Efficacy. Data were disaggregated on the TSI to investigate teachers’ stress levels. High levels of stress were reported on items dealing with role ambiguity, job stress and job satisfaction. The implications of these findings are discussed in the paper.

Key words: teacher stress, teaching efficacy, Barbadian special education teachers

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Introduction

In Barbados special education has three tiers: special schools (segregated settings), special education units where students attend classes but apart from their peers and inclusive settings where students receive their education with their non-disabled peers. However little is known about how Barbadian special education teachers cope with the daily rigours associated with teaching special needs students. Research by Evers, Brouwers & Tomic (2002) describe teaching and its associated tasks as “demanding and heavy” (p.228), and this is certainly true of teachers in special education settings. According to Blanton, Sindelar and Correa (2006) special education teachers’ roles are diverse and determined by the school and the characteristics of students that they serve. Their responsibilities are not limited to teaching academic skills but also include teaching vocation, life and social skills, implementing and monitoring of IEPs and Behaviour Intervention Plans (BIPs) (Blanton, Sindelar & Correa, 2006).

The above is in stark contrast to studies which have been done at the international level on psychological variables which predict and influence special education teachers’ retention, these include: teacher stress, teaching efficacy and burnout (Darling-Hammond, 2001).

Teacher Stress

Borg, Riding and Falzon (1991) define teacher stress as a physical, emotional or mental reaction resulting from one’s response to certain pressures in the environment and how well one can manage those pressures. Within special education the sources of teacher’s stress are both internal and external to the individual. A consistent finding is that teachers’ level of stress depends on the severity of the child’s disability and research for example by Fraser (1996) supports this assertion. He notes that if the disability is severe it can create tension, emotional imbalance and psychological trauma in the teacher’s life, however if the disability is mild or moderate the better the teacher’s performance in the classroom. Another study by Antoniou, Polychronin and Walters (2000) notes that children’s behaviour issues are another source of stress for teachers in special education settings. They argue that children with “high incidence difficulties” i.e. those who exhibit behaviours which teachers find difficult to manage can produce negative effects and feelings among peers and teachers. The situation is further compounded if teachers are unable to positively influence these students’ performance, as this can lead to poor motivation and eventual burnout. Other sources of stress have also been noted for example by Nichols and Sosnowsky (2002) and they include: student diversity, students’ misconduct, disruption, verbal and physical threats, unmotivated students, lack of adequate supervision and support, large case loads and class sizes, lack of administrative support, role conflict and ambiguity, limited professional development opportunities.

There are some key differences that must be highlighted however with respect to findings in the literature on teacher stress. One particular difference which is consistent is that cultural factors play a key role in determining teachers’ level of stress in special education settings. For example studies of special education teachers’ stress levels in Greece (Motti-Stefanidi, 2000; Kokkinos, 2007; Platsidou & Agaliotis, 2008) and Isreal (Pines, 2004) are not supportive of the ‘burned out or stressed out’ hypothesis which characterises much of the research in Africa for example Nigeria, (Adeniyi, Fakolade & Adeyinka, 2010); New Zealand (Billingsley,2004); United
States (Maslach & Schaufeli, 1993; Hasting and Brown, 2002) and Europe (Travers & Cooper, 1996).

According to research by Mearns and Cain (2003) and Billingsley (2004a) another key finding which is consistently reported in the literature is that demographic factors such as years of teaching experience support the idea that newly hired, younger and inexperienced teachers are more likely to be stressed out when compared to their more experienced colleagues in special education.

Teaching Efficacy

Teaching efficacy has been defined by Berman, McLaughlin, Bass, Pauly and Zellman (1977) as “the extent to which the teacher believes that he or she has the capacity to affect student performance” (p.137). Tschannen-Moran, Hoy & Hoy (1998) note that teaching efficacy can be conceptualised from two theoretical positions, the first of which is aligned with Rotter’s (1966) locus of control theory. This view of teaching efficacy was developed by RAND researchers who sought to investigate teachers’ beliefs about the level of control they exerted over their student’s achievements relative to the environment that the student was from or in. Hence, teachers with a high level of efficacy believed that they could control or influence their students’ motivation and achievement. The second orientation follows Bandura’s (1977) social learning theory and according to this school of thought, teaching efficacy could be viewed as a type of self efficacy where persons constructed beliefs about their capacity to perform at a given level of attainment (Tschannen-Moran, Hoy & Hoy, 1998). Bandura (1977) also noted that the level of success one experienced determined how much effort an individual expended and how resilient they cope with demanding situations.

Teacher efficacy has been found to influence: student achievement (Moore & Esselman, 1992; Ross, 1992), motivation (Midgely et al, 1989), teacher stress (Parkay, Greenwood, Oljnik & Proller, 1988), effort expended on teaching, setting goals and levels of aspiration (Tschannen-Moran, Hoy & Hoy, 1998). Positive benefits accrue when teachers’ report high levels of teaching efficacy. To illustrate, such teachers are more likely to experiment with new methods and ideas to better meet the needs of learners (Berman et al., 1977); are less critical of students who make errors and more likely to persist with struggling students (Ashton & Webb, 1986; Gibson & Dembo, 1984).

The Relationship Between Teacher Stress and Teaching Efficacy

The relationship between teacher stress and teaching efficacy has been studied mostly among teachers in regular education settings than those in special education environments. Skaalvik and Skaalvik (2010) cite research by Evers, Brouwers and Tomic (2002) which indicates that burnout has been shown to be moderately related to teaching efficacy. This finding is different from Skaalvik and Skaalvik’s (2007) research in Norway which found that teacher burnout was strongly related to teaching efficacy in a modest size sample of teachers in that country.

In a more recent study Skaalvik & Skaalvik (2010) developed a teaching efficacy scale which was utilised with a sample of 2,249 teachers across elementary and middle schools in Norway. According to these researchers the construct validity for this scale was improved over previous scales that failed to accurately measure teaching efficacy as a multidimensional psychological construct. These instruments
had: poor construct validity, were not multidimensional, did not reflect the demands and kinds of tasks that teachers were asked to do and did not follow Bandura’s recommendation for item construction (Skaalvik & Skaalvik, 2010).

Confirmatory factor analysis on the variables teacher self-efficacy and teacher burn out revealed that teaching efficacy correlated negatively with emotional exhaustion and depersonalisation, the central elements of teacher burnout. Skaalvik & Skaalvik (2010) argue for example that teachers who are not confident about their ability to manage students’ behaviour in their classrooms can experience low levels of efficacy which in turn increases the likelihood that these teachers would experience high levels of exhaustion and depersonalisation. Emotional exhaustion was related to time pressure which included: preparation for teaching in the evenings and weekends, little time to rest and recover from a hectic school day. Depersonalisation was linked to teachers’ relations to children’s parents.

This research into the levels of teaching efficacy and stress in a sample of Barbadian special education teachers is timely and also seeks to fill a gap identified in the international literature by Klassen, Tze, Betts and Gordon (2011). They cite Arnette (2008) who argues that “teaching efficacy researchers have called for an exploration of teaching efficacy in a wider variety of cultural and national settings” (p.25). These sentiments are echoed by researchers like Ho and Hau (2004) and Pajares (2007). The research questions that were investigated are: what are Barbadian special education teachers’ levels of efficacy across the four case sites? What are Barbadian special education teachers’ levels of stress across the four case sites?

Methodology

The research strategy employed was a multiple case study of four schools offering special education in Barbados. Stake (1995) describes a case as a bounded system that recognizes that there are limits which the researcher must impose to organize what he/she chooses to study. We could not investigate all special education settings and therefore we chose schools which represented or were indicative of the tiers of special education provision in the island. Another important idea which characterizes the case study strategy is that it tells a story about the bounded system (Johnson & Christensen, 2012). In order to study the psychological variables teaching efficacy and teacher stress and their influence on what teachers did in special education settings, we employed a quantitative research design.

Procedures

An Institutional Review Board form was submitted to the university’s review board, to approve the larger study. Letters of permission were written to the Ministry of Education and principals of participating schools to garner support for the investigation. Teachers were asked to fill in consent forms to indicate their agreement to take part in the research, only these teachers participated in the study. The researchers delivered packages to schools that contained a demographic section and the two questionnaires i.e. Teaching Efficacy and Teacher Stress Inventory. Teachers filled out the various questionnaires and returned them in sealed envelopes which were picked up by a member of the research team.
The Cases Sites

Site 1 is a segregated setting which caters to students with sensory impairments and communication disorders. This school has a modest size roll and provides a primarily academic programme for students at the school. In addition students with communication disorders also have access to specialized instruction in self-contained classrooms. Site 2 is a special school which caters to students with learning disabilities, mental retardation, and health impairments. The student population is large at just over 100 students and they take a combination of academic and alternative curriculum in arts, craft and agricultural sciences. Another important feature of the curriculum of this school is its focus on transition planning for students who graduate from this setting. Although both case site 1 and 2 have been designated as primary settings they cater to students who are secondary school aged, that is, from fourteen to 18 years old.

Site 3 is a special education unit located in a regular education school setting. Students in this setting are quite young and in some cases are re-integrated into the mainstream school setting depending on their performance. The focus in this setting includes building students’ basic academic and life skills to support personal development. Site 4 is an inclusive unit with a pull out programme which caters to students who need remedial assistance in language arts and mathematics. Students take these subjects in the unit and then re-integrate into their mainstream classes for other general studies subject areas. Students from case sites 3 and 4 whose disability may be at the more severe end of the spectrum may access further education at Case site 2 on completion of their primary school education.

The teachers

25 teachers (20 females and 5 males) were selected from (Case Site 1 N=7; Case Site 2 N=8; Case Site 3 N=5; and Case Site 4 N=5). The age range was 21 – 50 years old and teaching experienced ranged from 5 to 40 years. 11 were Trained Graduates 6 Untrained Graduate; 5 Trained Teachers; and 3 Untrained Teachers.

Instruments

Teacher Self-Efficacy Scale

The Gibson and Dembo (1984) Teaching Efficacy Scale (TES) was utilised in this study. The original scale comprised 30 items. However, after further analysis Gibson and Dembo (1984) found that only 16 of these items had adequate reliabilities. The 16 item questionnaire was utilised for this study because it had adequate reliabilities, as reported by Gibson and Dembo (1984) in their data analyses. The scale consisted of two factors: factor 1 Perceived Teaching Efficacy and factor 2 General Teaching Efficacy. It is scored using a Likert scale format, each respondent selects a number which correspond to his/her level of agreement (1=strongly disagree, 6 = strongly agree) with the particular item. Of the sixteen items comprising this scale nine (9) of these items measured Perceived Teaching Efficacy, that is, a teacher’s belief that their abilities and skills are important factors in bringing about learning outcomes (Woolfolk & Hoy, 1990). Examples of items on this scale include: “When the grades of my students improve it is usually because I found better teaching strategies” The remaining seven items measured General Teaching Efficacy, which is a teacher’s
belief that external factors such as family background and parental support are the most powerful influences on student outcomes, for example, “The amount a student can learn is primarily related to family background.” Scores on the Perceived Teaching Efficacy Scale can range from 9-54. High scores on this scale are indicative of teachers who are highly efficacious. More specifically, persons who obtain high scores on this scale have a strong believe in their ability to influence student learning. Conversely high scores on the General Teaching Efficacy Scale are indicative of low levels of teaching efficacy; scores on this scale can range from 7-42. Thus persons who score high believe that external factors are the most powerful influence on student learning. Gibson and Dembo (1984) reported acceptable reliability coefficients for each of these two factors. The following reliability coefficients were reported by Gibson and Dembo (1984) for each scale, for factor 1 (Perceived Teaching Efficacy) .78; for .75 for factor 2 (General Teaching Efficacy).

**Teacher Stress Inventory**

The Teacher Stress Inventory (TSI) is a 36 item questionnaire developed by (Schutz & Long, 1988) was utilised to assess the perceived causes of stress among the sample of special education teachers. However, for the purposes of this study 33 of the most relevant questions were chosen. The items that were removed from the scale include: “My life is currently quite lonely,” “I find my life currently quite boring” and “My administrative head pays attention to what I’m saying.”

The TSI was informed by the earlier work of Pettigrew and Wolf (1982), it comprises seven scales, most notably Role Ambiguity, examples of items on this scale include: “I am unclear on what the scope and responsibilities of my job are”, “I am uncertain what the criteria for evaluating my performance actually are”) Role Stress, examples of items on this scale include “I find that I have extra work beyond what is expected of me”, “I receive conflicting demands from two or more people or groups in the school setting”, Organisational Management, examples of items on this scale include: “I have influence over what goes on in my school”, “My administrative head asks my opinion on decisions that directly affect me”, Job Satisfaction, examples of items on this scale include: “All in all, I would have to say that I am extremely satisfied with my job”, “My job is extremely important in comparison to other interests in my life”, Life Satisfaction, examples of items on this scale include: “I currently find my life very enjoyable”, Task Stress, examples of items on this scale include: “Trying to keep my work from being too routine and boring puts a lot of stress on me”, “Trying to complete reports and paperwork on time causes me a lot of stress” and Supervisory Support examples of items on this scale include: “My administrative head stands up to outsiders for the people (s)he supervises”, “When I really need to talk to my administrative head, (s)he is willing to listen”.

Participants responses are rated on a five-point Likert scale ranging from “strongly disagree” to “strongly agree”. Items which are positively-worded are reversed-scored for analysis so that a score of 5 represented high stress. Further details about the reliability and validity of the TSI are given in Schutz and Long (1988).

**Findings**

Findings on the Teaching Efficacy scale revealed that across the four schools the 25 teachers showed a high degree of Perceived Teaching Efficacy (M=36.43, SD 6.18),
but low levels of General Teaching Efficacy (M=27.86, SD 5.56). Table 1 further disaggregates the data to show how teachers performed across the four case sites.

Table 1 here

In general teachers report high levels of efficacy with regards to teaching students with special education needs in the classroom, the results in Table 1 are positive and reflect teachers’ capacity to use pedagogies that are conducive to student learning. In spite of this, the high scores received by teachers on the General Efficacy Scale are not indicative of positive results, in fact these findings suggest that teachers are keenly aware of other factors beyond their control which can hinder the learning and development of children with special education needs in Barbados. The high score recorded for teachers at Case Site 3 (M= 30.40) is particularly worrisome, since students at this school complete an academic, semi skilled to skilled curriculum which should auger well for them after they leave school.

Findings on individual items for the subscale Perceived Teacher Efficacy reveal that teachers believe they can reach the most difficult students by varying their techniques and utilizing a step-wise approach to teaching concepts. The findings however suggest that managing difficult behaviours remain a challenge.

Table 2 here

Data were also disaggregated on the Teacher Stress Inventory to investigate those items where teachers reported high levels of stress as indicated by means that were greater than 3.00.

It should be noted from Table 3 (teacher stress) that items which achieved a mean rating higher than 3.00 are items 5 related to Role Ambiguity. Item (6) related to Task/environmental factors associated with teaching. Item (7) related to Job satisfaction. Items (25) and (26) related to Role Stress.

Low levels of stress were indicated by item means below 2.00, and these were recorded on item 23 which speaks to personal factors in teachers’ lives. Table 4 presents the findings on this item.

Table 4 here

Discussion

The results suggest that teachers across the four case sites were confident in their ability to adjust their level of teaching for students who experienced difficulties either executing or understanding a particular task. Further investigations of items means on the Perceived Efficacy Scale revealed that teachers reported being highly efficacious in the application of teaching approaches. These findings support observations made by Bandura (1997) in his teaching efficacy theory which suggests that teachers with a high sense of instructional efficacy believe that they can adapt their instructional techniques to teach even the most difficult student in their classroom.

The results also showed that special needs teachers felt that they did not have the necessary techniques to quell disruptive behaviour in class. This finding is somewhat surprising given the fact that these teachers initially reported being highly efficacious when dealing with the most difficult students. This result is contrary to Bandura’s (1997) theory which presupposes that teachers who are efficacious in their instructional techniques are equally capable of finding solutions to behavioural problems as well. This is not the case however for teachers in the Barbadian context and it may suggest that teacher’s efficacy levels are even further specified beyond
subject domains (Bandura, 1997) to include professional domains like instructional techniques, classroom management and so on. It might also suggest that teachers need to receive more training in how to stop disruptive behaviour in the classroom.

The results on the teacher stress component indicate that teachers reported experiencing the most stress in areas like job satisfaction, role ambiguity, task/environment and role stress. These findings are consistent with other research internationally reported by Fimian (1983) and Fimian and Santoro (1983) which indicate that special needs educators usually report high levels of stress related to job satisfaction. This finding can be explained in light of the lack of human resources within the region; hence teachers might believe that they have to undertake a heavier workload. This could prove somewhat burdensome and lead to physical and emotional fatigue, which could then lead to stress. An additional challenge as indicated by the teacher efficacy results is that teachers experience difficulties managing children who display challenging behaviours. In the West Indian context quiet classrooms are indicative of students on task and a teacher who displays good management skills, the opposite suggests a poor management style by the teacher with students’ learning being compromised.

Teachers reported experiencing high levels of stress in terms of role ambiguity i.e. knowing what they are expected to do; this was captured in the high rating on Item 5 of the Teacher Stress Inventory. This result is consistent with findings by Crane and Iwanicki (1986) which found role ambiguity to be one of the major contributing factors in relation to teacher stress in special needs teachers. In fact, the researchers found that role ambiguity explained a significant amount of variance in emotional exhaustion and depersonalisation. The finding that teachers in the Barbadian sample reported feeling ambiguous about their roles is worrisome as research links these feelings to role stress and possibly attrition i.e. the field could see the exodus of these valuable professionals if measures are not taken to assist special education teachers cope with the day to day tasks associated with their jobs (Morvant, Gester, Gillman, Keating and Blake, 1995).

Acknowledgements

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References


Table 1. Teachers’ Scores on Perceived and General Teaching Efficacy by School

<table>
<thead>
<tr>
<th>School</th>
<th>N= 25</th>
<th>Perceived Efficacy</th>
<th>Teaching Efficacy</th>
<th>General Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Site 1</td>
<td>7</td>
<td>35.40 (SD 5.02)</td>
<td>26.40 (SD 3.43)</td>
<td></td>
</tr>
<tr>
<td>Case Site 2</td>
<td>8</td>
<td>37.50 (SD 3.66)</td>
<td>29.62 (SD 4.40)</td>
<td></td>
</tr>
<tr>
<td>Case Site 3</td>
<td>5</td>
<td>36.40 (SD 1.94)</td>
<td>30.40 (SD 4.82)</td>
<td></td>
</tr>
<tr>
<td>Case Site 4</td>
<td>5</td>
<td>35.40 (SD 12.36)</td>
<td>24.00 (SD 8.09)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Item Means and Standard Deviations for Perceived Teacher Efficacy Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>4.04</td>
<td>1.781</td>
</tr>
<tr>
<td>4.</td>
<td>4.13</td>
<td>1.597</td>
</tr>
<tr>
<td>5.</td>
<td>3.83</td>
<td>1.800</td>
</tr>
<tr>
<td>6.</td>
<td>4.78</td>
<td>1.085</td>
</tr>
<tr>
<td>8.</td>
<td>2.67</td>
<td>1.494</td>
</tr>
</tbody>
</table>

Table 3. Item Means and Standard Deviations for Teacher Stress

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
</table>
5. When asked, I am able to tell someone exactly what the demands of my job are  | 3.84 | 1.028  
6. I find that I have extra work beyond what the demands of my job are  | 3.92 | 1.115  
7. The criteria of performance for my job are too high  | 3.33 | .917  
25. Trying to complete reports and paperwork on time causes me a lot of stress  | 3.17 | 1.337  
26. I find that dealing with discipline problems puts a lot of stress on me  | 3.28 | 1.137
Table 4. Item Means and Standard Deviations for item 23 on the Teacher Stress Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. I currently find my life quite boring</td>
<td>1.54</td>
<td>.833</td>
</tr>
</tbody>
</table>