Challenging Behaviour in Secondary School Students: Classroom Strategies for Increasing Positive Behaviour

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ABSTRACT

To assist in developing an evidence base in the area of behaviour management in classrooms, a systematic review of strategies to increase the positive behaviour of secondary school students with challenging behaviour in the general education classroom was undertaken. Educators have identified challenging behaviour as a major concern and many teachers report feeling ill-equipped to assist students who exhibit challenging behaviour. By not addressing challenging behaviour during secondary school, young people could face a number of adverse outcomes during adulthood. The objective of this review is to provide teachers with practical evidence-based strategies to address commonly occurring challenging behaviours, in order to increase the learning and social outcomes of students. From an extensive search of electronic databases, selected journals, and reference lists, 10 primary research articles met the selection criteria of this review and were critically evaluated. It was found that the use of positive reinforcement approaches were effective for increasing positive behaviour. The importance of clear, positive communication between students and teachers was shown to be evident, indicating a number of valuable implications for policy and practice.

Keywords
Challenging Behaviour, Secondary School Students, Teacher-Student Interactions, Classroom Management, Positive Behaviour Strategies.

INTRODUCTION

Educators have described challenging behaviours of students as a major concern in public schools for over 40 years (Walker, Ramsey. & Gresham, 2004, cited in Kern, White, & Gresham, 2007). Teachers have reported feeling ill-equipped to assist students with the many challenges they present in the classroom (Buchanan, Gueldner, Tran, & Merrell, 2009; Justice & Espinoza, 2007, cited in Ducharme & Shecter, 2011), leading to high stress levels and

burnout among teaching staff. Furthermore, teachers are facing pressure to maintain increasingly high academic standards, whilst supporting the various academic, behavioural and emotional needs of students within inclusive education settings. This may have significant implications – for example, in the United Kingdom, this pressure is likely to lead to a declining tolerance of challenging behaviour in the classroom (Department for Education and Skills, 2004), with high levels of teacher stress leading to the increased likelihood of using reactive and punitive strategies to manage this behaviour. These types of responses have been shown to be unhelpful and often damaging to student outcomes (Clunies-Ross, Little, & Kienhuis, 2008). However, strategies utilised within mainstream classrooms which support positive behaviour can change student outcomes in a number of ways. Furthermore, knowledge and understanding of evidence-based strategies can lead to more effective classroom behaviour management and effective teacher referrals of students for further assistance to other professionals such as educational psychologists or school counsellors (Greenberg et al., cited in Stormont, Reinke, & Herman, 2011).

The growing popularity of functional behaviour assessments for addressing behaviour issues in schools has led to an increased awareness of the importance of data-based decision making and evidence-based practice (Stormont et al., 2011). According to Ducharme and Shecter (2011), however, these functional assessments are often impractical for use by classroom teachers and, furthermore, resourcing constraints (e.g., funding) can influence decision-making. Therefore, there is a need to adopt strategies which can be easily incorporated into routine teacher practices, used with multiple students, and covering a range of challenging behaviours in order to support learning and social outcomes. This would be particularly useful for secondary school teachers who work across multiple classes. Accordingly, the role of a systematic review is an important contribution in developing an evidence base to inform future teacher practice in this area (Baxter & Fredrickson, 2005).

To assist in developing evidence in the area of behaviour management in classrooms, a systematic review was undertaken. This review endeavoured to answer the question: What classroom based strategies are most effective in supporting positive behaviour in secondary school students with challenging behaviour? It aimed to identify practical, evidence-based strategies relevant to the general education classroom. Furthermore, it aimed to provide an understanding about the effectiveness of positive, non-punitive strategies that could facilitate student self-management and increase socially skilled behaviour. Although challenging behaviour may indicate wider issues outside the classroom, a review of strategies which have the potential to influence students' overall behaviour will provide students with protective factors, strengthening social skills and academic achievement. This review will begin by elaborating on the importance of a systematic review in this area to inform policy and practice, as well as an explanation of challenging behaviour as expressed by students. It will explore the importance of focusing on secondary school classroom-based strategies. An explanation of the search methods used to identify research is detailed as well as the selection criteria used to identify studies. These studies are then systematically reviewed and critically analysed with recommendations for future practice outlined.

Evidence-based practice

Evidence-based practice is described by Kratochwill (2007) as "a movement within psychology and education to identify, disseminate and promote the adoption of practices with demonstrated research support." (p. 829). It is within the interests of education professionals to identify practices likely to best serve the diverse needs of students in modern day classrooms (Chafouleas, Hagermoser Sanetti, Jaffery, & Fallon, 2012). Implementing behavioural strategies that are not research based has the potential to lead to losses in funding and energy and result in teacher fatigue, frustration, burnout, diminished student outcomes, dropouts, suspensions, and ongoing negative consequences (McIntosh et al., 2011). A systematic review of literature, which addresses challenging behaviour in adolescents, will help to determine "practices that are informed by research, in which the characteristics and consequences of environmental variables are empirically established and the relationship directly informs what a practitioner can do to produce a desired outcome" (Dunst, Trivette, & Cutspec, 2002, p. 3).

CHALLENGING BEHAVIOUR

Definitions

Special Education 2000 defines challenging behaviour as conduct which: Jeopardises the physical safety of the student or others, threatens to cause or causes significant property damage; and severely limits the student's access to ordinary settings and interferes with social acceptance, sense of personal well-being and their educational performance. (New Zealand Ministry of Education, 1998, p. 13)

In specific terms, challenging behaviour can include students being disruptive or off task, swearing, answering back or being non-compliant, through to being violent, bullying, vandalising, and substance abuse (New Zealand Ministry of Education, 2008). In the literature, there have been many different descriptors used to refer to children and young people with challenging behaviour. For example, during the 1950s and 1960s terms such as *antisocial, emotionally disturbed, socially maladjusted and undersocialised* were adopted. Child psychiatrists may refer to these students as having a *disruptive behaviour, conduct* or *attention deficit/hyperactivity disorder* (American Psychiatric Association, 1994, as cited in Church, 2003). Currently, the term used most frequently in New Zealand is *students with behaviour difficulties* but for the purpose of this review, the term *challenging behaviour* will be used as it is frequently used in the international education literature. The term *positive behaviour* will also be used in this review, and is defined by Walker et al. (2004) as behaviour which is cooperative, positive and mutually acceptable.

Why focus on challenging secondary school student behaviour?

Although research on early intervention strategies for young children with challenging behaviour is voluminous, fewer studies on secondary school classroom strategies have been conducted and yet research on developing ways to maximise adolescent potential is important for a number of reasons. The early secondary school years have been identified as a time where most

students decide to continue or withdraw from schooling (Hertzog & Morgan, 1999; Mizelle & Irvan, 2000, as cited in McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). It is estimated that for each year a student spends in secondary school, the chance of welfare dependence decreases by 35% (United States National Research Council, 1993, as cited in McIntosh et al., 2008). As a result of longitudinal research conducted across New Zealand, Church (2003) found that young people who display challenging behaviour are at risk of a number of adverse outcomes in adulthood, including unemployment, early pregnancy and early fatherhood, domestic violence, criminal offending, driving offences, psychiatric disorders, alcoholism and substance abuse, higher rates of injury, hospitalisation and general health problems, separation and divorce, and a shortened life expectancy. Addressing challenging behaviour prior to adulthood reduces the risk of such adverse outcomes.

The cause of challenging behaviour in young children and adolescents can be complex, and may stem from a number of genetic and environmental factors. This behaviour usually has a message, and may occur because the student lacks the skills to adopt more appropriate behaviours to achieve a goal or convey the message (Kaiser & Rasminsky, 2007). Church (2003) explains that a student displaying a high occurrence of challenging behaviour will frequently attract negative reactions (often in the form of punishment) from peers and school staff. This response is because challenging behaviour typically interrupts learning time, and academic failures begin to outnumber successes, which in turn can result in further punishment for underachievement. A typical pattern for young people with challenging behaviours includes underachievement, punishment, peer rejection, and a negative view of the academic environment which often leads to a negative effect on their mood, self-esteem, and attitudes toward others. Church further explains that this poor self-esteem becomes associated with a set of attitudes which hold others in contempt, resulting in a lack of self-control, impaired social development, academic underachievement, and a lack of respect for authority.

This understanding about the development of challenging behaviour emphasises the principle that behaviour is learned and contextual (Shaffer, 2002). But, just as some students learn to behave negatively, this pattern of behaviour can be replaced by more adaptive, positive behaviour patterns. Indeed, before the increase in negative associations toward others and the academic environment solidifies, classrooms can create learning environments that foster and encourage positive behaviour and social skills. For young people from dysfunctional households where antisocial behaviour may be largely ignored, the classroom can create an environment with clear behavioural expectations – teachers are in the position to provide positive relationships the student may not develop outside of school (Braxton, Brewer, & Quirin, 2010). Building positive relationships, in addition to teaching conflict resolution, self-control, valuable social skills and having teachers who reward competence and encourage trust, can provide students with protective factors which can facilitate improved functioning in adulthood (Braxton et al., 2010; New Zealand Ministry of Education, 2008). Conducting class-wide intervention strategies enables teachers to direct instruction to appropriate behaviour, not only to those students displaying challenging behaviour, but to the whole class, strengthening the positive environment. Key stakeholders such as the students themselves,

their teachers, parents, the wider school and community have the potential to benefit from such approaches.

OBJECTIVES

The primary objective of this review was to investigate current research into strategies for increasing the positive behaviour of secondary school students who display challenging behaviour in the classroom. In order to achieve this, a systematic review of literature from 2004 to present was conducted to ensure that results were relevant to the contemporary classroom. Behaviour strategies for younger students have been relatively well documented and accordingly this review emphasises the need for a more substantial literature base for secondary school students. This review will provide teachers with practical strategies to address commonly occurring challenging behaviours with the objective being to increase the occurrence of positive behaviours. The intention is to build a knowledge base to inform evidence-based behaviour management strategies benefitting students, teachers, schools, parents, and the wider community.

METHOD

This systematic review of published literature for evidence-based practice analysis began with the construction of a scientifically relevant research question with the intention of producing relevant and applicable answers (Schlosser, Koul, & Costello, 2007), based on the above outlined rationale. As mentioned, the need for strategies for addressing challenging behaviour is pressing for all stakeholders. Rather than adopting approaches that operate *on* young people, strategies would be investigated that worked *with* students to maximise positive outcomes. Simply using strategies that minimise teacher irritability is inefficient. Increasing positive behaviour is one way to enhance student outcomes and give students better ways of coping with external pressures.

A multi-method approach, assessing both qualitative and quantitative research was undertaken because it provided a wider examination of useful ideas. Qualitative data were gathered in order to investigate the perceptions and understanding of those affected by the intervention or strategies and quantitative research studies were scrutinised to provide data about what works. Each study included in the review met a set of inclusion and exclusion criteria. Data were then analysed and categorised in terms of: (a) geographic location of the research, (b) sample characteristics, (c) the type of behaviour targeted in the intervention or discussed in the research, (d) the type of intervention or strategy used or discussed, (e) the research design used, and (f) the outcome of the research.

Search strategy

The review of current literature involved an extensive search of primary research published in peer-reviewed, scholarly journals using electronic databases *Education Resources Information Center (ERIC), PsychINFO, A+ Education* and *Education Research Complete.* The search was supplemented with a manual review of relevant electronic journals, such as the *Journal of*

Positive Behaviour Interventions, the *Journal of Emotional and Behavioural Disorders* and the *Journal of Behavioural Education.* When articles that met the inclusion criteria had been located, a secondary review of the reference lists of those studies was undertaken in order to find research not identified during the database search. Non-experimental studies were included to gain insight into teacher and student attitudes and perspectives toward classroom behaviour management strategies. One study on the views of educational psychologists was included in the review in order to further expand professional opinion. The search keywords used to search all four electronic databases and online journals were: *challenging-problem-maladaptive-antisocial-disruptive-off-task behaviour, conduct problems, adolescents, teenagers, high school-secondary school-junior high students, classroom strategies-techniques-interventions-methods, teaching strategies-techniques-interventions-methods, positive behaviour.*

Inclusion and exclusion criteria

To be included in the review, the research article needed to describe an intervention or strategy for increasing the positive behaviour and/or decreasing challenging behaviour in at least one secondary school student in the mainstream classroom. The search was conducted with a prevention and intervention focus; therefore, medical or biological interventions were excluded, as was research only describing the nature or prevalence of challenging behaviour in the classroom. Only studies conducted after 2004 were included in order to ensure that findings would be relevant to the contemporary classroom. The procedures within the identified studies were examined across dimensions of replicability, generality, and utility.

This review did not include studies whose participants carried a co-morbid diagnosis such as developmental delay or disorder, intellectual impairment or learning disability. This is because the intention of this review was to investigate strategies used with commonly occurring challenging behaviours in the general education classroom, which may be utilised by secondary school teachers to support positive behaviour in the classroom. Only studies which focused on students at the secondary school level were included, which typically involve students aged 12-18 years. Studies of school-wide behaviour strategies were excluded.

The search was an international one and included a mix of cultural, ethnic, geographic and economic contexts but no New Zealand research that fulfilled the selection criteria was found. The outcome of the search identified 106 articles, of which 10 met the selection criteria.

Table 1 TABLE OF EVIDENCE

Summary of studies exploring strategies and interventions for facilitating positive behaviour in the secondary school context

STUDY	COUNTRY	SAMPLE CHARACTERISTICS	TYPE OF BEHAVIOUR TARGETED	INTERVENTION/ STRATEGY USED	RESEARCH DESIGN	RESULTS
Anderson, Peterson-Nelson, Richardson, Webb, & Young (2011)	USA	N = 2 students, one teacher. Age: 13 & 14 Sex: Male students, female teacher Ethnicity: No data School: Public junior high	Off-task Disruptive Social difficulties Argumentative	Dialogue journals between teacher and student in order to strengthen teacher/student relationships, decrease challenging behaviour and increase positive behaviour.	Quantitative observation of student behaviour and teacher interaction in the classroom prior to and following intervention. Survey conducted on students prior to and following intervention to assess their perception of the teacher/student relationship.	Both students demonstrated an increase in positive behaviours, but only one showed a statistically significant decrease in challenging behaviour. Survey results showed the perceived relationship between the targeted students and their teacher did not improve post-treatment.
Colvin, Flannery, Sugai, & Monegan, (2009)	No data	N = 25 students, one teacher Age: 14-15, teacher in his second year of teaching (no data on age) Sex: No data on students, male teacher. Ethnicity: No data School: Large suburban high school	Off-task	Use of observational data to provide performance feedback to the teacher, focusing on: Classroom instructional settings, instructional practice, and student behaviour. Changes were made based on feedback provided from observation and challenging behaviour triggers identified.	Quantitative observation made at three stages – first stage identified off-task behaviour rates and triggers for challenging behaviour. Action plan then developed, implemented then any changes observed. Further feedback provided and implemented. Third phase assessed collective changes in behaviour.	Most of students on task increased for each successive observation (65%, 83%, 95% respectively). Strategies which led to increased student engagement included: improvement in transitions, whole-class question asking strategies, checks for understanding and movement around the class to check for engagement.

STUDY	COUNTRY	SAMPLE CHARACTERISTICS	TYPE OF BEHAVIOUR TARGETED	INTERVENTION/ STRATEGY USED	RESEARCH DESIGN	RESULTS
Coogan, Kehle, Bray, & Chafouleas (2007)	No data	N = 5 students Age: 12 Sex: Male Ethnicity: No data School: No data	Off-task Disruptive Aggressive	Multi-component approach using interdependent and unknown dependent group contingencies, self-monitoring, peer feedback and the randomisation of reinforcers (rewards) and criteria for reinforcement.	Quasi-experimental (A-B-A-B design, where A denoted baseline and B was the intervention, which was quantitatively observed). Survey conducted to assess student and teacher satisfaction with the intervention.	Large positive effects across all students. Students rated the intervention as slightly favourable. The teacher indicated a satisfaction with the intervention, and noticed immediate and dramatic improvements to student behaviour.
Hart (2010)	No data	N = 47 educational psychologists Sex: No data Ethnicity: No data School: No data	General challenging behaviour	Educational psychologists were asked about what they consider to be effective classroom behaviour management strategies. Data were then categorised into behaviour management strategy themes.	Educational psychologists were asked to structure thoughts on effective behaviour management strategies then put into focus groups. A thematic analysis of the data was then conducted.	Identified effective strategies fell into 8 themes: contingency management, students' feeling of being safe/secure, managing classroom conditions, promoting positive self-concept, promoting student autonomy, students' feeling of being valued, understanding of setting conditions, and vicarious learning.

STUDY	COUNTRY	SAMPLE CHARACTERISTICS	TYPE OF BEHAVIOUR TARGETED	INTERVENTION/ STRATEGY USED	RESEARCH DESIGN	RESULTS
Infantino & Little (2005)	Australia	N = 350 students Age: Average age of 13.8 years Sex: 28% male and 72% female Ethnicity: No data School: 81.7% Catholic single-sex, 18.3% private co-educational	General challenging behaviour	Secondary school students were asked to identify the most frequently occurring and the most troublesome challenging behaviours in the classroom. Students were also asked to rank in order of effectiveness, a number of deterrents and incentives and to indicate their preference of various types of praise and reprimands.	Quantitative questionnaire.	Private praise and private reprimands seen as most effective for increasing positive student behaviour. Free time, a positive letter home, receiving a good mark and report were seen as incentives for positive behaviour. Deterrents seen as most effective were being sent to the Principal's office, detention and getting a bad report.
Omoteso & Semudara (2011)	Nigeria	N = 600 (420 teachers and 180 school administrators) Sex: No data Ethnicity: No data School: Secondary	General challenging behaviour	Teachers were required to complete a questionnaire regarding the frequency of various challenging behaviours in their classrooms. Common strategies for addressing challenging behaviour were presented and teachers indicated the frequency of their use of these on a Likert scale. School administrators (Principals, Deputy Principals and Heads of Departments) were asked to indicate the effectiveness of the classroom management skills of the teachers who completed the questionnaires.	Quantitative questionnaire	Significant positive relationship between teacher effectiveness and positive student behaviour. Strategies leading to effectiveness include: clear communication with students, giving advice about appropriate behaviour, attending to student enquiries, making the effort to explain difficult concepts to students and referring difficult students to the school counsellor.

STUDY	COUNTRY	SAMPLE CHARACTERISTICS	TYPE OF BEHAVIOUR TARGETED	INTERVENTION/ STRATEGY USED	RESEARCH DESIGN	RESULTS
Roache (2008)	Australia	N = 1975 students Sex: No data Ethnicity: No data School: Secondary school	General 'misbehaviour'	Students were asked to complete a questionnaire about the most effective approaches to discipline, and the impact these strategies have on: the level of challenging behaviour, the extent to which students act to protect their own rights, their teacher's rights, and to ensure their peers act to protect rights, connection to peers, wellbeing, their liking of their teacher and subject, level of irritability and distraction felt when the teacher acts to control misbehaviour, and how justified students felt discipline to be.	Quantitative questionnaire	Hinting (e.g. non-directional descriptions of expected classroom behaviour) significantly impacted positive student behaviour, as did use of recognition of good behaviour and rewards.
Roache & Lewis (2011)	Australia	N = 363 secondary school teachers Sex: No data Ethnicity: No data School: Urban high school	General 'misbehaviour'	Teachers were asked to indicate the frequency of their use of six different strategies for addressing student challenging behaviour. They were also required to indicate the level of a series of responsible behaviours their students displayed. Finally, teachers were asked to indicate how many of their students displayed challenging behaviour, and their level of concern over classroom management.	Quantitative questionnaire	Combination of rewards and punishments involving discussion, validation of positive behaviour, involvement and trust most likely to enhance student responsibility and reduce challenging behaviour.

STUDY	COUNTRY	SAMPLE CHARACTERISTICS	TYPE OF BEHAVIOUR TARGETED	INTERVENTION/ STRATEGY USED	RESEARCH DESIGN	RESULTS
Schanding & Sterling-Turner (2010)	USA	N = 30 students Age: 14-17 Sex: 47% male & 53% female Ethnicity: 60% Caucasian, 40% African American School: Rural public high school	Off-task Disruptive	Interdependent group contingency intervention – the *Mystery Motivator*. Every member of the group receives a mystery prize based on some aspect of the group behaviour.	Quantitative observation (A-B-A-B design). 3 students were identified who consistently display challenging behaviour – observation was conducted on these students and the general class.	40% reduction in challenging behaviours from baseline levels observed with the 3 identified students and a 50% reduction in challenging behaviour from baseline levels exhibited by randomly selected peers.
Swinson & Knight (2007)	United Kingdom	N =303 students, of these, 24 were identified as displaying challenging behaviour. Twenty teachers. Age: 12 Sex: (Of the 24) 75% male & 25% female Ethnicity: No data School: Secondary	Off-task Disruptive	Evaluation of teacher verbal feedback directed toward students who have been identified as having particularly challenging behaviour, and the rest of the class. The aim is to investigate the quality and quantity of verbal feedback directed at the designated pupils and the rest of the class, and to examine the effect different verbal feedback has on challenging behaviour.	Quantitative observation (A-B-A-B design)	Those students who displayed challenging behaviour were found to be more on task in well-controlled classrooms where other students were on task. Teacher verbal feedback toward the identified students showed a positive relationship between positive feedback and on-task rates.

RESULTS

Table 1 summarises the results from the 10 identified studies. This includes information on a) the country in which the research was conducted, b) sample characteristics, c) type of behaviour targeted in the research, d) the intervention or strategy used, e) the research design, and f) a summary of the results.

Geographic location

The evaluated research covered a range of international geographic areas, thus covering a range of different education systems. Of the research which specified the country in which it was conducted, Australia had the largest majority (3 studies), followed by the United States of America (2 studies). Three of the 10 studies did not report on the geographic location of the research.

Sample characteristics

The 10 studies provided assessment of a total of 3722 participants. The sample sizes ranged from 2 to 1975 participants. Of these, 2690 were students, 805 teachers, 47 educational psychologists, and 180 school administrators (principals, deputy principals and heads of departments).
Four of the studies involved students only, three involved both students and teachers, one study involved educational psychologists only, one involved only teachers, and the remaining study involved both teachers and school administration staff.

Two studies involving students did not report data on the gender of participants. Of the remaining five studies that did report on gender, 68% of students were female and 32% were male. Of the studies involving teachers, three reported data on the gender of the teacher involved (one male, two female). Of the studies involving teachers, only two (Anderson et al., 2011 and Schanding & Sterling-Turner, 2010) reported on the level of educational experience of the teachers involved, with both teachers in each study having three years of experience. Neither the gender, nor the level of experience was reported in the study involving educational psychologists (Hart, 2010). One study reported information on the ethnicity of participants (Schanding & Sterling-Turner, 2010).

Type of behaviour targeted

Four studies utilised students who had been identified as having particularly challenging behaviour within their samples. Anderson et al. (2011) studied two students who had been identified by their teachers as at risk of emotional and behavioural disorders. These students were reported to lack critical social skills, and be consistently off task, disruptive and argumentative. Coogan et al. (2007) studied five students who were identified within a single class and who exhibited the most frequent inappropriate behaviours, through either an assessment of their discipline records, or observed classroom behaviour (although the author did not report on who identified them). Collectively, these students were reported to exhibit off-task, disruptive, disobedient and inattentive behaviours. Schanding and Sterling-Turner (2010) reported that three students were identified by their teacher as the most disruptive. Their teacher noted that the class, as a whole, engaged in disruptive

behaviour, and that the most frequent challenging behaviours exhibited by her students were off-task behaviour, students being out-of-seat, and using inappropriate vocalisations. In the Swinson and Knight study (2007), 24 students were identified by form tutors as regularly displaying challenging behaviour including inappropriate in-seat and out-of-seat behaviour, shouting, inappropriate talking, distracting other pupils, arguing with the teacher, distracting the teacher, and inattention. Colvin et al. (2009) observed general off-task behaviour among participants (whole class), and all remaining studies (five) reported investigating general challenging behaviour.

Overall, it appears then that the most commonly occurring challenging behaviours observed across studies that identified specific students were off-task and disruptive behaviours. In the other reported study only general descriptions of challenging behaviours were discussed.

Intervention/strategy used

A range of strategies were used or identified to address challenging behaviour and increase positive behaviour in participants. These strategies can be categorised into three theoretical approaches (behavioural, social-cognitive, and ecological) which underpin the nature of the strategies used or considered in the studies.

Behavioural: This approach is based on the assumption that learned challenging behaviours can be unlearned and replaced with positive behaviours – the focus being to reinforce positive behaviour and eliminate challenging behaviours. Little attention is paid to individuality, however (Evans, Harden, Thomas, & Benefield, 2003). Examples of behavioural interventions or strategies utilising this approach include those using some form of positive reinforcement in order to increase positive behaviour (social reinforcement, tangible rewards, and allowing students to engage in preferred activities). Four studies (Infantino & Little, 2005; Roache, 2008; Schanding & Sterling-Turner, 2010; Swinson & Knight, 2007) identified positive results. Infantino and Little reported the use of praise and rewards as being most effective as did Roache (in addition to clear communication of expected behaviours). Schanding and Sterling-Turner (2010) used a mystery reward for good behaviour, and the Swinson and Knight (2007) study evaluated teacher verbal feedback (praise or negative comments directed at students) to impact upon behaviour.

Cognitive-behavioural: This approach is based on the assumption that individuals can form mental representations of social behaviour, and are able to reflect on this behaviour. Mood and emotions influence behaviour – it is not strictly learned, however. It is assumed that unhelpful thought patterns can be modified for long-term benefits (Evans et al., 2003). The research by Coogan et al. (2007) was an example, and used the strategies of student self-monitoring, peer feedback and interdependent group contingencies which can impact upon the individual to increase positive behaviour. Peer feedback and interdependent group contingencies aim to increase student self-monitoring of positive behaviour by allowing the student the opportunity to reflect on their own behaviour.

Ecological: This approach assumes that socio-cultural factors are more influential on behaviour than individual factors. It stresses the importance of understanding the environmental conditions which impact on behaviour (Evans et al., 2003), with a key notion being that relationships with others can affect

individual behaviour. Examples include the modification of student-teacher relationships and the use of the classroom environment to impact on the challenging behaviour. Three out of the 10 studies selected were identified as being ecological in nature (Anderson et al., Colvin et al., 2009; and Omoteso & Semudara, 2011). Anderson et al. aimed to strengthen teacher/student relationships and communication in order to decrease challenging behaviour and increase positive behaviour by utilising dialogue journals. Colvin et al. highlighted the importance of providing performance feedback to teachers (to ascertain the effect it had on behaviour) based on observations of their interactions with students. Results from Omoteso and Semudara identified that the most effective strategies for increasing positive behaviour were those involving clear communication between the teacher and student (including advice on appropriate behaviour, explanation of difficult concepts and attention provided for student enquires). In essence, the researchers identified effective behaviour management as consisting of firm boundaries and positive relationships with students.

The Roache and Lewis study (2011) was both ecological and behavioural, as the strategies involved the use of rewards and praise for positive behaviour, as well as enhancing student communication, involvement and trust. The research of Hart (2010) was also ecological and behavioural. It included strategies that promoted student wellbeing, self-concept and autonomy, clear communication about appropriate behaviour and management of classroom environment, contingency management (reinforcing positive behaviours and punishing challenging behaviour) and vicarious learning (identifying staff and peers modelling positive behaviour so that other students can learn from them).

Study designs

Of the 10 studies in this review, eight studies utilised a non-experimental research design, and two studies used a quasi-experimental design. Both Schanding and Sterling-Turner (2010) and Coogan et al. (2007) used an ABAB quasi-experimental design with Coogan et al. also incorporating a quantitative questionnaire in their research. Two studies (Colvin et al., 2009; Swinson & Knight, 2007) used quantitative observation to measure the effects of the intervention or strategy, and four studies (Infantino & Little, 2005; Omoteso & Semudara, 2011; Roache, 2008; and Roache & Lewis, 2011) utilised quantitative questionnaires to investigate opinions on effective strategies for increasing positive behaviour. Anderson et al. (2011) used both quantitative questionnaires and quantitative observation in their research design. One study (Hart, 2010) used a focus group design.

Outcomes

An inspection of the data from those studies using a quasi-experimental design or quantitative observation was conducted. In addition, a conceptual interpretive analysis of the qualitative data from those studies using questionnaires was undertaken. These concepts were based on student and teacher/professional views of 'what works' in reducing challenging behaviour in the classroom. The conceptual synthesis revealed similarities between the two groups. Educators and students believed that praise and rewards for positive behaviour were effective as was clear communication of expected behaviour.

For those two studies using a quasi-experimental and those three using quantitative observation, results were classified as positive, mixed, or negative. Positive results were defined as outcomes which indicated an observable reduction of challenging behaviour among participants after the intervention. All but one of the studies reported positive outcomes from the intervention or strategy. Anderson et al. (2011) reported that both participants showed a statistically significant increase in positive responses to the teacher; however, only one participant showed a reduction in challenging behaviour, with the other students' challenging behaviour increasing after the intervention was introduced.

DISCUSSION

Major findings

As highlighted earlier in this review, investigating strategies for increasing positive behaviour in those adolescent students who have challenging behaviour is an important area to inform evidence-based practice for professionals. This systematic review evaluated 10 primary research articles, addressing challenging behaviour among secondary school students. Systematic evaluation of these studies revealed common themes among student and teacher/professional perspectives on effective strategies to increase positive behaviour, as well as intervention strategies demonstrating effectiveness from observational data (at least in the short term).

When conducting a conceptual interpretive analysis of survey and focus group data, it was found that both teachers/professionals and students identified the use of positive reinforcement (i.e., various tangible rewards and/or praise), effective for reducing challenging behaviour, as well as clear communication about expected classroom behaviour. These themes complement findings from those studies using observational designs in order to test the effectiveness of strategies using praise and/or rewards, and those increasing communication between students and teachers. The Coogan et al. (2007) study found large positive effects across all students using an approach that incorporated the use of rewards, as did Schanding and Sterling-Turner (2010) who found a 40% reduction in challenging behaviour across targeted students, and a 50% reduction from randomly selected peers. Swinson and Knight (2007) found that the use of praise increased on-task behaviour among students.

For the purpose of this review, strategies were related to a theoretical approach. It was found that studies categorised under the behavioural model were the most prevalent. The behavioural model is based on the assumption that positive behaviours can be taught to replace negative, challenging behaviours and commonly uses rewards (e.g., preferred activities, tangibles) to facilitate positive reinforcement. It was found that strategies utilising a behavioural approach can be effective for reducing off-task and/or disruptive behaviour, or general challenging behaviour of secondary school students in the general education classroom in the short term. Because no follow-up research was mentioned, and no longitudinal research located, it is not known if strategies using aspects of the behavioural model are effective beyond the period of intervention. In order to determine which strategies for increasing positive behaviour in those students with challenging behaviour are *most effective*, a comparison of different types of strategies within each study would

need to be undertaken. Unfortunately this type of study was not found, but what was found was strategies that *can be effective.*

Limitations of the included studies and ethical considerations

Strategies utilising a behavioural approach for addressing challenging behaviour have been criticised for holding a simplistic technical view of the causes of such behaviour (Evans et al., 2003). These approaches are often considered a 'quick fix', and further research is needed in order to investigate long-term benefits. Furthermore, placing importance on individual behaviour in the classroom may not be appropriate for all students - developmental and cultural considerations may need to be considered. A student's challenging behaviour, (e.g., aggression) may be an 'acting-out' survival strategy for a troubling home situation. Well-intentioned strategies can increase inequalities between the student and his or her peers when individual students are targeted, and it may be that perceived inequalities could be the reason behind the student's behaviour. This was highlighted in the data from student questionnaires, which suggest students view strategies for positive behaviour as more favourable when they do not feel 'singled out'. Therefore, it is important to consider causes behind challenging behaviours when intervention is required.

There was little evidence that researchers or teachers developed intervention strategies for challenging behaviours based on student needs. Rather, approaches based on the needs of teachers to create an orderly environment within the classroom seemed more apparent. In the studies where specific students were identified as 'challenging', not one educator or researcher reported a consultation with the student about the intervention or even the possible cause of the behaviour. Further, all targeted students were identified by their teacher, giving way to possible selection bias. This highlights an important issue concerning rights and ethical behaviour and the use of a 'hit or miss' approach – would the results be more successful if students were involved in the development of the behaviour strategies? In consideration of this, the findings of Coogan et al. (2007) are relevant as an example as there was concern by one of the participants that implementation was undertaken because the class was "dumb and bad" (p. 553). This led to the student rating the intervention as unfavourable. If educators outlined the desirability for a more positive classroom environment and explained the nature of the strategies, the use of rewards and the likely impact, then it is possible that change could occur more readily. Whether an intervention is deemed acceptable by those whom it involves is discussed by both Brownsmith (1976, cited in Evans et al., 2003) and Evans et al. Both studies found that the effectiveness of interventions evaluated was compromised because not all students involved in the intervention wanted to change their behaviour – they were nominated to participate by their teacher. This raises issues about the ethical rights of students in research. Ethical guidelines for this type of research need to be developed more adequately and the potential consequences of implementing interventions without considering longer term support strategies or more intensive support are needed.

It was not clear from any of the studies whether informed consent to participate in research was gained from the students involved. One study (Infantino & Little, 2005) detailed that the researchers obtained parental

consent, but no mention of student consent was indicated. No other studies made mention of the consent procedure. According to Raines (2008), adolescents 14 years and older are capable of making quite complex decisions in regards to giving informed consent to participate in research and this raises wider questions about the use of deception during this type of research. Is misleading or withholding information from participants ethical, or necessary, for optimal research outcomes? Will obtaining informed consent from the student(s) involved alter their behaviour during data collection and compromise results? Researchers and practitioners need to balance the potential benefits of the intervention with the potential costs of not implementing strategies for addressing challenging behaviour (Raines, 2008). Furthermore, awareness of the intrusiveness of the strategy is an important variable to consider. It is also important to consider the perceived power differentials which may influence a student's decision about whether or not to participate in research – particularly within the school environment in which students perceive there may be negative consequences for not engaging with the researcher.

### *Implications for Teachers*

This review has highlighted strategies that can show effectiveness for increasing the positive behaviour of secondary school students in the general educational classroom. Practical strategies teachers can implicate include self-monitoring of teacher-student communication to ensure that verbal interaction with students is clear, positive, and encourages students to feel comfortable requesting help and clarification of teaching instruction. This can be strengthened by checking understanding of instructions. With positive communication, teachers may prevent challenging behaviour from occurring through reminders of expected classroom behaviour in order to maintain a positive learning environment.

Another significant implication for practice identified in this review was the effectiveness that use of positive reinforcement strategies can have on increasing positive student behaviour. Positive reinforcement strategies which can prove effective with secondary school students include the use of a token economy system (where tokens can be exchanged for a reward that is meaningful to the student), tangible rewards, praise, a preferred activity or free time. Although the studies under investigation showed positive results for the use of various positive reinforcers, it is important to highlight the necessity of ensuring that students find the reward reinforcing (Catania, 2000). Teachers can do this by simply asking students what they would like to receive as a consequence, for example, for completing a requested task (which will be practical for use in the classroom). This ensures that the use of positive reinforcement serves its intended purpose.
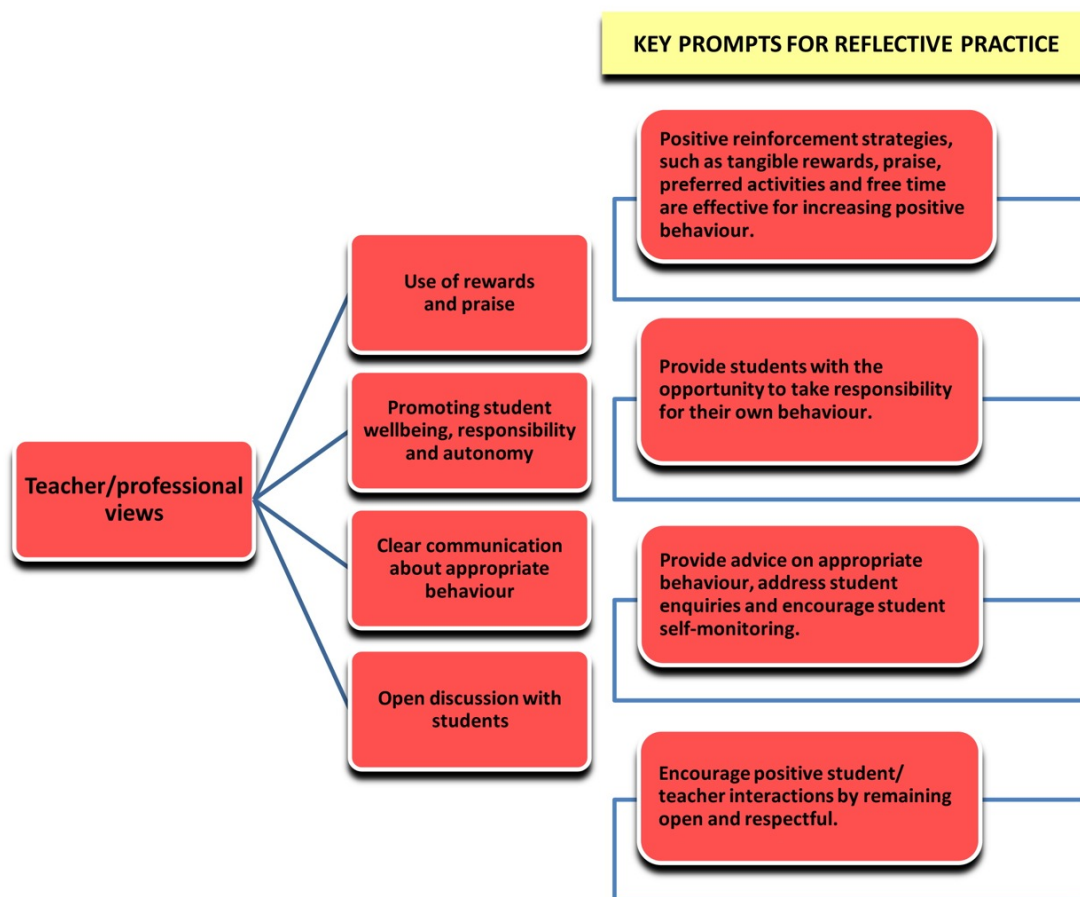
CONCLUSION

It is important to investigate evidence from both a science and a practice perspective, in order to advance an evidence-based culture in which research and practice are interconnected (Gardner, Spencer, Boelter, DuBard, & Jennett, 2012). This helps to maintain a balance of what is deemed to be 'evidence'. Utilising a mixed methods approach to a systematic review has the potential to develop a more in-depth understanding of the phenomenon under investigation

than using either qualitative or quantitative research alone (Hong & Espelage, 2012). Investigating the views of students themselves enriches understanding about effective strategies for increasing positive behaviour from those whom the strategies directly affect. The results of this review can alert general education teachers to practical, cost effective strategies for supporting the positive behaviour of secondary school students with challenging behaviour, and helps to inform evidence-based practice. The importance of clear and positive communication between students and teachers is also made evident and has a number of valuable implications for policy and practice.
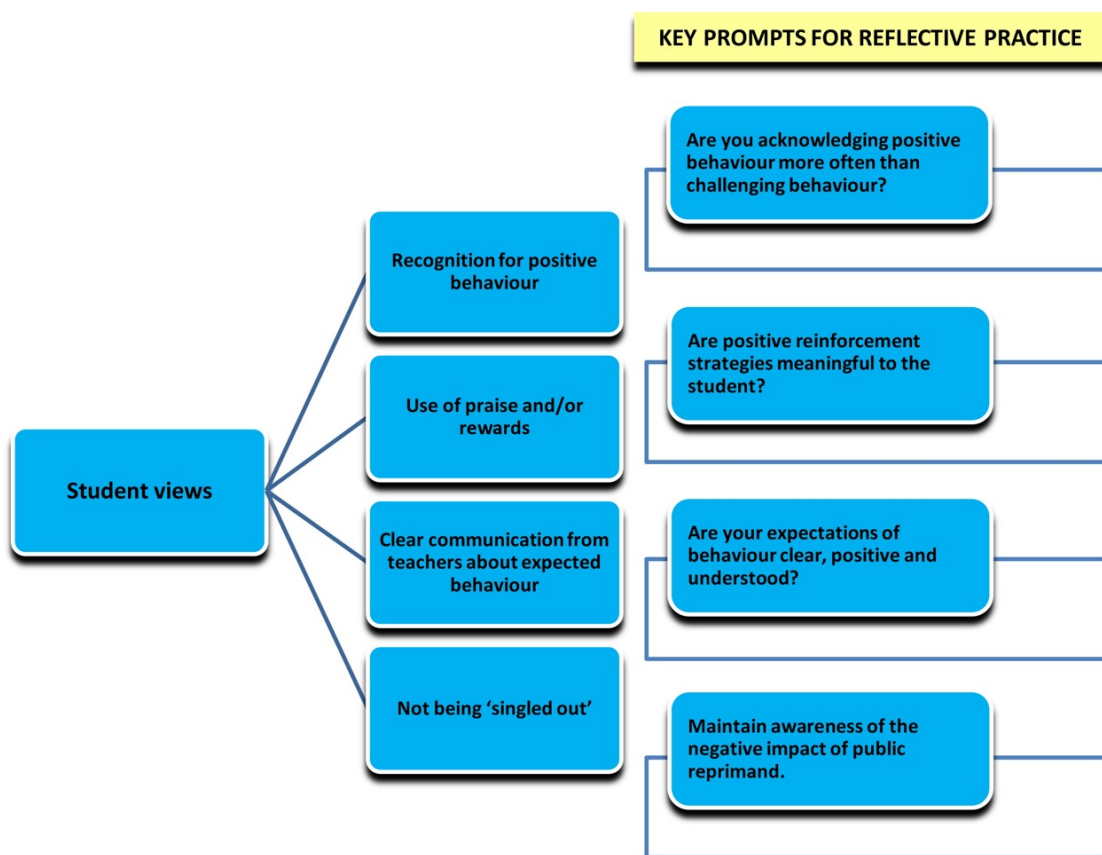
Figure 1 Strategies for increasing positive behaviour in the classroom – Student views

KEY PROMPTS FOR REFLECTIVE PRACTICE

Teacher/professional views

- **Use of rewards and praise**
  - Positive reinforcement strategies, such as tangible rewards, praise, preferred activities and free time are effective for increasing positive behaviour.
- **Promoting student wellbeing, responsibility and autonomy**
  - Provide students with the opportunity to take responsibility for their own behaviour.
- **Clear communication about appropriate behaviour**
  - Provide advice on appropriate behaviour, address student enquiries and encourage student self-monitoring.
- **Open discussion with students**
  - Encourage positive student/teacher interactions by remaining open and respectful.

Figure 2 Strategies for increasing positive behaviour in the classroom – Teacher/professional views

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