Brief Online Classroom Behavior Management Training for Teachers to Address Male Student Behavioural Issue in Chennai, India

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Abstract

When teachers require on-going coaching in the management of students' behaviours, Tele-Education may be used to bridge this competency gap. India's education policy has had considerable success in increasing students, from rural and disadvantaged areas, participating and completing secondary schooling. However, it has also resulted in higher numbers of students with challenging classroom behaviours. Behavior management is not well addressed in the current national plan and little training is provided to teachers. Previous research on students defined the behavioural management issues as well as the skills requirements for teachers to manage and provide positive behavioural management. As a result, three brief online training modules were developed and three real time behavior management case discussions were provided to assist teachers ($n = 10$) to manage challenging behaviours by male students ($n = 50$) in a pre and post intervention single group design. The Tele-Educational intervention increased teacher application of behavior management principles and improved classroom behavior in young males, suggesting potential for the approach to be utilised in other parts of India or in other countries where there is a need for this training.

Keywords

Tele-Education, Teacher, Student, Behaviour-Management

1. Introduction

The occurrence of disruptive and unproductive classroom behaviours is endemic

across schools (Angus, 2009; Hinshaw, 1992; Moffitt, 1993; Zubrick et al. 1997), and classroom management has been associated with these behaviours (Johansen, Little & Akin-Little, 2011; Office for Standards in Education, Children's Services and Skills, 2005). The emotional impact on teachers who are not adequately equipped with classroom behavior management skills may result in a negative impact on their mental health (Dunham, 1981; Sullivan, Johnson, Conway, Owens, & Taddeo, 2012). Thus, strategies that help empower teachers with skills in an era of scarcity of expertise area constant challenge. In India, one potential strategy may involve offering skills via an online distance education modality to increase access to training.

Since independence, the Indian government has been delivering education under a series of five years plans (National Council of Educational Research and Training, n.d.). The current 2013 plan is integrative, combining both government and private schools with a focus on regional school development to increase years of school attendance across the population. India's mean years of education is 5.17 years (National Council of Educational Research and Training, n.d.; Nitin, 2013). A priority area is rural and economically disadvantaged students and the policy has had considerable success with increased participation by these groups.

A pilot study carried out within a rural private educational institution in Chennai, India noted that it is relatively common for high school aged males to act in disruptive ways in the classroom, particularly if their teacher is female (Teoh, Cheong, Eucharista, Edirippulige, & Bambling, 2015). This may in part be explained by some of the cultural values regarding male and female roles as well as difficulty with English language and academic tasks (National Council of Educational Research and Training, n.d.; National Youth Policy, 2014; Nazareth Group of Institutions, 2014; Nitin, 2013; Teoh et al., 2015). The study observed that challenging behaviours in the classroom ranged from attention seeking and distracting behaviours challenging teachers' authority. However, most behavior management challenges were typically at the lower end of this continuum; whereby behaviours were highly influenced by attention and reward from peer groups and the reactions of teachers (National Council of Educational Research and Training, n.d.; National Youth Policy, 2014; Nazareth Group of Institutions, 2014; Nitin, 2013; Rahmi, 2011; Raina, 1993; Teoh et al., 2015; Wilson & Lipsey, 2007). Teachers reported they had little behavior management training and used a variety of methods, typically based on trial and error, or personal preference to manage challenging classroom behaviours. There was also an absence of school based behavior management policy and procedures across the sector. Additionally, teachers prioritised behavior management training and support as a critical skills development area (Teoh et al., 2015). To assist with rectifying the problem, the authors recommended that a behaviour management skills workshop be implemented to train teachers, which due to the location of the school, would be delivered online via an interactive real-time tele-education mode.

There are a variety of behavior management approaches available however, these are typically, based on Australian, British and American models which may make various cultural assumptions. Common behavior management programs include the Incredible Years (Webster-Stratton, 2011), Triple P (Sanders, 2004), and Circle of Security (Dolby, 2007). A cross cultural evaluation of the behavior management literature suggests that there are principles that may be transferable to the Indian context. These are positive behavior management principles and working with adolescent male's strengths and supporting positive teacher-student and peer relationships (Kellam et al., 2008; Wilson & Lipsey, 2007). Other behavioural strategies that appear to have utility include the application of simple rules and expectations, verbal and non-verbal praise, informing students about routines and providing support to adhere to the routines (Kern & Clements, 2007). A positive assessment by students of the relationship with their teacher is considered a key element in contemporary behavior management approaches. In the mental health literature, a positive working alliance predicts motivation and engagement and intervention outcomes, and the importance of a positive interpersonal relationship with the teacher is acknowledged in the behavioural management literature (Kellam et al., 2008; Rahmi, 2011; Raina, 1993; Wilson & Lipsey, 2007). Contemporary behavior management research prioritises a school wide approach where all teachers apply the same strategies and the school provides resources dedicated to support teachers in applying the behavior management (Kellam et al., 2008; Nazareth Group of Institutions, 2014; Rahmi, 2011; Raina, 1993; Wilson & Lipsey, 2007).

The global growth of efficient digital communication systems allows educational skill-based programs to be offered by experts from any location in the form of Digital-Education. This approach is typically used to provide services and training from urban to rural areas (Smith et al., 2009), and the international take up of remotely delivered Digital-Education is rapidly expanding which means that programs can be offered from different countries to that of the recipients. Literature related to the distance education using digital technologies is fast growing with research occurring over a wide range of practice disciplines (Eom & Ashill, 2016; Gambadauro & Torrejón, 2013; Kuo, Walker, Schroder, & Belland, 2014). One important area where digital web-based education programs has shown efficacy is providing student mental health programs to teachers as pre-recorded seminars (Pereira, Wen, Miguel, & Polanczyk, 2015), however these may not be as interactive as actual Tele-Education programs. Tele-education is an alternative to offering face-to-face skill based training, and may potentially be an effective means of delivering a skill based courses, as evidenced by a course on-neonatal resuscitation (Jain, Agarwal, Chawla, Paul, & Deorari, 2010), which demonstrated only marginal differences on knowledge acquisition and skill between a Tele-education and Face-to-Face group. A recent search of the electronic databases on the usage of Tele-Education or E-Learning to instruct school teachers in classroom management did not reveal any published articles. The

program developed for this study used a variety of pre-recorded, local facilitation and live digital supervision sessions with teachers in Chennai to better model a typical workshop experience with the goal of overcoming some of the limitations found for pre-recorded learning seminars. Our pilot study revealed confluence with the concepts discussed above and the teacher feedback which informed the online training and supervised practice intervention for behavioural management with male students (Teoh et al., 2015).

2. Research Questions

This study was developed based on concerns about student behavioral problems at a rural school in India. Research suggested that behavioural management strategies offered to teachers would assist with reducing the problematic behaviours. Given that the school was in a rural area, it was decided that on-line interactive training would be used to deliver the behaviour management skills to teachers. In order to ascertain the effectiveness of this program, two main hypotheses guided this study:

1) There would be an increase in teachers' classroom management behaviors after six hours of online interactive training delivered over six weeks, as rated by self-reports and their students.

2) There would be a significant reduction in the frequency of behavior incident reports post intervention compared to baseline, post online interactive training.

3. Materials and Methods

3.1. Procedure

This study used a single group pre and post intervention design at a private institution in Chennai, India. Nazareth Higher Secondary School is a private high school and offers low cost fees to rural and disadvantage students. All teacher participants (n = 10) completed three 1-hour pre-recorded online classroom behavior management modules followed by an online face-to-face discussion session for each lecture. Following the 3 lectures and discussions, an additional 1.5 hour discussion session to review specific case studies and behaviour management techniques that the participants used. This was carried out over 6 weeks and developed for this study based on the pilot work with this group of teachers (Teoh et al., 2015).

The program was delivered electronically through University in Queensland, Australia, directly to the teachers in Chennai who attended as a group. In Chennai, there was an appointed teacher facilitator who conducted a pre-determined post session discussion with the trainee group to consolidate learnings and consider the practical application to actual behavior management cases. At the completion of the three pre-recorded online sessions participants were then provided with three real time group supervision style skype discussion sessions with the presenters where they discussed behavior management cases and the application

of behavior management principles and dealing with challenges over an additional four week period.

This mixed delivery approach was designed to ensure some degree of interaction between presenter and learner as well as consolidation and application of learnings (Holmberg, 1989). This approach also allowed flexibility to suit the individual needs and preferences of participants (Sims, 2003) through presenting case studies and live group discussions with the presenter, while having access to pre-recorded lectures and PowerPoints. Furthermore, "deep and meaningful formal learning" was achieved through forms of interaction that are student-teacher, student-student and student-content focused (Anderson, 2003).

A variety of measures were used to measure student behavioural change, and teacher's usage of classroom management skills. Observations of behaviour change were obtained from both teachers and students. Where teacher's class behaviour strategies were concerned, information was obtained from both the teacher and the student. Measurement points were pre- and post-intervention using the *Behavior Management Workshop Outcome Scale* (*BMOS*: *teacher completed*), the *Teaching Behavior Questionnaire* (*TBQ*: *student completed*) pre and post-intervention. Measures of student behaviour was carried out using the *Teacher Observations of Classroom Adaptation* (*TOCA*: *teacher completed*), and the *Observed Classroom Behavior Scale* (*OCBS*).

3.2. Workshop

The presenters were two Australian Psychologists with post-graduate Clinical Psychology qualifications, and more than 10 years of experience with working with school-aged students with non-compliant behaviours. Both had previously researched the area of school-aged students' behaviours, and taught on the subject at tertiary level.

The workshop was presented as a three formal pre-recorded 1-hour lectures, which was followed by an online face-face discussion session. An additional 1.5 hour discussion session was run to review specific case studies and behaviour management techniques that the participants used. In total, this amounted to 6 hours over 6 weeks of interaction between facilitator and participants. The sessions were delivered verbally supported by PowerPoint slides, and accompanied by learning plans, with discussion questions to reflect on at the end of each session. The content of the lecture component included needs of teachers and students, characteristics of problem behaviours, predictors of problem behaviours (i.e., social learning, interpersonal factors, imitation, social acceptance, impulsivity, emotional issues), behavioural techniques for increasing positive behaviours (i.e., praise, rules, clear instructions) and reducing negative behaviours (i.e., ignoring, realistic consequences, enforcement of rules), and characteristics of learning disorders (i.e., attention deficits). The workshop was largely based on Operant Conditioning principles described in early child behavior modification programs described by Buehler, Patterson, & Furniss (1966), similar to the theo-

retical principles used by programs such as the Triple P and Incredible Years programs (Sanders, 2004; Webster-Stratton, 2011). To facilitate real time interactive sessions between the Australian workshop presenters and Chennai participants, at the conclusion of the first three sessions, participants were asked to submit three typical case studies of behavioural problems within the school. These cases were discussed using Socratic questioning, and the online tutor regularly encouraging the group to re-visit the theories of behavior, and techniques suggested in order to guide the participants towards trying out various behavioural techniques. Where potential behavioural problems as a result of learning disabilities and mental health issues were identified, the tutor would suggest that the participants refer the student to see a local Psychologist within their district for a more in-depth assessment.

3.3. Instruments

3.3.1. Behavior Management Workshop Outcomes Scale

The Behavior Management Workshop Outcomes Scale (BMOS) was developed for the purposes of this research project and assessed participant knowledge, skills and confidence in using behavior management techniques pre and post-intervention. Pre-intervention scale consisted of three self-rating and two applied case-study questions which required providing a written application of behavior management principles. The three questions were "How do you rate your knowledge of behaviour management principles to manage challenging classroom behaviours?", "How do you rate your skill in applying behavior management principles to manage challenging classroom behaviors?" and "How do you rate your confidence in using behaviour management principles to manage challenging classroom behaviors?" The responses were provided on a rating scale of 1 to 6 (i.e., 1 = "Almost None"; 3 = "Some"; 6 = "Very Good"). The post-intervention scale replicated the pre-intervention scale.

3.3.2. Teaching Behavior Questionnaire

The Teaching Behavior Questionnaire (TBQ; Pössel et al., 2013) consists of 37 questions grouped into four subscales and measures student's perception of their teachers. The scale *Instructional Behavior* indicates how a teacher manages the classroom and responds to individual students' needs (e.g. "My teacher uses examples that I understand"). *Negative Teaching Behavior* indicates behaviours that students perceive as counter-productive or unpleasant (e.g. "My teacher threatens to punish me when I misbehave"). *Socio-Emotional Behavior* indicates how well the teacher relates with students on a personal level (e.g. "My teacher talks with me about my interests"). *Organisational Behavior* indicates how the teacher facilitates smooth transitions between activities and minimizes disruptions (e.g. "My teacher takes away a privilege if I abuse it"). The internal consistencies of the subscales ranged from .77 to .95. Higher scores indicate more positive behaviours for the *Instructional Behavior*, *Socio-Emotional Behavior*, and *Organisational Behavior* subscales, and more negative behaviours on the *Nega-

tive Teaching Behavior subscale.

3.3.3. Teacher Observations of Classroom Adaptation

The Teacher Observations of Classroom Adaptation (TOCA; Koth, Bradshaw, & Leaf, 2009) consists of four subscales measuring each student's level of *Aggressive and Disruptive Behaviours* (e.g. fights), *Concentration Problems* (e.g. pays attention), *Prosocial Behaviours* (e.g. shows empathy), and *Emotion Regulation* (i.e., stops and calms down when angry or upset). Teachers indicated the extent to which each student displayed these behaviours using a 6-point Likert scale (1 = *never* to 6 = *almost always*). The questionnaire was completed for each student by their classroom teacher. Internal consistency for the subscales ranges from .89 − .96 (Koth et al., 2009). Higher scores are indicative of higher levels of reported *Aggressive and Disruptive Behaviours*, *Concentration Problems*, *Prosocial Behaviours*, and *Emotion Regulation*.

3.3.4. Observed Classroom Behavior Scale

The Observed Classroom Behavior Scale (OCBS) was developed for this study and was used with the participating students (n = 50). Each student evaluated by teachers at pre and post-intervention across 12 category criteria, e.g. "refusing to work", "throwing items" on a 4-point scale for frequency of engaging in disruptive behaviours across these categories. Scores of one point indicate students never engaged in the behavior, through to a score of four points where students often engaged in the behavior. Student participants were rated at two intervals; pre intervention and one month after study completion. Internal consistency for the total scale is .91, while subscales ranged from .92 to .75.

3.4. Data Analysis

Data from measures were tested for assumptions for comparison of average scores and met assumptions with the expected distribution and an absence of outlining scores. This was confirmed with a visual inspection of scatter plots of all participant scores. A repeated measures t-test was conducted pre and post intervention with students and teacher participants. Estimates of the sample size required to achieve a power of .8, and a medium effect size of at least .5 indicated that the subject group needed to be at least 26 subjects to compare mean scores pre and post intervention (Jones, Carley, & Harrison, 2003).

3.5. Sample Characteristics

Subjects were recruited from a private school with a strong focus on improving access from students from rural and disadvantaged areas. Therefore the student group may be considered representative of the public system in India. The ten teachers who participated in this study provided informed consent and were all female aged between 23 and 51 years (M = 38), and years of service as a teacher at the school was M = 5.5 years with only two participants having one year or less teaching experience. Prior to working at the school, teachers had 1 to 16

years of experience. Teachers in this group taught female and male students aged between 13 to 15 years. Total numbers of male and female students taught by these teachers during 2016 was 2034 students (800 male students) and there were 260 behavioural incidents formally recorded by the school relating to male student behavior. The typical focus of the incident reports was disruptive, difficult and disrespectful behavior towards teachers or other students. The age of the teacher and years of teaching experience was not significantly related to frequency of classroom behavioural incidents (p = .129). Fifty students participated in this study aged from 13 to 16 years (M = 14.6) and were randomly selected from the school's behaviours incident records.

4. Results

4.1. Workshop Training: Teacher Behaviors

At pre-intervention, teachers provided a variety of responses to the practical behavior management scenarios using the BMOS. Two teachers prioritising understanding and interpersonal strategies as important, and the remainder teachers recommended strategies are not consistent with positive behavioural management principles such as exclusion, confrontation, and class wide consequences. Teachers rated themselves moderately on the three scaled, regarding knowledge of behavior management (M = 4.21), applying behavior management to the classroom (M = 4.50), and confidence in using behavior management (M = 4.21; See Table 1).

The training post-test revealed high conformity to positive behavior management principles in the applied case study questions, with responses being relationally orientated with a positive behavioural focus, and the acknowledgement of a variety of student needs, as well as the need to address issues such as motivation, boredom, and concentration as a teaching/behavior management strategy. The scores indicated that all teachers were prior to the online workshop already confident, had above average knowledge and were already using some techniques. Following the online workshop, the teachers reported that there was no change in their knowledge of behavior management (M = 4.21) in the classroom, however, they rated themselves higher on applying behavior management (M = 5.50), and having greater confidence in using behavior management (M = 5.21) (See Table 1).

Teacher's behaviors were also rated by their students. TBQ student scores

Table 1. Teacher's responses to the behavior management workshop using BMOS (N = 10).

Workshop Comments	Mean Score	
	Pre-Intervention	Post-Intervention
Knowledge of behavior management	4.2	4.2
Applying behavior management to the classroom	4.5	5.5
Confidence in using behavior management	4.2	5.2

were significant for the *Instructional Behaviour* subscale (*M* = 3.27, *SD* = .30), *t*(49) = 3.08, *p* = .003), with a medium effect size (r = .40). This would suggest that students perceived that teachers used less instructional behaviours after completing the online workshop. Thus, it would appear that after the online workshop, teacher's used less teaching behaviours that were instructionally supportive (e.g., providing opportunities for students to respond, to choose, or to receive positive feedback). The remaining subscales were not significant; *Socio-Emotional Behaviour*, *Negative Teaching Behaviour*, and *Organisational Behaviour* (See Table 2).

4.2. Student Behaviour Measures

TOCA scores, measuring students behaviors as rated by teachers, demonstrated a significant reduction in *Aggressive and Disruptive Behaviours* from baseline (*M* = 2.6, *SD* = 1.28), *t*(49) = 2.20, *p* = .033 and *Concentration Problems* (*M* = 3.94, *SD* = 1.84), *t*(49) = .99, *p* = .000 compared to pre-intervention scores. The effect sizes varied, with changes in Concentration problems being the largest (r = 0.58), and Aggressive and the other two variables being somewhat smaller effect sizes. However, there was no significant difference in score with regards to *Prosocial Behaviour* scores (*M* = 3.9, *SD* = 1.13), *t*(49) = 1.91, *p* = .061 (See Table 3).

Analyses of the pre- and post-intervention data of the teacher's perceptions of the student's classroom behaviours, using the OCBS would suggest that there are general reductions in student's disruptive behaviours across all items (see Table 4). The largest reductions being in the area of *refusing to follow directions* (difference = 76 points) and *attention-seeking behaviours* (difference = 74 points), and the smallest reductions being in the areas of *sleeping in class* (difference =

Table 2. Pre and post behaviour change using TBQ (N = 50).

Teacher's Behaviours	Pre-intervention	6 months post intervention	*t*-value	significance level	Effect size (r)
Instructional Behaviour	5.5	3.0	3.08	.003	.40
Negative Teaching Behaviour	2.4	2.4	1.04	.093	.15
Socio-Emotional Behaviour	2.8	2.7	1.71	.229	.23
Organisational Behaviour	3.2	3.2	.66	.510	.09

Table 3. Pre- and post-intervention behaviour change using TOCA (N = 50).

Classroom Adaptation Subscales	Pre-intervention	6 months post-intervention	*t*-value	significance level	Effect size (r)
Aggressive and Disruptive Behaviours	3.9	2.6	2.20	.033	.29
Concentration Problems	3.6	2.2	4.99	.000	.58
Prosocial Behaviours	3.6	3.9	1.91	.061	.26

Table 4. Pre- and post-intervention behavior change; student frequency of disruptive behavior checklist using OCBS (N = 50).

Observations of Classroom Adaptation Items	Mean scores at pre-intervention	Mean scores at 6 months post-intervention	Difference
Refusing to work	162	105	−57
Throwing items	168	116	−52
Disrupting with noises	165	102	−63
Teasing classmates	156	107	−49
Making inappropriate gestures	160	117	−43
Sleeping in class	165	126	−39
Attention-seeking behaviours	176	102	−74
Destroying property	161	127	−34
Talking without permission	162	98	−64
Refusing to follow directions	173	97	−76
Using physical aggression	161	121	−40
Moving out of assigned area	165	101	−64

39 points), *destroying property* (difference = 34 points) and *using physical aggression* (difference = 40 points).

5. Conclusion and Discussion

This study was set up to assess the impact of three brief online training modules and three real-time behavior management case discussions in assisting teachers with managing challenging male student behaviours.

Hypothesis 1 was partially supported as teachers' reported some changes on measures of skills and confidence using the behavioural management model. The data indicate that there were conflicting reports on the changes in teacher's behaviours. Whilst teachers reported greater use of, and confidence in, applying behavioural management skills, the students did not report marked changes in teacher's behaviours other than a decrease in instructional or teaching behaviours. From a knowledge and understanding perspective, the case based post-test questions demonstrated that whilst participants' reported that their knowledge of behavioural management remained unchanged, they did report applying more of these principles post online intervention, and that they had developed an acceptable understanding of behavior management principles and how to apply them. The lack of increase in actual knowledge of theoretical principles of behavioural management is not surprising, considering that the theoretical principles covered were mainstream principles. Despite this, the increase in confidence in applying of behaviour management principles, may be attributed to having the opportunity to discuss the principles and strategies, with the workshop facilitators and fellow-participants, this providing a needed boost or encouragement to use the skills either, more often, or perhaps in a more refined

manner.

The online delivery method followed by facilitated discussion was evaluated as an appropriate methodology by teachers in India. Likewise, the three remotely delivered real-time sessions where teachers could discuss actual behavior management cases in a group setting was perceived as developing applied skills. This finding provides some support for the efficacy of an interactive online distance learning approach (Anderson, 2003). The direct benefits for India may be that online training can be delivered in decentralised way from a centralised provider to teachers in various locations. This may reduce costs for each region or school that typically must purchase their own training or send staff to workshops in other places.

Students only reported some changes in one classroom management score. Using the TBQ, students scored their teachers lower for the *Instructional Behavior* subscale. Perhaps, a by product of workshop participation was a greater awareness of student behaviours and behaviour management, thus resulting initially in more focus on classroom management, and less emphasis on teaching methodology (i.e., instructional behaviour). It is of interest that students did not perceive changes in *Negative Teaching Behavior* (unpleasant interactions) or *Social Emotional Behavior* (how teachers relate to them personally), and *Organisational Behaviours* (minimising disruption) with their teachers. This may represent a lack of sensitivity in the measurement device, or a weakness in the training and identification of the important areas to focus on in future training. However, we think it most likely that it is a result of insufficient development of the interpersonal relationship with students as the central behavior management strategy.

Hypotheses 2 was partially supported as teachers reported improvement in some behavior management scores. TOCA post-scores demonstrated a significant reduction in disruptive student behaviours and concentration problems compared to pre-intervention scores, and similar results were observed on the OCBS post-scores. This suggests that as teachers applied the behavioural management content learned in the online workshops they observed a direct benefit for classroom management. These findings are consistent with previous reviews of the application of behavioural management principles and disruptive student behavior within the classroom (Kern & Clemens, 2007). The most important test for any behavior management intervention is whether it makes a practical difference to the frequency of disruptive behaviours. The reduction in disruptive classroom behavior across all categories of behavior management indicates an effect for the training. It also provides evidence that the intervention had a school wide effect on behavior management. Frequency of disruptive behavior may be reduced further over time with greater positive behavior management. It may be prudent to provide teachers with top up sessions on behavior management with a focus on the actual management of challenging cases. The results of this study indicate areas that should be included in any top up training.

Further benefits may be from the school wide approach as all teachers were utilising the same resource to create consistency in application. However, there was only a modest positive trend towards the TOCA's *Prosocial Behavior* scores. This indicates that while there was a reduction in student negative behavior there was not a significant increase in prosocial behaviours among students. The development of prosocial behaviours is considered important given that when anti-social behaviours decrease, positive reinforcement is provided to increase prosocial behavior. To sustain new behaviours the student then progresses towards internal reinforcement. Once internal reinforcement of new behaviours is established, behavior change is thought to be more permanent; whereas external reinforcement may result in a return to baseline behaviours when the reinforcement stops. This suggests that the behavior change found in this study was a result external teacher management rather than student motivated change. Being a relatively brief study there may have been insufficient time available to develop prosocial behavior that require student-motivated change regarding personal values and involvement in forms of social skills training (Bandy & Moore, 2011; Kidron & Fleishman, 2006; Lochman, Coie, Underwood, & Robert, 1993).

Contemporary behaviour management is integrated into the general teaching approach and utilises the young person's peer and family systems to effect positive behaviour change. Results indicate that teachers may have strategically adapted their classroom management approach toward prosocial classroom management activities and reduced classroom management strategies perceived as problematic.

The results found in this study are similar to other studies which use formalized training programs to increase the teacher's knowledge and ability to manage classes in an effective manner (Piwowar, Thiel, & Ophardt, 2013; Korpershoek, Harms, de Boer, van Kuijk, & Doolaard, 2016). Even brief programs for teachers that focused on managing the overall classroom environment have had an impact on reducing problematic behavior with more disruptive students (Snyder et al., 2011). However, these studies have focused primarily on pre-school children (Snyder et al., 2011; Piwowar et al., 2013). The most robust finding from this study was the increase in appropriate classroom management strategies with a reduction in unhelpful classroom strategies. This is an area that could perhaps be investigated in greater detail in subsequent studies using E-Learning and Tele-Education teaching strategies to bring about behavioural changes in students.

Observation of the magnitude of differences in problematic student behaviours, pre- and post-intervention, would suggest that techniques covered in this brief online workshop such as *giving clear instruction*, *ignoring inappropriate behaviours*, and *modelling and re-enforcing appropriate behaviours*, would be suited for dealing with behaviours such as *attention-seeking* and *refusing to follow directions* where the largest behavior changes were observed. The areas of least behavior change such as *sleeping in class*, *destroying property*, and *using*

physical aggression, are those behaviours that often have causes that are beyond what a teacher could manage in influence during teaching time. These include fatigue, socialisation and values problems, modelling family aggressive behavior, and poor social skills which all require additional intervention.

The design of this study has several limitations. Firstly, the limitations relate to teacher sample size and context as the research was conducted at one school. However, student sample size was adequate and a representative demographic. The small teacher sample means that conclusions should be interpreted with some caution as the teachers who volunteered to participate in the study were reasonably experienced, highly motivated to participate in the study, and were committed to improving behavior management. Likewise, the school principle and senior administrators also provided a high level of support to teachers and the research project. It is possible that different results may be achieved with different teachers in different school contexts where the level of commitment and motivation may vary. The lack of a control group and randomisation was also a limitation. It was not feasible to employ a full empirical trial protocol in this study, however further investigation of this topic would be enhanced by a multisite randomised controlled trial. Furthermore, another limitation of this study relates to the lack of a measure of the teacher's behaviour, by an independent person. Whilst the results from the self-reports of teachers and of the students suggests some changes in teacher behaviour, a rating by an independent observer, using a quantitative measure, would be recommended in future study trials. Where the efficacy of online training, as opposed to face-to-face training is concerned, a future study may consider having two groups where one group received online training and the other received face-to-face training.

Effectiveness in program delivery may also be dependent on teacher variables such as collaborative relationships with other teachers, providing clear program roadmaps, increasing self-efficacy, and contextualising the learning process (Webster-Stratton, Reinke, Herman, & Newcomer, 2011). Quite apart from actual reduction of student misbehaviour, there are also some potential positive by-products of the trial which deserve further investigations. The implications of understanding teacher's ability to manage their classrooms is important, given that within Asian countries, the ability to management classroom behaviours is perceived as an important marker of competency amongst new teachers (Goh, 2013), and is thus a topic that needs to be taken seriously in order to support the developing professional identify of new teachers. Furthermore, encouraging teacher education programs that focus on classroom management is important given the flow-on effects from improved student behavior, and associated variables such as improved academic performance (Korpershoek et al., 2016).

Based on the results of this study there is preliminary evidence to suggest that a brief online Tele-Education behavior management training package for teachers to manage adolescent male classroom behavior in India has brought about some changes in student behaviours. However, conflicting results from teachers

and students suggest that the mechanism of teacher behaviour change by which the reductions in student negative behaviors occurred is unclear and warrants further investigations. Despite this, there is much potential for the Tele-Educational approach of classroom behaviour management instruction to be investigated and trialled utilised in other parts of India or in other rural areas where there is a need for this training. Future studies may replicate this methodology with the suggested improvements in terms of a multi-school design, multi-informant, and multi-delivery approach across different rural regions of India.

Acknowledgements

We would like to thank Nazareth Higher Secondary School, Chennai, India for their support of this project.

Statement of Human Rights

This study received ethical approval from the Medical Research Ethics Committee (MREC) University of Queensland, Australia, within the guidelines of the National Statement on Ethical Conduct in Human Research. Ethics approval number 2014000585. All participants provided informed consent for this study and parental consent was obtained for student participants.

Conflict of Interest

The authors declare that they have no conflict of interest.

References

Anderson, T. (2003). Getting the Mix Right Again: An Updated and Theoretical Rationale for Interaction. *International Review of Research in Open and Distance Learning, 4,* No. 2. http://www.irrodl.org/index.php/irrodl/article/view/149/230 https://doi.org/10.19173/irrodl.v4i2.149

Angus, M. J. (2009). *The Pipeline Project: Trajectories of Classroom Behaviour and Academic Progress: A Study of Engagement with Learning.* Mount Lawley, Australia: Edith Cowan University.

Bandy, T. & Moore, K. A. (2011). *What Works for Promoting and Enhancing Positive Social Skills: Lessons from Experimental Evaluations of Programs and Interventions.* Child Trends Fact Sheet #2011-07. https://www.childtrends.org/wp-content/uploads/2011/03/child_trends_2011_03_02_R B_WWSocialSkills.pdf

Buehler, R. E., Patterson, G. R., & Furniss, J. M. (1966). The Reinforcement of Behavior in Institional Settings. *Behavior Research and Therapy, 4,* 157-167. https://doi.org/10.1016/0005-7967(66)90002-7

Dolby, R. (2007). *The Circle of Security: A Roadmap to Building Healthy Relationships.* Canberra, Australia: Early Childhood Australia.

Dunham, J. (1981). Disruptive Pupils and Teacher Stress. *Journal of Educational Research, 23*, 205-213. https://doi.org/10.1080/0013188810230306

Eom, S. B., & Ashill, N. (2016). The Determinants of Students' Perceived Learning Outcomes and Satisfaction in University Online Education: An Update. *Decision Sciences*

Journal of Innovative Education, 14, 185-215. https://doi.org/10.1111/dsji.12097

Gambadauro, P., & Torrejón, R. (2013). The "Tele" Factor in Surgery Today and Tomorrow: Implications for Surgical Training and Education. *Surgery Today, 43,* 115-122. https://doi.org/10.1007/s00595-012-0267-9

Goh, P. S. C. (2013). Conceptions of Competency: A Phenomenographic Investigation of Beginning Teachers in Malaysia. *The Qualitative Report, 18,* 1-16. http://nsuworks.nova.edu/tqr/vol18/iss20/2

Hinshaw, S. P. (1992). Externalizing Behavior Problems and Academic Underachievement in Childhood and Adolescence: Causal Relationships and Underlying Mechanisms. *Psychological Bulletin, 111,* 127-155. https://doi.org/10.1037/0033-2909.111.1.127

Holmberg, B. (1989). *Theory and Practice of Distance Education*. London: Routledge.

Jain, A., Agarwal, R., Chawla, D., Paul, V., & Deorari, A. (2010). Tele-Education vs Classroom Training of Neonatal Resuscitation: A Randomized Trial. *Journal of Perinatology, 30,* 773-779. https://doi.org/10.1038/jp.2010.42

Johansen, A., Little, S. G., & Akin-Little, A. (2011). An Examination of New Zealand Teachers' Attributions and Perceptions of Behaviour, Classroom Management and the Level of Formal Teacher Training Received in Behaviour Management. *Kairaranga, 12,* 3-12.

Jones, S. R., Carley, S., & Harrison, M. (2003). An Introduction to Power and Sample Size Estimation. *Emergency Medicine Journal, 20,* 453-458. https://doi.org/10.1136/emj.20.5.453

Kellam, S., Brown, H. C., Poduska, J., Ialongo, N., Wang, W., Toyinbo, P., Wilcox, J. C. et al. (2008). Effects of a Universal Classroom Behavior Management Programme in First and Second Grades on Young Adult Behavioural, Psychiatric, and Social Outcomes. *Drug and Alcohol Dependence, 95,* S5-S28. https://doi.org/10.1016/j.drugalcdep.2008.01.004

Kern, L., & Clemens, N. H. (2007). Antecedent Strategies to Promote Appropriate Classroom Behavior. *Psychology in the Schools, 44,* 65-75. https://doi.org/10.1002/pits.20206

Kidron, Y., & Fleischman, S. (2006). Promoting Adolescents' Prosocial Behavior Educational Leadership. *Research Matters, 63,* 90-91. http://www.ascd.org/publications/educational-leadership/apr06/vol63/num07/Promoting-Adolescents'-Prosocial-Behavior.aspx

Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S. (2016). A Meta-Analysis of the Effects of Classroom Management Strategies and Classroom Management Programs on Students' Academic, Behavioral, Emotional, and Motivational Outcomes. *Review of Educational Research, 86,* 643-680. https://doi.org/10.3102/0034654315626799

Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2009). Teacher Observation of Classroom Adaptation—Checklist: Development and Factor Structure. *Measurement and Evaluation in Counselling and Development, 42,* 15-30. https://doi.org/10.1177/0748175609333560

Kuo, Y. C., Walker, A. E., Schroder, K. E., & Belland, B. R. (2014). Interaction, Internet Self-Efficacy, and Self-Regulated Learning as Predictors of Student Satisfaction in Online Education Courses. *The Internet and Higher Education, 20,* 35-50. https://doi.org/10.1016/j.iheduc.2013.10.001

Lochman, J. E., Coie, J. D., Underwood, M. K., & Robert, T. (1993). Effectiveness of a So-

cial Relations Intervention Program for Aggressive and Nonaggressive, Rejected Children. *Journal of Consulting and Clinical Psychology, 61,* 1053-1058.
https://doi.org/10.1037/0022-006X.61.6.1053

Moffitt, T. E. (1993). Adolescence-Limited and Life-Course Persistent Antisocial Behavior: A Developmental Taxonomy. *Psychological Review, 100,* 674-701.
https://doi.org/10.1037/0033-295X.100.4.674

National Council of Educational Research and Training (n.d.).
http://www.ncert.nic.in/html/pdf/FinalNCERT_ProfileBrochures.pdf

National Youth Policy (2014). *Ministry of Youth Affairs in India.*
http://yas.nic.in/sites/default/files/NYP%20Brochure.pdf

Nazareth Group of Institutions (2014). *Staff Survey of Training Priorities.* Chennai: Author.

Nitin (2013). *What Is Rashtriya Uchchatar Shiksha Abhiyaan (RUSA) One India Education.*
https://www.careerindia.com/news/2013/11/13/what-is-rashtriya-uchchatar-shiksha-abhiyaan-rusa-007505.html

Office for Standards in Education, Children's Services and Skills (Ofsted) (2005). *Managing Challenging Behavior: Better Education and Care.* Document HMI 2363.
http://www.ofsted.gov.uk

Pereira, C. A., Wen, C. L., Miguel, E. C., & Polanczyk, G. V. (2015). A Randomized Controlled Trial of a Web-Based Educational Program in Child Mental Health for School Teachers. *European Child and Adolescent Psychiatry, 24,* 931-940.
https://doi.org/10.1007/s00787-014-0642-8

Piwowar, V., Thiel, F., & Ophardt, D. (2013). Training Inservice Teachers' Competencies in Classroom Management. A Quasi-Experimental Study with Teachers of Secondary Schools. *Teaching and Teacher Education, 30,* 1-12.
https://doi.org/10.1016/j.tate.2012.09.007

Pössel, P., Rudasill, K. M., Adelson, J. L., Bjerg, A. C., Wooldridge, D. T., & Black, S. W. (2013). Teaching Behavior and Well-Being in Students: Development and Concurrent Validity of an Instrument to Measure Student-Reported Teaching Behavior. *The International Journal of Emotional Education, 5,* 5-30.

Rahmi, U. (2011). *The Associations between Classroom Climate and Teacher Student Interpersonal Behavior in Primary Science.*
http://www.scribd.com/doc/48856530/The-Associations-between-Classroom-Climate-and-Teacher-Student-Interpersonal-Behavior-in-Primary-Science-Ulfa-Rahmi

Raina, V. K. (1993). *Teacher Educators across Cultures: Perspectives from India, United Kingdom and United States.* New Delhi: Educational Research and Innovations Committee, National Council of Educational Research and Training.

Sanders, M. R. (2004). *Every Parent: A Positive Approach to Children's Behaviour* (Rev. ed.). Melbourne: Penguin.

Sims, R. (2003). Promises of Interactivity: Aligning Learner Perceptions and Expectations with Strategies for Flexible and Online Learning. *Distance Education, 24,* 87-104.
https://doi.org/10.1080/01587910303050

Smith, C. E., Boateng, B. A., Fontana-Chow, K., Azzie, G., Pietrolungo, L., Cheng-Tsallis, A., Tallett, S. et al. (2009). Tele-Education: Linking Educators with Learners via Distance Technology. *Pediatric Annals, 38,* 551-556.
https://doi.org/10.3928/00904481-20090918-10

Snyder, J., Low, S., Schultz, T., Barner, S., Moreno, D., Garst, M., Schrepferman, L. et al.

(2011). The Impact of Brief Teacher Training on Classroom Management and Child Behavior in At-Risk Preschool Settings: Mediators and Treatment Utility. *Journal of Applied Developmental Psychology, 32,* 336-345.
https://doi.org/10.1016/j.appdev.2011.06.001

Sullivan, A., Johnson, B., Conway, R., Owens, L., & Taddeo, C. (2012). *Behaviour at School Study: Technical Report 1.* Adelaide: University of South Australia.
http://www.bass.edu.au

Teoh, H. J., Cheong, J., Eucharista, Edirippulige, S., & Bambling, M. (2015). Teacher Perception of Classroom Challenging Behaviors in Male Student and Behaviour Management Responses: Chennai, India. *Nazareth Educational Pedagogy and Educational Research, 2,* 19-28.

Webster-Stratton, C. (2011). *The Incredible Years: Parent, Teacher and Children's Training Series.* Seattle, WA: Incredible Years Inc.

Webster-Stratton, C., Reinke, W. M., Herman, K. C., & Newcomer, L. L. (2011). The Incredible Years Teacher Classroom Management Training: The Methods and Principles That Support Fidelity of Training Delivery. *School Psychology Review, 40,* 509-529.

Wilson, S., & Lipsey, M. (2007). School Based Interventions for Aggressive and Disruptive Behavior: Update of a Meta-Analysis. *American Journal of Preventive Medicine, 33,* S130-S143. https://doi.org/10.1016/j.amepre.2007.04.011

Zubrick, S. R., Silburn, S. R., Gurrin, L., Teoh, H., Shepherd, C., Carlton, J., Carlton, J. et al. (1997). *Western Australian Child Health Survey: Education, Health and Competence.* Perth, WA: Australian Bureau of Statistics and the TVW Telethon Institute for Child Health Research.