The impact of positive behavioural support training on staff and the people they support

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Abstract

Background: Staff training is used as part of the implementation of policy initiatives designed to decrease the use of restrictive interventions, and increase the safety and quality of outcomes for persons with disability who exhibit challenging behaviours. However, the effectiveness of such training on a sector-wide scale remains unknown.

Method and materials: Disability staff participated in a training program based on the principles of PBS, which included elements of good practice as recommended in the Behavior Support Plan-Quality Evaluation II. Behaviour support plan (BSP) quality and client outcomes were evaluated and compared with a matched control group.

Results: Evaluation outcome data showed an improvement in the BSP quality and client mental health, reductions in maladaptive behaviours and restrictive intervention use.

Conclusion: A structured staff training intervention in PBS can meet staff training needs and result in positive client outcomes. Further research should ascertain the factors that might mediate such effects.

Keywords: positive behavioural support (PBS); restrictive intervention; intellectual disability; training; challenging behaviour

Introduction

People with disability are commonly subjected to restrictive interventions. These interventions include chemical restraint, mechanical restraint, physical restraint and seclusion. They are typically used in response to challenging behaviours in order to prevent the person from causing harm to themselves or others, or destroying property. Challenging behaviours, depending upon the definitions adopted, are reported to be displayed by 4% to 17% of people with an intellectual disability (Emerson and Einfield, 2011; Lowe et al, 2007; Matson et al, 2008; Robertson et al, 2005). Restrictive interventions can pose a danger to the person’s physical and mental health, as well presenting a breach of their human and civil rights, and may endanger the safety of those providing their support, and adversely affect the ongoing relationship between the person and their support staff (Allen, 2009; McVilly, 2008; McVilly, 2009; Sturme, 2009.). To achieve improved outcomes for people with a disability there has been substantial emphasis on the training of staff in the principles and practices of positive behavioural support (PBS).

Positive behavioural support (PBS) is a well-established intervention framework (Bambara and Knoster, 1998; Carr et al, 1999; Carr and Horner, 2007; Carr, 2007; Dunlap, Newton, Fox, Benito and Vaughn, 2001; Dunlap et al, 2000; Horner et al, 1990; Meyer and Evans, 1989; Will, 1999). PBS has grown into an evidence-based systematic approach that involves environmental changes to enhance quality of life and develop functional abilities and behaviours for children and adults with intellectual disabilities (Carr et al, 2002). It was developed in response to adverse behavioural approaches implemented with people with intellectual disabilities who presented with challenging behaviours (Meyer and Evans, 1989; Will, 1999). Improved outcomes for people with disability are highly dependent upon addressing their social and clinical needs using ethical, evidence-based strategies. Further research is required to assess strategies that are designed to decrease the necessity to resort to restrictive interventions, and to concurrently improve people’s health, wellbeing and life potential.

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Outcomes of PBS training

A systematic review of the literature on the impact of PBS training identified that reduction in challenging behaviours is the most commonly evaluated aspect of PBS training (O'Dwyer, McVilly, and Webber, 2015). Most of the research completed on PBS training supports the effectiveness of PBS in reducing such behaviours and in promoting adaptive behaviours (Cox, Dube and Temple, 2015; Koegel, Koegel, and Dunlap, 1996; MacDonald and McGill, 2013). Limited research has been conducted about this approach for adults with intellectual disabilities supported by staff in funded accommodation (MacDonald and McGill, 2013). Recently, completion of PBS workshops designed for parents of adult children has also been found to result in reductions in challenging behaviour (Daynes and Baker, 2014). Following four three-hour workshops, half of the parents reported that they felt more able to manage their adult child’s challenging behaviours at home.

The O’Dwyer et al (2015) review also suggested that future research should make greater use of robust psychometric measures, collection of longitudinal data, and the inclusion of control groups to incorporate experimental control in any analyses. Another design component to consider is the use of a well-defined staff-training program, with identifiable learning outcomes based on the PBS framework (Crates and Spicer, 2012). Our review also revealed that further quantitative investigation into the quality of life, mental health and behavioural development of people with disability, together with reduction in the use of restrictive interventions by their support staff as a result of staff training in PBS, is clearly required. Little is known about the impact of these factors on the lives of people with an intellectual disability.

To address these limitations in previous research, our study focused on the effect of PBS staff training on the mental health and behavioural outcomes of people with intellectual disability, and evaluated the variables that mediate change, such as the quality of the behaviour support plans which direct staff activity (Allen, 2009; Cook et al, 2007; McVilly, 2007).

The current study was established to evaluate the effectiveness of a professional development intervention for disability sector staff; in particular, its impact on the challenging behaviour, restrictive practice use, mental health and behaviour support plan quality for people with intellectual disability who exhibit severe challenging behaviours (i.e., harm to self or harm to others). It was hypothesised that with the implementation of a structured staff training program based on the principles and practices of PBS: the quality of BSPs would increase; the reported use of restrictive practices would decrease; client challenging behaviours would decrease; and client mental health would increase.

Method

Ethics

The protocol for this project was approved by the Deakin University Human Research Ethics Committee.

Participants

Agencies registered with the Victorian Department of Human Services were invited to enroll a minimum of 2 staff per agency at a team leader level in the programme. A total of 54 staff members participated in the program. Fifty-one participants completed the demographic profile survey.

Procedures

Staff were provided with a plain language statement and consent form. They were free to choose if they wished to participate in the evaluation study. Furthermore, for them to participate, they needed to use their agency’s internal processes to gain the consent of a client (or the client’s guardian/significant other) for release of the information to the research team. All clients were reported to have an intellectual disability as their primary disability.

Demographics

Independent variables included staff demographic profiles (age, gender, region of employment, position, highest formal qualifications, full or part time employment, number of years in current position, number of years in disability sector, number of people supported with challenging behaviour (self-report)) and client profiles based on demographic profiles (staff-report) and the adaptive behaviours profile of the Scales of Independent Behaviour – Revised (SIB-R) (Bruininks et al, 1996). The SIB-R is a psychometrically validated proxy-based assessment of adaptive and maladaptive behaviours for people with an intellectual disability.

A control group of clients was created and matched post hoc from the senior practitioner’s Restrictive Interventions Database System (RIDS). The control group matching criteria included having a BSP on the Department of Human Services RIDS submitted in...
the preceding 12 months, restrictive intervention type (ie, chemical restraint, mechanical restraint, physical restraint, or seclusion), and service setting type, but excluded those clients whose staff had attended any other behaviour support training provided from the Office of Professional Practice in the preceding 12 months. The control and intervention client groups contained the same number of participants (n=17). No control group was available for the maladaptive behaviours profile of the SIB-R or the Developmental Behaviour Checklist-Adult (DBC-A).

**Measures**

The Behaviour Support Plan Quality Evaluation-II (BSP QE-II) was originally developed in the USA for the assessment of behaviour support plans for children presenting with high-risk behaviours in the school system (Browning Wright, Saren, and Mayer, 2003; Browning Wright et al, 2007). It is reported to have good internal consistency, with Cronbach’s alpha coefficient reported to be 0.82 (Browning Wright et al, 2007). The BSP QE-II has been found to be a valid and reliable tool in Australia when applied to the review of behaviour support plans for adults with disability in community based services (McVilly, Webber, Paris, and Sharp, 2012; McVilly, Webber, Sharp and Paris, 2012). The quality of a behaviour support plan can influence the use of restrictive interventions, (Webber, McVilly and Chan, 2011; Webber, Richardson, Lambrick, and Fester, 2012).

The Restrictive Interventions Database System (RIDS) was developed by the Department of Human Services to record and report events of routine, pro re nata (PRN) or emergency restrictive interventions. Data is reported to this system by service providers as a statutory requirement (Disability Act, 2006).

The maladaptive behaviours profile of the SIB-R (Bruininks et al, 1996) was completed by staff. Maladaptive behaviours are considered according to eight categories of behaviour, which are then clustered according to three behavioural domains: externalised behaviours, internalised behaviours and asocial behaviours. Combined, these form a general maladaptive behaviour index. Staff participating in the training programme completed the SIB-R maladaptive behaviours profile pre and post intervention. These were completed using a consensus view of staff pairs attending the training.

The Developmental Behaviour Checklist-Adult (DBC-A) (Mohr, Tonge, Taffe, and Einfeld, 2012) was completed by staff pre and post intervention. The scale consists of 107 items dealing with emotional and behavioural difficulties not attributable to developmental delay. The scale provides a total problem behaviour score, as well as a number of sub-scales. These were scored on the basis of the consensus view of staff pairs attending the training.

**Training materials**

**The PBS training package**

The training package that was used in the study had been co-produced by staff from the Office of Professional Practice and disability service providers in Victoria, delivered over four days in two-day blocks conducted two weeks apart. This staged implementation provided participants with the opportunity to reflect on and share their learning with their teams in their own workplace between training sessions. The trainers were two staff members from the Office of Professional Practice research and development team with an academic background in psychology. The trainers were all trained in PBS, with one trainer (author 3) considered an expert in PBS, having written, lectured and researched extensively in the area. The lead author and author 2 were involved in scoring the measures and evaluating training. The program was run as a pilot by one of the trainers in another state in Australia; however, it was not evaluated.

The package was based on the principles of PBS and included elements of good practice as recommended in the BSP QE-II guide (recently renamed Behavior Intervention Plan-Quality Evaluation II; www.pent.ca.gov) which has established validity and acceptable reliability (Browning Wright, Saren, and Mayer, 2003; Browning Wright et al, 2007). The content of the curriculum included theory, presentation of research and practical exercises. There was an emphasis on applying the theory to practice (development of a behaviour support plan), and monitoring and reviewing of this BSP using the BSP QE-II which had been previously validated for use with adults (Webber, McVilly, Fester and Zazelis, 2011).

Day 1 of the PBS training program covered key definitions of challenging behaviours and restrictive interventions, and an overview of the biopsychosocial framework that underpins PBS, including personal communication needs and strategies. Day 2 covered how to determine possible functions of the behaviours of concern, through
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Results

Staff demographics and organisational profiles

As a requirement of the training at least two staff who provided support to each person with a disability taking part in the research were required to attend. Participants were predominantly female (75%) and were mainly from community service organisations (69%) compared with government services (31%). These trends generally reflect the distribution of the Australian disability workforce. Participants were representative of all administrative regions across the state, including metropolitan and rural locations. The majority were at service coordinator/regional manager level (43%), followed by front line/house manager or supervisor (29%), and APO/practice leader/coordinators who approved the behaviour support plans (28%). The majority (83%) of the participants reported working full time and only 13% part time. Years in current position varied widely from 3 months to 20 years, with a mean of 4.3 years ($SD=5.24$). Similarly, years in the disability sector also varied between 5 months and 38 years, with a mean of 16.9 years ($SD=9.25$).

Design

A 2x2 design (groups: training vs control; time: before training vs after training, at 12 months) was used to examine the impact of training on: (a) behaviour support plan quality; (b) number of restrictive interventions; (c) maladaptive behaviours; and (d) mental health.

Table 1: PBS training programme overview

<table>
<thead>
<tr>
<th>Day</th>
<th>Content</th>
<th>Learning outcome</th>
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<tbody>
<tr>
<td>1 and 2</td>
<td>Bio-psycho-social factors on person’s development; challenging behaviours; functional behavioural assessment and positive behaviour support.</td>
<td>Development of a high quality BSP</td>
</tr>
<tr>
<td>3</td>
<td>Evidence-based positive behaviour support interventions were covered, including environmental changes and replacement behaviours.</td>
<td>Use BSP QE-II to assess a behaviour support plan.</td>
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<tr>
<td>4</td>
<td>De-escalation strategies and debriefing after serious incidents was also covered. The content also covered human rights from the perspective of the person with a disability and disability support staff. How to use the Behaviour Support Plan Quality Evaluation guide II (BSP QE-II, Browning Wright et al, 2003) to assess the quality of a behaviour support plan. Review the BSP QE-II. Develop an implementation plan for their team for the next 12 months, with further training, practice and consolidation in using the BSP QE-II.</td>
<td>Self-appraise and revise a BSP, and have a plan to implement it.</td>
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</table>
**Client profiles**
Staff participants supported a total of 17 people with a disability (six females and 11 males) who were the recipients of interventions associated with the participating staff. These individuals ranged in age from 18 to 54, with a mean age of 41 years (SD=9.57). Anecdotally, staff reported they were chosen due to their high rate of challenging behaviours and/or restrictive intervention use.

SIB-R adaptive skills score for total clients yielded a mean Broad Independence W score of 477.03 (SD=16.11) ranging from 424.74 to 500.90; equating with an average age-equivalent score of 3 years 8 months (range of 8 months to 8 years). These scores are indicative of people with profound to borderline disability. The SIB-R Support Level Index indicated clients’ support level score to range from ‘infrequent or none’ to ‘pervasive’, with the majority falling in the ‘frequent’ range (32%) followed by ‘limited’ (26%), ‘extensive’ (8%), ‘pervasive’ (5%), ‘intermittent’ (5%). 24% of participants did not complete this section prior to intervention.

The BSP QE-II was used to examine the impact of a structured staff development programme on the quality of behaviour support plans (BSPs) developed by direct support staff and their supervising team leaders. Pre intervention BSP QE-II’s Cronbach’s alpha coefficient was .719, and .756 for the post intervention, suggesting acceptable internal consistency.

A Wilcoxon Signed Rank Test was conducted to evaluate the impact of the intervention on BSP QE-II total scores. At the outset, there was no statistically significant difference between pre intervention BSP QE-II scores (MD=8.00, SD=2.71) and the matched control group (MD=8.50, SD=2.50), z=-1.653, p=.098. Therefore these groups could be considered equivalent with respect to their BSP QE-II total scores prior to training.

For the intervention group, there was a statistically significant improvement in BSP QE-II scores from pre intervention (MD=8.80, SD=2.80) to post intervention (MD=9.25, SD=2.94), z=-2.404, p=.016, r=.51. There was no statistically significant difference between the control group BSP QE-II scores pre intervention (MD=8.50, SD=2.50) to the post intervention (MD=9.00, SD=2.65), z=-1.653, p=.098. That is, as might be expected, without any intervention there was no statistically significant change in the control group’s BSP quality over time.

A Wilcoxon Signed Rank Test was conducted on the subscale level of the BSP QE-II pre and post interventions. As shown in Table 2, there was a statistically significant improvement in BSP QE-II team coordination scores from pre intervention to post intervention with a relatively large effect size (z=-3.00, p<.003, r=.52). There was also a statistically significant improvement in BSP QE-II communication and review of goals scores from pre intervention to post intervention, with evidence of a medium effect size (z=-1.890, p<.059, r=.32). This suggests participants in the program learnt that good BSPs need to identify and document how a team is going to work together, and how they would use client outcome data to reflect on their practice.

<table>
<thead>
<tr>
<th>Table 2: Average ratings for each of the BSP QE-II quality domains for N=17 behaviour support plans prepared pre training by participants and post training after 12 months</th>
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</thead>
<tbody>
<tr>
<td><strong>BSP QE-II Quality Domain</strong></td>
</tr>
<tr>
<td><strong>Pre training</strong></td>
</tr>
<tr>
<td>Team coordination strategies outlined</td>
</tr>
<tr>
<td>Communication and review protocols outlined</td>
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<tr>
<td>Total</td>
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</tbody>
</table>

*Sig. p<.05.

Scale: 0=not included or addressed; 1=partially addressed; 2=fully described.

**Reported chemical restraint**
To examine whether the training resulted in a decrease in the use of restrictive practices the reported use of pro re nata (PRN) (as required) chemical restraint was examined. Webber et al. (2011) reported that approximately 8.7% of the population of people with an intellectual disability receiving a funded disability service in Victoria were administered chemical restraint in a 12 month period. It was also reported that PRN chemical restraint is most sensitive to change as it is reliant on disability support staff’s judgement whether to administer, compared to routine chemical restraint which is prescribed to be administered on a routine basis and its administration is not reliant on disability support staff’s judgements (Webber et al, 2011).
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A chi-square for independence indicated no significant associations between the proportion of people subjected to chemical restraint pre (n=13) and post intervention (n=11), χ² (1, n=302) = 0.66, p= 0.42. However, there was an observable trend in the data – suggesting that while at the outset both the intervention and control groups were comparable in the proportions reporting the use of chemical restraint (ie, 76%), the intervention group reduced to 68%; while in the same period the control group had increased to 82% of people who were reported to be chemically restrained.

Severity of client behaviours
To examine whether training resulted in reductions in the severity of challenging behaviours, the average scores for the maladaptive behaviour sub-scale on the SIB-R are shown in Table 3. The pre-intervention maladaptive behaviours in general were reported to be marginally serious in their expression. The post-intervention maladaptive behaviours were reported to be between normal to marginally serious in their expression. A statistically significant difference was not found in the general maladaptive index pre-intervention (M=-17.23, SD=12.16) to post intervention (M=-13.82, SD=20.28), t (33), p<.375. However, there was evidence of a trend in the expected direction towards improvement.

Table 3: Average ratings for the maladaptive behaviour index of the SIB-R for pre training participants and post training comparison group after 12 months

<table>
<thead>
<tr>
<th>Domains</th>
<th>Average SIB-R ratings</th>
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<tbody>
<tr>
<td></td>
<td>Pre training</td>
</tr>
<tr>
<td>Internalised</td>
<td>-13.9</td>
</tr>
<tr>
<td>Asocial</td>
<td>-15.0</td>
</tr>
<tr>
<td>Externalised</td>
<td>-14.0</td>
</tr>
<tr>
<td>General</td>
<td>-17.2</td>
</tr>
</tbody>
</table>

*Sig. p<.05

Maladaptive Behaviour:
-41 and below=very serious;
-40 to -31= serious;
-30 to -21= moderately serious;
-20 to -11= marginally serious;
-10 and above=normal.

A paired-samples t-test was conducted to evaluate the impact of the intervention on the maladaptive behaviour sub-scores. There was a statistically significant improvement in two of the maladaptive behaviour sub-scale scores from pre intervention to post intervention. As can be seen, the asocial maladaptive behaviour pre intervention (M=-15.08, SD=12.59) showed signs of improvement at post intervention (M=-8.05, SD=11.86), with evidence of a medium effect; t (33), p<.015, d = .58. That is, a shift from marginally serious behaviours to normal. Secondly, the externalised maladaptive behaviour pre intervention (M=-13.34, SD=10.71) showed signs of improvement post intervention (M=-5.81, SD=9.48), with evidence of a relatively large effect; t (31), p<.003, d=.75. That is, a shift from marginally serious behaviours to normal.

The change for the internalised maladaptive behaviour pre-intervention (M=-13.91, SD=10.31) to post intervention (M=-8.70, SD=12.72) was not statistically significant; t(33), p<.87. However, there was a trend in the expected direction, indicating reduction in internalised maladaptive behaviours. This finding may be associated with lessening of depressive symptomology.

Client mental health
The Developmental Behaviour Checklist for Adults (DBC-A) was used to examine the impact of training on clients’ mental health. The results of the assessment of client mental health using the DBC-A are given in Figure 1.

A paired-samples t-test yielded statistically significant improvement in total DBC scores from pre intervention (M=72.98, SD=27.86) to post intervention (M=30.40, SD=34.17), with evidence of a very large effect; t (49), p<.000, d=1.37. This suggested an overall improvement in client behaviour and potentially their mental health status.

A paired-samples t-test yielded statistically significant improvements in: (a) total DBC disruptive subscale scores from pre intervention (M=23.06, SD=7.85) to post intervention (M=8.80, SD=9.49), t (49), p<.000; (b) total DBC communication and anxiety disturbance subscale scores from pre intervention (M=14.70, SD=6.96) to post intervention (M=5.72, SD=7.14), with evidence of a large effect, t (49), p<.000, d=1.29; and (c) total DBC self-absorbed subscale scores from pre intervention (M=12.30, SD=7.78) to post intervention (M=5.52, SD=6.96), with evidence of a large effect, t (49), p<.000, d=.92.
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It is concluded that there was a significant improvement in BSP quality following training. As might have been expected, there was no significant change in the control group who received no training.

These improvements in BSP quality might be attributable to the combined effect of improvements in components of the BSPs relating to team coordination and communication, and the documentation and procedures supporting the review of goals. This is to be expected as the program focused on these areas due to them being previously lacking (Webber et al., 2011). There was also a positive trend of improvement in the documentation in plans of the function of behaviour, environmental supports, and teaching functionally equivalent replacement behaviours. These improvements were all greater than expected by chance alone.

**Discussion**

This study investigated the impact of a structured staff training program, conducted in the form of a sector wide training program, based on the principles and practices of PBS for adults with intellectual disability. The aim of the study was to investigate the impact of training in PBS on the following client outcomes: challenging behaviour; restrictive practice use; mental health; and behaviour support plan quality. It was hypothesised that with the implementation of the programme: the quality of BSPs would increase; the reported use of restrictive practices would decrease; client challenging behaviours would decrease; and client mental health would increase.

There were also statistically significant improvements in: (a) total DBC antisocial subscale scores from pre intervention \((M=10.96, SD=5.67)\) to post intervention \((M=4.08, SD=5.56)\), with evidence of a large effect, \(t(49), p<.000, d=1.23\); (b) total DBC depressive subscale scores from pre intervention \((M=5.42, SD=4.48)\) to post intervention \((M=3.00, SD=4.00)\), with evidence of a medium effect, \(t(49), p<.003, d=.57\); and (c) total DBC social relating subscale scores from pre intervention \((M=6.48, SD=3.88)\) to post intervention \((M=3.28, SD=4.34)\), with evidence of a medium to large effect, \(t(49), p<.000, d=.78\).
However, overall, the quality of the BSPs of the trained group were below optimal levels at pre intervention (35% scale maximum), and remained so at post intervention (47% scale maximum). Previous research in Victoria indicated that in order to achieve any significant reduction in the use of restrictive interventions, a minimum of 60% scale maximum on the BSP QE-II was necessary (Webber et al., 2012). The small sample size, homogeneity of staff who participated and the conservative scoring of the BSP QE-II by the independent rater may have impacted on the overall scores of the BSPs.

Regarding use of restrictive practices (based on reports recorded by service providers on RIDS), no significant differences were evident between intervention and control groups, pre and post intervention. However, an observable trend in the data suggested that while there was an increase in the proportion of the control group reporting the use of PRN chemical restraint in BSPs, there was a decrease in the proportion of the intervention group reporting the use of PRN chemical restraint in BSPs. These findings are consistent with previous studies, which report a reduction in chemical restraint following staff training interventions (Crates and Spicer, 2012; McClean, Grey and McCracken, 2007).

The client challenging behaviours, based on the proxy ratings assessed using the maladaptive behaviour scale of the SIB-R, showed improved behaviour from ‘serious’ to ‘normal/marginally serious’. This was expected and consistent with previous research (MacDonald and McGill, 2013; Crates and Spicer, 2012; Martin, 2013; McClean et al., 2005; McClean, Grey and McCracken, 2007). At a sub-scale level, this was reflected in improvements in asocial and externalised behaviours beyond what might be expected by chance alone. While not statistically significant, the trend of the change of internalised behaviour was positive. Here it could be noted that internalised behaviours such as self-harm are difficult to decrease quickly (the study only examined a 12-month period) and changes in internalised behaviour may be more difficult for staff to observe in comparison to externalised or asocial behaviours.

A significant change was not observed in the SIB-R support level scores for the individuals with a disability. However, this would not be expected given the high levels of support at pre intervention and the relatively short time frame (12 months). Longer-term studies may consider the impact of adaptive behaviour and support level scores, as well as maladaptive behaviours.

Based on the proxy ratings using the DBC-A, clients’ mental health improved in overall functioning and in the subdomains disruptive, communication and anxiety, self-absorbed, antisocial, depressive and social relating. Changes in externalised behaviours, eg screaming, throwing objects, communicating and toileting were more clearly observed in comparison to more internalised behaviours, eg depressive and social relating behaviours. These findings are consistent with those of McClean, Grey and McCracken (2007), who reported also improvements in mental health using the Mini PAS-ADD (Moss, 2002).

**Limitations**

The sample size of this study was a particular limitation of this research given the homogeneity of the sample. Furthermore, the current findings relate only to the use of numbers of people on PRN chemical restraint rather than number of episodes of PRN restraint use. Future research should focus on the use of episodes of PRN restraint use and the effect of staff training on the use of different restrictive intervention types, as previous research has demonstrated some reduction in seclusion and other restrictive practices (Webber et al., 2012; Crates and Spicer, 2012; McClean, Grey and McCracken, 2007). This study looked at mental health specifically; future research should consider quality of life outcomes for people with a disability.

Furthermore, staff competency following the training and the role or experience of the staff member who wrote the BSP were not considered or sub-analysed. This evidence is difficult to obtain because at least three people have some impact on the content of BSPs in Victoria – the house supervisor or team leader, the authorised program officer who authorises the use of restrictive interventions and the person who takes ultimate responsibility for the BSP, the endorser. Recent research shows that the staff role is an important factor, regardless of the amount of training completed, to achieve higher BSP QE-II total scores (Webber and Richardson, 2016). In addition, although the BSPs were evaluated 12 months post training, the evaluation of the implementation of the BSPs was not assessed. Finally, it should also be noted that the first author was not blind to condition (pre vs post or control vs trained), although there was a separation in functions of the three authors in that the lead author assessed the effectiveness of the training on the outcome variables and the second and third authors prepared and delivered the training.
Conclusions and future directions

Notwithstanding the above limitations the results of the current study suggest a comprehensive four-day program of PBS based around the development of a quality behaviour support plan impacts on clients’ mental health, challenging behaviour and use of restrictive interventions. The findings of the current study, while consistent with previous training studies, add to previous studies by including the impact of PBS on the quality of behaviour support plans and the impact of PBS on mental health indicators. Taken together these findings suggest that training staff in PBS can have an impact on better quality behaviour support and ultimately on the clients’ mental health.

However, it is realised that PBS is a collaborative approach involving all those who are invested in the life of a person with an intellectual disability (Gore et al, 2013), including support staff, family, friends and the individual themselves. Future research should consider how to best include all stakeholders to implement the best support they can for the person with a disability. This will include a range of services, such as psychiatric, community respite, individual and respite, high support and on-call intensive options, staff teams being directly involved in developing individualised plans, plans based on comprehensive functional assessment, and staff education and training in PBS as well as specific disorders and current research (Crates and Spicer, 2012; Martin, 2013; McClean, Grey and McCracken, 2007) and regular supervision (McClean et al, 2005). Future structured staff training programs should also address mental health (Wilner et al, 2012), quality of life, and staff attributions and perceptions of their clients’ behaviours and support needs (Whittington and Burns, 2005).

Future studies could assess the implementation of the BSPs following training and investigate the organisational factors such as leadership style (e.g., transformational vs transactional). In addition, recent research has shown that different managerial practices can significantly enhance outcomes for persons with an intellectual disability, and for their staff (Deveau and McGill, 2014). These include managers observing staff, providing feedback, providing one-to-one supervision, modelling good practice, and facilitating team meetings.

In conclusion, this study demonstrates that a structured staff training program can have the effect of improving the quality of BSPs. Importantly, change in client behaviour showed significant improvements following intervention and there was a trend in the reduction of staff reliance on chemical restraint. Combined, these results suggest this intervention was effective in improving outcomes for people with a disability who show challenging behaviour, as measured longitudinally over a 12-month period.
References


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