

Training Care Teams of Children with Autism Spectrum Disorders in Positive Behaviour Support: An Innovative Approach

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Abstract

As part of a team, the authors developed a workshop to help parents and teams address the behavioural needs of children with autism using a positive behaviour support (PBS) approach. Teams received comprehensive training in PBS and completed weekly homework assignments. Measures of participant satisfaction, parent satisfaction and efficacy and child behaviour suggested this training as an effective intervention for these teams. Participants reported improvements and the effective implementation of strategies after involvement in the workshops. This innovative model suggests potential for teams struggling with communication challenges in addressing problem behaviours in children with autism.

In the greater Edmonton region, the Joint Action for Children Committee (JACC) is an intersectoral working group of administrators from child and youth servicing organizations that provide health, education, protective and support services to children, youth and their families. The purpose of JACC is to improve the coordination of services and outcomes for families and the agencies that serve them in this region. In response to increasing reports of crises being experienced by families of children with autism, JACC developed a pilot project in 2010 that focused on building capacity in families and their care teams in effective behavioural support. This article describes an innovative training initiative aimed at

increasing the knowledge and fluency of a behaviour intervention framework for children with autism.

Autism is a developmental disability characterized by three core areas of impairment: difficulty relating socially to others; difficulty communicating effectively and at an age-appropriate level; and the use of repetitive and stereotypical patterns of behaviour (American Psychiatric Association 2000). As a result of these difficulties, individuals diagnosed with autism are at an increased risk of developing and continuing to use problem behaviours (Bradley et al. 2004). It is understood that the problem behaviours serve a communicative function, and interventions that focus on teaching functionally equivalent, alternative ways of communicating are the most successful interventions (e.g., see Carr and Durand 1985). Current “best practices” in the remediation of problem behaviour focus on (1) teaching alternative behaviours, (2) restructuring environments to avoid problem behaviour and (3) reinforcing the use of appropriate behaviour (National Research Council 2001). These intervention strategies are components of a larger system of support known as positive behaviour support (PBS).

“Positive behavior support refers to the broad enterprise of helping people develop and engage in adaptive socially desirable behaviors and overcome patterns of destructive and stigmatizing responding” (Koegel et al. 1996: xiii). In contrast to traditional approaches of behaviour modification that used aversive techniques to limit problem behaviours, PBS focuses on

building socially appropriate skills and supporting individuals' use of "positive" behaviours (Durand and Carr 1985; Meyer and Evans 1989). PBS aims to teach individuals who use problem behaviour a broader range of skills to enable more effective interactions with their environment. Systematic reviews have shown that PBS is an effective intervention for problem behaviour for individuals with autism (National Autism Center 2009; National Research Council 2001).

Following a scan of the published literature, individuals fluent in PBS assembled the learning objectives and organized the curriculum. The curriculum package included the following topics:

- Effective team functioning (e.g., collaboration, goal setting)
- Understanding autism spectrum disorders
- Behavioural learning theory
- Functional behaviour assessment methodologies
- Designing multi-component behaviour support plans
- Data-collection systems (e.g., hypothesis testing, monitoring, evaluating)
- Selecting and teaching appropriate alternative and replacement behaviours
- Intervention strategies for improving environmental fit (e.g., antecedent and consequent manipulations)
- Promoting skill maintenance and generalization
- Non-violent crisis intervention strategies

The final training curriculum was consistent with other reports of essential elements of PBS training (Dunlap et al. 2000; Horner et al. 1999; Reid and Parsons 2004).

Description

Between April 2010 and March 2011, a total of 35 teams (203 participants, including 30 parents) entered the program. Training occurred during three full days and two follow-up half-days over the span of seven weeks. Teams were composed of at least one parent and a wide range of professionals organized around that parent's child. Self-identified titles included teacher, home support worker, educational assistant, mental health therapist, psychologist, speech-language pathologist, social worker, principal, respite worker, special education facilitator, occupational therapist, registered nurse and learning services facilitator. Attracting this range of professionals was intentional, and a major goal of the workshop was to share information across a spectrum of providers who could, in turn, share learned knowledge with their colleagues. Approximately five teams participated in each workshop (range one to six), and there was a total of eight workshops.

Two or three individuals performed workshop facilitation in each session, and one of the first two authors (S.R. or S. Lynch) co-facilitated each of the workshops. New facilitators

were always paired with a more experienced facilitator to help ensure workshop fidelity (i.e., that participants across groups would receive essentially identical formal training).

In the results presented below, *session* and *session day* refer to an individual day or half-day of training. *Team* refers to the three to seven individuals who came to the training to address the needs of a single child. *Group* refers to the four or five teams in each training session. Finally, *season* refers to the set of workshops given in the same season (spring 2010, fall 2010 or winter 2011).

Method

All workshop participants were given two brief measures (described below) to complete at the end of each session. Other measures were given to the parent (and for one measure, the group coordinator) before and after the training was completed. All participants were informed that the completion of these measures was optional. Ethics approval for this study was obtained in 2010.

Measures

Measures involving all participants (both parents and staff) completed at the end of each session included the following:

- Attendance – to assess satisfaction and interest in training by participant behaviour
- Weekly Workshop Evaluation (WWE; internal measure) – to assess satisfaction with the workshop, as well as homework completion and comprehension
- Team Functioning Questionnaire (TFQ; internal measure) – to assess how team members perceived the functioning of the team they were in, from their own perspective as well as those of others

One measure was given at the end of the final session:

- Final Workshop Satisfaction Survey (FWSS; internal measure) – to assess overall satisfaction with the workshop upon completion

The following pre-post measures were completed by parents:

- Parenting Sense of Competence scale (PSOC; Johnston and Mash 1989) – to assess parenting efficacy and satisfaction from the parents' perspective pre-post treatment
- Parenting Stress Index (PSI; Abidin 1995) – to assess parents' stress across a range of areas from the parents' perspective pre-post treatment
- Aberrant Behavior Checklist (ABC; Aman and Singh 1986) – to assess child behaviour and challenges from the parent and coordinator perspective pre-post treatment (note: this

measure was also completed independently pre- and post-workshop by a staff member)

The return rate of in-session questionnaires was 77% (714 from 931 participants, across the five sessions and nine groups) for the WWE and 62% (580 from 931 participants) for the TFQ. For other measures, pre- and post-measures were received on the PSOC for 23 of 28 (82%) completing parents, on the ABC from 18 (64%) and on the PSI from 12 (43%). The ABC was completed pre- and post-training by 28 (85%) of 33 completing school staff.

Results

Attendance

Overall attendance across groups was reasonably steady, suggesting that participants found the training useful. Thirty-three of the 35 (94%) groups who started the training completed it (one parent withdrew consent for her team, whereas another parent stopped attending). Including the two non-completing teams, attendance in sessions two to five was approximately 90% of the attendance in session one. Declines primarily occurred in the final two sessions; this may have been related to these being half-day rather than full-day sessions.

Weekly Workshop Evaluation

On the WWE, choices for each question included “not at all” (coded as 1), “a little bit” (2), “mostly” (3) and “completely” (4). Percentages regarding satisfaction noted below include those responding “mostly” or “completely.”

Overall satisfaction from the WWE was high, with 97% saying they were satisfied with the day’s training. A total of 85% felt that the day’s session improved their skills in addressing the needs of the team’s child. As well, 88% were satisfied with their opportunities to discuss autism facets and strategies with others. These results suggest that the capacity to address the behavioural challenges discussed in that session was increasing. However, only 67% felt the workshop improved their understanding of autism. This is not surprising, given that many participants were already well versed in autism, either as a professional or a parent.

In terms of topic coverage, 96% were satisfied with discussion of the two main areas presented each day. This suggests that participants did indeed understand the focus of the presentations.

Ninety-eight percent felt they understood the homework assigned between sessions, and 90% felt confident that they could attempt the homework, suggesting that the assignments were realistic in size and scope. The previous week’s homework was completed by 83%, with 81% feeling successful with what they completed. Across participants, 91% felt there was enough time in the class devoted to the discussion of homework from the previous week.

Changes were seen across seasons ($F[2, 701] = 12.95, p <$

.001), with overall satisfaction rated more highly in the two later seasons (mean = 3.60 for both) than in the first (mean = 3.38). This is not a surprising finding as the quality of the workshop could be expected to improve as facilitators became more comfortable with material presented.

Across all sessions, parent ratings from the 89 parent WWE forms (mean = 3.58) were at similar levels to those of the other 476 participants (mean = 3.50; $t[563] = 1.25, p > .10$).

Team Functioning Questionnaire

On the TFQ, choices for each question included “strongly disagree” (coded as 1), “somewhat disagree” (2), “neutral” (3), “somewhat agree” (4) and “strongly agree” (5). Percentages noted below include those responding “somewhat agree” or “strongly agree.”

On the TFQ, participants consistently agreed with positive statements about team functioning (93% overall; grand mean = 4.60), with agreement on each of the 14 items above 90% (item means ranged from 4.47 to 4.74). Moreover, 74% of all items were marked as “strongly agree.” When averaging across all items, no trends were observed across seasons ($F[2, 575] = 1.32, p > .10$); however, group differences were found ($F[8, 569] = 4.25, p < .001$). This pattern suggests that there were no differences in team functioning based on facilitator experience, but that individual groups did show differences (subjectively, this is most likely related to pre-workshop team functioning levels). Parent ratings were again at similar levels to those of other team members (mean = 4.603 versus 4.598; $t[535] = 0.05, p > .10$).

Final Workshop Satisfaction Survey

A total of 130 of 168 (77%) participants on the final workshop day completed the FWSS. Results were similar to those found in the WWE measures: 96% indicated satisfaction with the workshop series, and across items 88–98% indicated satisfaction. On an item querying the level of presentation (e.g., too complicated versus too simplistic), 85% described it as “just right,” with the remaining 15% equally describing it as either too complicated or too simplistic. On an item querying the mix of expert presentation versus opportunities to interact with the team, 73% described that mix as “just right,” with a larger number indicating a desire to interact more with their team (22%) than to focus more on the speakers (6%). As noted above, there was no significant difference between parent satisfaction (mean = 3.55) and staff satisfaction (mean = 3.58; $t[127] = 0.25, p > .10$).

Parenting Sense of Competence

Twenty-three parents completed the PSOC measure pre- and post-training. The overall score significantly improved from pre- to post-treatment ($d = 0.68, t[22] = 3.63, p = .001$). Individual subscales assessing satisfaction ($d = 0.54, t[22] = 2.74, p = .012$) and efficacy ($d = 0.61, t[22] = 3.04, p = .006$) likewise showed

improvement. These findings suggest that parent impressions of their ability and their satisfaction with parenting improved significantly upon completion of this training.

Parenting Stress Index

Only 12 parents completed the PSI pre- and post-training, and results were not significant overall. Subjectively, parents often were uncomfortable with the personal questions and length of this measure in comparison with the other measures given. Child challenges as assessed by the Child Domain index decreased mildly, approaching significance ($t[11] = 1.78, p = .104, d = 0.31$). Stress, as assessed in the Parent Domain, did not decrease ($t[11] = 0.03, p > .5, d = .003$), suggesting that the level of stress experienced by parents did not change as a result of this training.

Aberrant Behavior Checklist

A total of 18 parents and 28 team members completed the ABC pre- and post-treatment. A consistent pattern was seen on the total score of this measure (sum of the five subscale scores), with parents ($d = 0.43$ [effect size of change pre-post treatment], $t[17] = 1.80, p = .090$) and team members ($d = 0.31$; $t[27] = 2.57, p = .016$) suggesting mild to moderate improvements. These would hopefully increase over time, given improved parent confidence and new parent-team strategies. Improvements were reported at a slightly higher level by parents, though statistical significance at the .05 level was attained only by team members, likely due to the larger sample size in that group.

Qualitative Comments

On the WWE, participants were given an opportunity to provide open-ended general comments about the training that day. A number of themes were identified in these comments. Some reflected general satisfaction (e.g., “Thank you. Next year will be much more successful because of all you’ve taught”; “Thank you for all the extremely valuable information”). Some participants made comments that were specific to their own team (e.g., “It was good to have more than half our time discussing our own plan”). A few comments were related to pragmatic issues (e.g., “4:30 p.m. is too late; a few people were fading”; “The pace of today’s session was too fast”). In general, the comments on the forms reflected the results of questionnaires as well as general impressions from the presenters that participants were largely satisfied with the content of the presentations though some practical issues could be addressed in future sessions.

Discussion

The goal of this workshop series was to help parents and teams that support children with autism learn PBS strategies to address problem behaviours. We found that teams attending this workshop reported satisfaction with the information learned in the training and were able to show good team interaction and

functioning. Parents attending reported improved confidence and effectiveness in addressing behaviours with their children. Parents and teams reported some improvement in child behaviour on a global measure across the seven weeks of training.

The outcome measures from this workshop support the subjective comments and impressions gained during the workshop facilitation. We observed teams working well together on activities given in the workshop, and toward the end of the workshops teams reported many anecdotal comments suggesting improved behaviour in children.

Although it has been shown that the strategies contained within the workshop are considered best practice (National Research Council 2001), it is unlikely that the success that we observed (teams implemented strategies and reported success using objective behavioural tracking [e.g., see O’Neill et al. 1997]) was solely the result of learning the PBS curriculum. Teams seemed to also benefit from having extended time for discussion and this increased opportunity to work together. Many team members reported that given the financial constraints within the education system, individuals rarely get the opportunity for such involved and extended discussions as an entire team. Thus, one of the factors that likely contributed to the success of this training was the model itself: the opportunity to receive mentorship as well as thoroughly discuss PBS strategies as a unified team.

In presenting the workshop, we found several nuances that required skilful facilitation. These included an awareness of when teams were struggling with a topic as well as assisting teams in interpreting clinical anecdotes from school settings or therapy sessions. In addition, it seemed that a dynamic presentation style was needed to fully engage the teams and maintain that engagement over such an extended period of time. Finally, we found that a very solid understanding of autism and PBS were needed by facilitators in order to work through issues and barriers identified by teams. While we are considering wider dissemination of this material, we believe it is critical to have at least one facilitator who possesses all of these skills. We suspect that running the workshops with only one facilitator would be very difficult and less effective, though this was not tested.

We were pleased with the improved levels of parent satisfaction and perceived competence (at a moderate effect size) that occurred after the workshop, in only seven weeks. Future research may address whether such gains can be maintained on a long-term basis. We were gratified that global behavioural gains were reported at home and at school (at a low to moderate effect size), and suspect that a measure that focuses on the specific behavioural goals of a parent and team would yield stronger results than the global ABC measure (which invariably includes some items that are not applicable to the child from the outset).

A key and relatively unique feature of this intervention was that cross-sectoral teams received training and that parents received the same training as the professionals and paraprofes-

sionals. The intention was that all of the team members would learn and use the same language and strategies when dealing with a particular child. The behaviour plans that were put into place and the discussions at the tables during the workshops were indirect evidence that this intention was realized. One parent noted that this was the first time that she felt that she was a member of the team. This cross-sectoral approach was facilitated (and funded) by the intersectoral working group JACC. Such groups that cross ministerial jurisdictions and work together to find innovative solutions to challenges that affect them all offer promising new collaborative approaches to dealing with complex issues that affect children and their families.

Future research may investigate the amount of facilitation and mentorship that teams require in order to implement the PBS strategies with high fidelity. We are considering providing the workshop material with a much lower level of facilitation; while we are hopeful that doing so will be highly effective, we are somewhat skeptical that the switch to PBS strategies will actually occur without direct facilitation and team time together. Additional research may also offer insights into how to best capture the potential success of such a novel PBS training model. In the present investigation, data collection focused on assessing the training model. Data were collected on team functioning, workshop satisfaction, parenting stress levels and feelings of competence and general levels of child behaviour. Not included in the analyses were the quantitative or qualitative aspects of the problem behaviours that initially brought the teams to the training. Moreover, the goal of PBS as an intervention is to replace children's problem behaviours with more socially appropriate behaviours. As problem behaviours are eliminated, there should be a concomitant increase in the use of positive behaviours. This innovative model features the importance of an interagency and interdisciplinary collaborative approach in working with students with severe challenges, and emphasizes the value of including families as members of the care team. **HQ**

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