

Brief Report: Implementing Structured Consultation with Autism Early Intervention

Practitioners

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Abstract

Background

Implementation of evidence-based practices with fidelity during early intervention is important to achieving positive outcomes for children with autism spectrum disorder. However, uptake with fidelity has been poor in community settings. Traditional professional development approaches have done little to change practice. This has stimulated interest in researching the use of structured consultation to address this challenge.

Method

This study used a single case experimental design with multiple baselines across participants to investigate the effects of structured consultation on the use of descriptive praise. Participants were four early intervention professional and paraprofessional staff, one in the role of consultant and three consultees.

Results

All consultees learned to implement descriptive praise with fidelity and maintained improvements at follow-up. All participants rated the professional development program based on structured consultation as socially valid.

Conclusions

Structured consultation improved treatment fidelity and was acceptable to staff. Replication on a larger scale is recommended.

Keywords: Evidence-based practice; mentoring; structured consultation; descriptive praise; knowledge translation; professional development

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As the evidence-base for practices used with children with Autism Spectrum Disorder has grown, the focus has moved to community implementation of practices with fidelity (Cook & Odom, 2013). Fidelity most commonly refers to the accurate adherence to intervention procedures as intended (Pellecchia et al., 2015). In-service professional development for early intervention staff has the potential to increase the use of evidence-based practices (EBPs) and to improve fidelity of implementation. Research has consistently demonstrated, however, that typical in-service professional development approaches are generally ineffective (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Such approaches are characterised by attendance at workshops where the focus is on delivery of information about EBPs rather than on in situ implementation. In a recent study, focus groups involving early intervention staff delivered a consistent message about the need for practical, hands-on learning in real time within the classroom (Trembath et al., unpublished manuscript). The need for this more hands-on approach has been supported by research showing that the introduction of performance feedback following training was sufficient to increase the level, trend, or stability of teachers' use of classroom management skills Simonsen, Myers, and DeLuca (2010).

Job-embedded professional development strategies have been increasingly recommended as an alternative to more traditional workshop-based approaches (Dunst, 2015; Synder, Hemmeter, & Fox, 2015). Research is demonstrating the benefits of job-embedded strategies such as demonstration, modelling and performance feedback delivered by a consultant with appropriate knowledge and expertise. Structured consultation, a form of staff development involving self-monitoring and structured meetings with performance feedback, has shown some promise in improving the use of specific praise by teachers (Briere,

Simonsen, Sugai, & Meyers, 2015). Briere and colleagues implemented a within-school structured consultation procedure to increase new teachers' rates of specific praise statements during teacher-directed instruction. Veteran teachers, who were trained by the researchers, acted as mentors. All new teacher participants increased their rate of specific praise following the introduction of structured consultation.

Unlike schools, where structured consultation has been trialled with teaching staff, early intervention programs for children with ASD are typically delivered by staff from a variety of professional disciplines including teaching, speech pathology, occupational therapy, and psychology. Further, paraprofessionals often play a key role in working directly with children in these settings. Structured consultation has generally been tested with professionally qualified staff and the inclusion of paraprofessionals has received little attention. The feasibility and effectiveness of structured consultation in early intervention settings for children with ASD involving professionals and paraprofessionals is yet to be tested.

The aim of this study was to provide a proof of concept of the feasibility and social validity of structured consultation in early intervention with professional and paraprofessional staff. Consistent with previous research (Briere et al 2015) and recommendations in the implementation science literature (e.g., Proctor et al., 2011), this pilot study focused on change in staff behaviour (fidelity), acceptability and feasibility (social validity) rather than on child outcomes. A multiple baseline across participants design was adopted and descriptive praise was chosen as a widely used yet relatively straight forward strategy to learn and implement. Descriptive praise identifies the behaviour for which a child is being praised and offers an advantage over general praise in teaching efficiency for children with ASD (Polick, Carr, & Hanney, 2012). Should the study findings demonstrate the efficacy of the structured consultation process using descriptive praise, the next step would be to apply this

process to strategies with increasing complexity and to investigate the impact on child outcomes.

The present study aimed to investigate the effects of structured consultation on the implementation of descriptive praise by professional and paraprofessional staff employed by a community-based ASD early intervention organisation. Research questions included:

1. Does structured consultation increase the use of descriptive praise with fidelity by early intervention practitioners?
2. Are structured consultation components considered socially valid by early intervention practitioners?

Method

Setting

The study took place in a 40-place early intervention centre for children with ASD in Australia. Twenty-six staff including teachers, therapists and paraprofessional were employed across four classes of 10 children. The study was conducted with the approval of the organisation's research committee, and the Human Research Ethics Committee of the authors' University (GU Ref No: EDN/55/15/HREC).

Participants

Ten staff volunteered to participate as a consultant or consultee for the study and the centre manager selected from this group one consultant and three consultees. All participants were female.

Consultant had a Graduate Certificate in Autism Studies with 10 years' experience as a behaviour therapist working with children with ASD. She was in her second year working across all classrooms at the centre in the role of Behaviour Therapist.

Consultee 1 had been working as a paraprofessional with children with ASD for 2 years. She had been at the centre for 5 months, working across the classrooms catering for

children preparing for transition to mainstream school. Consultee 1 was completing a Diploma in a work-related field of study.

Consultee 2 had been working as a paraprofessional in a classroom at the centre for 2 months, working in a classroom catering for children with significant learning needs and had no previous experience working with children with ASD. She had a Bachelor's Degree in an unrelated field and a Diploma in a work-related field of study.

Consultee 3 had been working as a paraprofessional at the centre for 3 months and had no previous experience working with children with ASD. She was based in a class catering for children with significant learning needs. Consultee 3 had a Bachelor's Degree in an unrelated field and was completing a Diploma in a work-related field of study.

Procedure and Measures

The second author trained the consultant in the structured consultation process for descriptive praise. Fidelity to implementation of descriptive praise by the consultant was confirmed through a 10 minute observation by the second and third authors using a fidelity checklist (100% inter-observer agreement was achieved). The consultant then used the same structured consultation process to train the three consultees following establishment of baselines. Sessional staff funded through a research grant, were used to replace participants during training.

The third author measured consultee baseline behaviour using a fidelity checklist during 5 x 10 minute sessions over a two week period across a range of usual classroom activities. Structured consultation sessions for Consultant/Consultee 1 commenced after baseline sessions showed no noticeable increasing trend. Training commenced with Consultee 2 once increased fidelity of implementation of descriptive praise was observed for the first consultee. Due to time constraints, training for Consultee 3 had to commence prior to establishing an intervention effect for Consultee 2. Fidelity to the structured consultation

process by the Consultant was confirmed by the third author using two checklists based on the scripted structured consultation training (strategy training procedure fidelity: 100%; meeting feedback procedure fidelity: 94%).

Structured consultation sessions occurred weekly between consultant and consultee until consultees reached fidelity of at least 90% across three consecutive sessions. This required 2-3 consultation sessions for each consultee. Observation probes were conducted by the third author, on the consultees' use of descriptive praise with fidelity, two weeks following the last training session for each consultee.

Descriptive praise. As shown in Table 1 the working definition of descriptive praise included four steps: look, deliver, state behaviour, and praise. These steps were used to create a four point fidelity checklist that was used as the outcome measure with all four components required to achieve fidelity of implementation (correct response). A correct response percentage score was calculated by session through dividing correct responses over total number of praise-type statements observed. The consultant and the authors gathered data using this checklist during the observation sessions. Inter-observer reliability was conducted on a minimum of 30% of the sessions for each consultee by blinded research assistants. All components represented very good agreement (Kappa Measurement of Agreement *Look* .74; *Deliver* .82; *State behaviour* .93) except for Praise (*Kappa* = .65) which showed moderate agreement.

[Insert Table 1 about here]

Structured consultation. The training script and structured consultation procedural guide were adapted from Briere et al (2015) for the early intervention context. The structured consultation process included three steps. The first step involved initial scripted training in descriptive praise including definition, critical features, and a brainstorming activity of when to use this strategy. Explanation of observation sessions, self-monitoring, and feedback

sessions were also given in this 30 minute session. The second step involved 10 minute observations of strategy implementation and completion of monitoring by the consultee (self-monitoring) and consultant (forms available from authors). The third step involved completion of 15 minute feedback sessions where consultees discussed their own self-monitoring and consultants provided performance feedback, and discussed goals for further development to promote strategy implementation.

Social validity. An adapted version of the Intervention Rating Profile-15 for teachers (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985) was completed by the four participants to assess the social validity of the strategy and consultation model. The profile contained 13 questions on six-point Likert scales.

Results

Fidelity of strategy implementation

Analysis was conducted using the Single Case Data Analysis (SCDA) package (Wilbert, 2014) in R version 3.2.2 (R Core Team, 2015). Figure 1 displays the percentage fidelity to descriptive praise by each of the three Consultees during baseline and training. Consultee 1 ($M = 36.80\%$) and 3 ($M = 37.20\%$) used descriptive praise with fidelity less than 50% of the time across baseline sessions with one exception each (Consultee 1 60% and Consultee 3 70%). Consultee 2's baseline was generally stable with a mean fidelity level of 5.4%. While Consultee 3 showed a variable baseline with a rising trend between observation four and five, time factors did not allow further collection of baseline data prior to implementing the intervention. The three consultees increased their use of descriptive praise with fidelity following training and all achieved competency ($\geq 90\%$ fidelity). Non-overlap of all pairs (NAP) was used to assess the size of treatment effects using guidelines by Parker and Vannest (2009) that indicated strong effects of the intervention for all three consultees with

the NAP of Consultee 1 of 96.25%; Consultee 2 of 100%; and Consultee 3 of 96%. The overall NAP across Consultees was 97.42% likewise indicating a strong effect.

[Insert Figure 1 about here]

Visual analysis was consistent with NAP calculations and suggested differing patterns of improvement for each of the three Consultees. As shown in Figure 1, each consultee was observed for five baseline sessions before receiving training in descriptive praise. Following this, consultees were observed and received structured consultation sessions as indicated by circles, with Consultee 1 completing three sessions, while Consultee 2 and 3 completed two. Consultee 1 required eight sessions before reaching competency and Consultees 2 and 3 required four sessions.

Each consultee was observed two weeks after training to assess maintenance. Consultee 1 and 3 maintained fidelity (100%). Consultee 2's fidelity was 88%. Thus, Consultee 1 and 3 remained above the 90% criteria for fidelity set in this study, whereas Consultee 2 remained higher than her baseline fidelity (5.4%), but just below this cut-off.

Social validity

Results indicated that participants viewed the within-school consultation process as a socially valid method of training. Mean ratings and ranges (on the adapted IRP-15) for each item are displayed in Table 2. Mean scores for all items were 5.5 or above on a 6 point scale with 6 indicating strongly agree. All staff strongly agreed the consultation method was a useful model to develop intervention practices, an appropriate method to teach descriptive praise, would recommend it to other staff and were willing to use this method in the future.

[Insert Table 2 about here]

Discussion

Our results demonstrate the utility and social validity of structured consultation. Consultees increased their use of descriptive praise with fidelity and maintained gains two

weeks post. The consultant rapidly learned training strategies to implement with the paraprofessionals. This approach to professional development is likely to be viewed favourably by early intervention service providers as it makes use of in-house knowledge and expertise and is likely to be more cost effective than traditional workshop-based approaches that use external specialists. An external specialist may still be required if the expertise is not available internally.

The consultees were all paraprofessionals and the consultant was a professional staff member. Further research is needed to determine the extent to which structured consultation can transcend job descriptions (e.g., paraprofessional consulting professionals) and disciplines (e.g., speech pathologists consulting psychologists). In principle, a consultant could be any staff member with expertise in a desired/needed strategy regardless of job title or discipline, but little, if any, research has been conducted investigating this aspect of job-embedded learning.

This study focused on a relatively straightforward intervention strategy and provides an initial proof of concept that could be expanded to a range of strategies. Results for Consultee 1 and 2 following stable baselines provide confidence in change due to intervention; however further baseline data for Consultee three if time permitted would have provided further confidence on treatment effect.

Future research could provide important information on the generalisability of this method to a range of strategies, key components, and durability of changes. The use of group-based designs could allow investigation of generalisation as well as comparison of the outcomes of traditional training alone vs. the potential additive effects of observation and consultation sessions. Research using other strategies could further address whether structured consultation is both effective and socially-valid across a range of practices. The addition of longer follow-up periods could address the question of durability.

This study used voluntary participants with established relationships and outcomes may vary if participation in such an approach was mandated and did not include an established relationship with an experienced consultant. Further, casually employed staff were used to relieve participants from their normal duties so they could attend structured consultation meetings. This may have acted as an incentive for staff to participate and been a key ingredient in the success and feasibility of the intervention. The feasibility of the structured consultation approach may, in part, be dependent on the relationship and availability of additional resources such as those used in this study.

In conclusion, a significant challenge in the field is how to translate strategies designed and tested in controlled conditions to everyday practice in community settings (Pellecchia et al., 2015). Previous research (Briere et al., 2015) has suggested the utility of structured consultation to train teachers, and this study provides the initial proof of concept of its potential in the early intervention setting with paraprofessionals. Future research is needed to test this approach with more complex strategies implemented across a larger number of participants, over longer period of time, and across disciplines. Such an approach holds promise for a professional development that may fit within the context of existing early intervention systems using existing skills and knowledge to upskill colleagues to increase use of EBPs with fidelity.

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Table 1

Operational Definition of Descriptive Praise Components

<i>Component</i>	<i>Definition</i>
Look	Looking at the child to get their attention
Deliver	Praise contingent on behaviour and within three seconds of its occurrence
State behaviour	A single behaviour is described
Praise	A positive statement is included

Table 2

Social Validity Ratings (Adapted IRP-15)

<i>Item</i>	<i>M (range)</i>
1. The structured consultation model was an acceptable way to improve skills	5.75 (5-6)
2. Most staff members would find the structured consultation model appropriate	5.75 (5-6)
3. The consultation model proved effective in helping to change staff behaviour	5.50 (5-6)
4. I would recommend the use of the structured consultation model to other staff to develop their use of specific intervention practices	6 (6)
5. I would be willing to continue using the consultation model in the future	6 (6)
6. The strategy used during the consultation (i.e., descriptive praise) would not result in negative side effects for children	5.75 (5-6)
7. The strategy used during the consultation (i.e., descriptive praise) would be appropriate for a variety of children	5.75 (5-6)
8. The strategy recommended by the consultation (i.e. descriptive praise) is consistent with those I have used before in the classroom setting	5.50 (4-6)
9. The strategy used during the consultation (i.e., descriptive praise) is a fair way to increase desirable behaviour in children with ASD	6 (6)
10. The strategy used during the consultation (i.e., descriptive praise) is reasonable for increasing desirable behaviour in children with ASD	6 (6)
11. I liked the procedures used in the consultation intervention	6 (6)
12. The strategy used during the consultation (i.e., descriptive praise) is a good way to increase desirable behaviour	5.75 (5-6)
13. Overall, the consultation model was beneficial	6 (6)

Figure Caption

Figure 1. Observed Fidelity by Consultees during baseline and intervention. Circles indicate structured consultation feedback sessions.

