JoDD
Journal on Developmental Disabilities
Volume 25 Number 1, 2020
On-Line First

Social Validity of a Kindergarten-Readiness Behavioural Intervention for Children with Autism

Author Information

Karis Cochrane,[1]
Carly Cressman,[1]
Toby L. Martin [1,2]

[1]Department of Psychology, University of Manitoba, Winnipeg MB
[2]St.Amant Research Centre, Winnipeg MB

Correspondence:

cochra13@myumanitoba.ca

Keywords

social validity,
early intensive behavioural intervention,
intervention satisfaction,
applied behaviour analysis,
autism spectrum disorder

Abstract

Social validity assessments measure consumer satisfaction with the goals, procedures, and outcomes of a program. This study aimed to measure the social validity of a modified early intensive behavioural intervention (EIBI) for 5-year-old children with a formal autism spectrum disorder diagnosis. We evaluated a pilot program developed by St.Amant called the Pre-Kindergarten Program (PKP). Eight populations were surveyed using six unique questionnaires to measure indirect consumers', immediate community members', and extended community members' satisfaction with the goals, procedures, and outcomes of the PKP. Questionnaires were distributed via email and mail containing a web-browser link and/or a paper questionnaire. A total of 82 responses across all populations were analyzed for within-group and between-group differences using descriptive statistics and Pearson correlations to make recommendations for how Pre-Kindergarten EIBI programs can most effectively meet consumer needs. The PKP had good social validity overall. Waitlist families and families being served were the most satisfied overall; clinicians outside the program were the least satisfied group. Lack of parental involvement and limited service hours were recurring concerns mentioned among various populations in open-ended questions. Further research is required to determine the social validity of other EIBI programs and the factors that relate to social validity.

Introduction

Social validity can be defined as the acceptability of treatment goals, procedures, and outcomes (Wolf, 1978). Much research has successfully demonstrated the effectiveness of Early Intensive Behaviour Intervention (EIBI; Gruson-wood, 2016; Tews, 2007), yet little research has been conducted to determine its social validity (Klintwall, Eldevik, & Eikeseth, 2013). Behavioural interventions are indeed powerful tools, but they will be unlikely to produce lasting results if the intervention agents find them unacceptable (Carroll & St. Peter, 2014; Schwartz & Baer, 1991). Schwartz and Baer (1991) recommended three steps to determine the acceptability of a program: (a) identify what needs to be evaluated regarding the goals, procedure, and outcomes; (b) establish whom to ask and collect data from; and (c) decide how to go about obtaining information (interview, questionnaire, etc.). Schwartz and Baer (1991) also proposed that a well-rounded social validity assessment samples four primary populations. The first population is *direct consumers*, who are the immediate recipients of the intervention. The second population is the *indirect consumers*, who are the individuals that greatly benefit from the behaviour change. Thirdly, they recommended sampling *immediate community members*, who are those who through proximity interact with direct or indirect consumers frequently. Lastly, they recommended including *extended community members*, which are those individuals who have no contact at all or may not even know the direct or indirect consumers.

EIBI and Social Validity

Social validity and the factors that contribute to it are inconsistently reported in the current behaviour intervention literature. A review by Callahan et al. (2016) examined 828 studies of evidence-based practices for ASD treatment as identified by the National Autism Center (NAC) and National Professional Development Center on Autism Spectrum Disorders (NPDC). Results indicated that only 221/828 (26.7%) articles provided a direct measure of social validity.
In a rare positive example (Neitzel, 2004), researchers measured the social validity of both the parents of young children with ASD (2-5 years of age) and the early intervention professionals who worked with them. In doing this, they used the Family-Centered Program Rating Scale (FCPRS), which was created to ascertain parent and care-provider satisfaction with early interventions (Murphy, Lee, Turnbull, & Turbiville, 1995). They found that the early intervention professionals were more satisfied with intervention services for young children with autism than the parents were. This finding suggests a need for further social validity assessments of EIBI programs to understand how program acceptability varies across stakeholder groups.
In the present study, we evaluated the social validity of a pre-kindergarten program (PKP) provided to children with a formal autism spectrum disorder (ASD) diagnosis. The program was delivered in Winnipeg, Manitoba by St.Amant—a provincially funded non-profit agency that serves Manitobans with autism and other developmental disabilities. The PKP ran for the first time from February 4th, 2016 until September 2nd, 2016 (7 months) and for the second time from February 4th, 2017 to September 2nd, 2017 (9 months). The purpose of the PKP was to promote readiness for kindergarten in a group of five-year-old children who would have otherwise aged off the wait list for the Early Learning Program (i.e., preschool EIBI) at St.Amant.
The PKP was a modified EIBI Program. While the program met most criteria of an EIBI program, according to Eldevik et al. (2009), 3 out of 10 components were missing. First, there was no parental involvement in the program. Secondly, although the treatment was one-on-one,

it took place in a classroom environment rather than a home setting. The program was also shorter in duration (7 to 9 months) and intensity (20 hr/wk) than a typical EIBI. Otherwise, the remaining 7/10 recommended EIBI components, such as a personalized intervention plan, clinicians with Applied Behaviour Analysis (ABA) training, and normal development outcomes were met.

Nineteen children participated in the pilot year of the PKP (2016); 21 children participated in 2017. The children were educated at two different locations and received service either in the morning or afternoon. St.Amant used responses from a nine-item social validity questionnaire to evaluate the satisfaction of the parents of the children in the program upon program completion.

Our primary goal in conducting this research was to evaluate the acceptability of the goals, methods, and outcomes of a pre-kindergarten modified EIBI program (St.Amant's PKP) to its indirect consumers, immediate community members, and extended community members. We also aimed to identify individual items which correlated most strongly to social validity because the most important contributors to social validity are currently unknown. We sampled a diverse range of populations, using Schwartz and Baer's (1991) recommendations for conducting a thorough social validity assessment.

Materials and Methods

Participants

Participants were 82 adults who represented one of the following groups:

- Parents/guardians of children who were previously enrolled in the 2017 PKP (n = 11)
- Parents/guardians of children on the St.Amant Early Learning Program (SAELP) waitlist who were not offered the PKP service (n = 4). None of the parents who responded had received any form of ABA intervention for their child, from inside or outside St.Amant, but were waiting to receive St.Amant services
- St.Amant staff involved in the PKP (n = 7). Respondents included 2 Autism Consultants, 2 Senior Tutors, and 3 Tutors. Each respondent was personally involved either by teaching children 1-on-1 or by developing the children's personalized intervention plans in the 2017 PKP
- St.Amant Autism Program staff not involved in the PKP (n = 12). Respondents included 7 Autism Consultants, 3 Autism Tutors, and 2 Lead Autism Tutors; all were employed in the St.Amant Early Learning program at St.Amant in 2017
- Daycare/Nursery School Staff (n = 12). Respondents were staff from 6 different daycares in Winnipeg, MB; these included 4 Early Childhood Educators (II), 3 Supervisor/Directors, 1 Childcare Assistant, and 4 not specified
- Family Social Service Workers (n = 16). All respondents were registered family social service workers employed in Winnipeg, MB
- Clinicians outside of St.Amant (n = 7). Respondents included 4 Occupational Therapists, 1 Physiotherapist, and 1 Speech Language Pathologist all employed in Winnipeg, MB
- Kindergarten Teachers (n = 13). Respondents were 11 kindergarten teachers and 2 resource teachers. All were employed in the River East Transcona School Division in Winnipeg, MB.

Respondent demographics such as age range, gender ratio, ethnicity, and socioeconomic status were not collected. It is also unknown whether more than one individual from each household participated within each group. Respondents in some groups, such as clinicians, family service

workers, kindergarten teachers, and daycares, may have served children who were enrolled in the 2017 PKP, and may therefore have observed clients during their time in the program. It is unknown how many respondents did so.

Instruments

We developed six different social validity questionnaires. Each questionnaire began with a brief written description of the PKP. Each of the questionnaires contained the same eight general social validity satisfaction items, one overall satisfaction item, and several questions specific to their demographic. Questions were presented as 5-point Likert scale items ranging from *1 = Strongly Disagree* to *5 = Strongly Agree*, and 6 = *Not Applicable (N/A*), with the exception of two items rated on a 3-point Likert scale from *1 = too few/too little* to *3 = too much*. Lastly, all 8 groups were asked up to three open-ended questions to allow for comments.

Parents of children in the PKP received a comprehensive 47-item social validity questionnaire, while each of the other seven questionnaires consisted of nine to 17 items. It should be noted that all six questionnaires were original to our study, and their psychometric properties have not yet been assessed.

Recruitment and Procedure

Participants completed a questionnaire either on paper or using Survey Gizmo (http://www.surveygizmo.com). All questionnaires included a consent form stating that recipients had no obligation to complete the questionnaire, and confidentiality and anonymity would be maintained. Participants gave consent by completing the paper copy provided and returning it in a pre-paid envelope, or by clicking a button at the end of the online questionnaire to complete it. The only participation required of our participants was the completion of the questionnaire. Participants completed questionnaires at a time and location of their choosing.

To recruit participants for this study we used several approaches. St.Amant Autism Programs emailed and mailed eligible families and individuals recruitment letters with a brief project description and consent form. To identify daycares/nursery schools, we took a quasi-random sample; selection was not based on which locations served the children in the PKP. We also selected one school division in Winnipeg via random sample. We then contacted every principal within the chosen school division to have questionnaires passed on to all kindergarten teachers. Finally, we recruited clinicians outside of St.Amant along with family service workers by contacting managers at St.Amant Clinical Services, Children's Disability Services, and Manitoba Department of Families.

St.Amant Autism Program administrative staff (not direct supervisors) sent recruitment letters via email and mail on our behalf to ensure ethical anonymity. The consent form/recruitment letters indicated that participation is voluntary and would in no way affect any current or potential future services provided by St.Amant. Participants were only asked to provide identifying information in the questionnaire if they chose to receive an update of the results of the study upon its completion. Identifying information was in no way linked to any data.

We obtained ethics approval for this research from both the St.Amant Research Access Committee as well as the Psychology and Sociology Research Ethics Board (PSREB) at the University of Manitoba.

Design

A cross-sectional, descriptive observational design was used: participants completed a survey at a single point in time and a control group was not recruited. All Likert scale responses from the eight populations were analyzed to produce descriptive statistics regarding the social validity of the PKP and to compare social validity within and between groups. To identify factors that contribute to social validity, Pearson correlations were run between individual items and sections of the questionnaire with the overall satisfaction question included in every questionnaire.
To analyze the responses to open-ended questions obtained from the various populations, a qualitative content analysis was conducted (Elo & Kyngas, 2008) where written responses were analyzed within an open coding strategy. Categories and themes were then freely derived by multiple coders for each question according to the topics identified in the participant's responses. We then grouped the topics into broader themes such as staffing issues, for example. The frequencies of the themes were then analyzed and counted to represent the number of occurrences.

Results

Indirect Consumers (*PKP Parents*)

Parents' overall satisfaction with the PKP was high and consistent across responses (see Table 1). We divided the 47-item questionnaire into six domains; Goals, Personnel, Impact, Methods, Other, and Overall Satisfaction. Of the six domains measures, the *Other* section received the highest ratings ($M = 4.73$, $SD = 0.65$). The second highest rated section was the *Impact* section ($M = 4.66$, $SD = 0.63$). The lowest rated section was the *Goals* section ($M = 3.98$, $SD = 0.86$). The remaining sections both received moderate to good ratings above a mean of 4 (Agree).

Table 1.

Responses to 9 Universal Social Validity Questions - M (SD)

	PKP Parents (n =11)	PKP Staff (n = 7)	St. Amant Staff (n = 12)	Waitlist Families (n = 4)	Daycares (n = 12)	Kindergarten Teachers (n = 13)	Family Social Services (n = 16)	Clinicians (n = 7)
1. I feel that the PKP is an effective program.	4.82 (.40)	4.29 (.76)	4.56 (1.01)	5.00 (.00)	3.82 (.75)	4.08 (1.12)	4.21 (.89)	2.67 (1.51)
2. I feel that the PKP is an important program.	4.91 (.30)	4.86 (.38)	4.82 (.60)	5.00 (.00)	4.25 (.62)	4.31 (1.11)	4.50 (.52)	3.29 (1.38)
3. I feel that the features of the PKP are appropriate given its goals.	4.91 (.30)	4.00 (1.00)	4.10 (1.20)	5.00 (.00)	4.33 (.49)	4.23 (1.09)	4.40 (.63)	2.86 (1.21)
4. I am satisfied with the goals of the PKP.	4.91 (.30)	4.43 (.53)	4.64 (.50)	5.00 (.00)	4.00 (.89)	4.15 (1.14)	4.20 (.86)	3.29 (1.25)

5. I am satisfied with the outcomes of the PKP.	4.91 (.30)	4.00 (1.00)	4.50 (.53)	5.00 (.00)	4.11 (.33)	3.92 (1.19)	4.07 (.96)	2.86 (1.21)
6. I am satisfied with the approach used by the PKP.	4.91 (.30)	3.43 (1.40)	4.82 (.40)	5.00 (.00)	4.18 (.60)	3.92 (1.12)	4.13 (.83)	2.57 (1.27)
9. Overall, I am generally satisfied with the PKP program.	4.73 (.65)	3.86 (.90)	4.42 (.67)	5.00 (.00)	3.75 (.45)	4.08 (.64)	4.07 (.80)	3.29 (1.38)

Note. Likert scale: (1) strongly disagree, (2) disagree, (3) Neither agree or disagree, (4) agree, (5) strongly agree.

The four lowest-rated items among the 47-item questionnaire were all 5-point Likert scale items. The first item was "I have observed undesirable behavioural changes in my child's behaviour since enrolling in the PKP" (*Goal* section; $M = 2.00$, $SD = 1.41$). The second lowest rating was for the statement, "My family's overall quality of life has improved since the onset of the PKP" (*Goal* section; $M = 3.27$, $SD = 1.35$). The third was "I was informed in advance of a change in personnel that work with my child on a daily basis" (*Personnel* section; $M = 3.80$, $SD = 1.23$). The last was "I understand the concept of discrete-trials testing" (*Method* section; $M = 3.90$, $SD = 1.10$). All remaining items of the questionnaire received ratings of 4 (Agree) and above. Parents gave moderate ratings regarding hours of service and level of parental involvement (see Table 3).

Table 3.
Responses to 3-point Likert scale Universal Social Validity Questions - M (SD)

	PKP Parents ($n = 11$)	PKP Staff ($n = 7$)	St.Amant Staff ($n = 12$)	Waitlist Families ($n = 4$)	Daycares ($n = 12$)	Kindergarten Teachers ($n = 13$)	Family Social Services (n = 16)	Clinicians (n = 7)
1. I feel that the PKP offers (fill in the blank) hours of service per child.	1.91 (.30)	1.43 (.53)	1.33 (.49)	2.00 (.71)	1.82 (.60)	2.00 (.00)	1.93 (.46)	2.00 (.82)
2. I feel that the level of parent involvement is with the PKP is (fill in the blank).	1.91 (.30)	1.00 (.00)	1.08 (.29)	2.40 (.55)	1.50 (.52)	1.50 (.52)	1.80 (.41)	1.86 (.90)

Note. 3-point Likert scale: (1) too few; too little, (2) adequate amount, (3) too many; too much

Correlations were computed within stakeholder groups between individual item ratings and overall satisfaction to identify which items contributed most strongly to the overall satisfaction with the PKP (Table 2). The two items of the 47-item questionnaire that correlated most strongly with overall satisfaction were (1) "I have observed positive behaviour changes with my child since the onset of the PKP, and (2) "I feel the PKP is an effective program."

Table 2.
Correlations With Overall Satisfaction

	PKP Parents (*n* = 11)	PKP Staff (*n* = 7)	St.Amant Staff (*n* = 12)	Waitlist Families (*n* = 4)	Daycares (*n* = 12)	Kindergarten Teachers (*n* = 13)	Family Social Services (*n* = 16)	Clinicians (*n* = 7)
1. I feel that the PKP is an effective program.	.94**	.81*	.52	N/A	-.16	.46	.60*	.41
2. I feel that the PKP is an important program.	.37	.91*	.22	N/A	.24	.20	.27	.48
3. I feel that the features of the PKP are appropriate given its goals.	.37	.74	.44	N/A	.00	.21	.51	.53
4. I am satisfied with the goals of the PKP.	.37	.15	.24	N/A	.00	.32	.39	.33
5. I am satisfied with the outcomes of the PKP.	.37	.93*	.77*	N/A	.25	.45	.65*	.23
6. I am satisfied with the approach used by the PKP.	.37	.45	.04	N/A	-.16	.36	.41	.37

Note. Values are Pearson correlation coefficients. * indicates a significant p-value of < .05. ** indicates a significant p-value of < .001. N/A indicates a p-value was not calculated. Variance across participant ratings was equal to zero.

In the open-ended sections of the questionnaire, 100% of parents provided responses. The following themes emerged from the thematic analysis: good child progress (8/11; 67%), a need for more hours/longer duration (4/11; 33%), too slow of a learning pace (3/11; 25%), too many communication issues (3/11; 25%), and problems with personnel/staff (2/11; 17%). When asked what they liked most about the program, 5/11 (45%) parents stated they liked the one-on-one approach, 6/11 (55%) wished the program was longer in duration, and 4/11 (36%) thought the program would be better if it were more accessible, either by being closer to home or offering a daycare. Regarding the goals of the program, 4/11 (36%) parents hoped to improve their child's speech, and 4/11 (36%) hoped that their child would be prepared for kindergarten.

Immediate Community Members (*PKP Staff*)

PKP staff were most satisfied with the importance of the PKP, the goals of the PKP, and the effectiveness of the PKP, as demonstrated by these items receiving the highest ratings. The lowest rated items answered on a 5-point Likert scale included “I feel that my client is now ready for kindergarten” (*M* = 3.29, *SD* = 1.11), “I am satisfied with the approach of the PKP” (*M* = 3.29, *SD* = 1.11), “I have seen significant improvement in my client’s undesirable behaviours since the onset of the PKP” (*M* = 3.57, *SD* = 1.62), and “I have seen significant improvement in

my client's behaviours since the onset of the PKP" (*M* = 3.83, *SD* = 1.47). Notably, 57% of PKP staff felt there were too few hours of service offered and 100% of PKP staff felt there was too little parental involvement.

Overall Satisfaction was measured using the 5-point Likert agreement scale. PKP staff had a mean of 3.86 in overall satisfaction indicating moderate satisfaction with the program. There were substantial correlations between overall satisfaction and ratings regarding program outcomes, program importance, and program effectiveness (see Table 2). The lowest correlation with overall satisfaction was satisfaction with program goals.

None of the PKP staff provided any additional comments or responses, and as such, there was no thematic analysis conducted for this group.

Extended Community Members

(*Clinicians, Family Service Workers, Kindergarten Teachers, Daycares, Waitlist Families, Autism Program Staff)*

The most highly rated items across all extended community members were those regarding the goals of the PKP, the importance of the PKP, and the features of the PKP (see Table 1). The lowest rated items across all groups were regarding program effectiveness and program outcomes. Waitlist families had the highest mean ratings of any group (*M* = 5.00, *SD* = 0.00), followed closely by Autism Program staff (*M* = 4.42, *SD* = 0.67). Notably, all waitlist individuals replied 5 (Strongly Agree) to the statement, "Given the opportunity, I would enter my child in the PKP" on a 5-point Likert Scale. Conversely, clinicians showed the lowest overall satisfaction of all groups (*M* = 3.29, *SD* = 1.38), followed by daycares (*M* = 3.75, *SD* = 0.45). When all extended community member groups were asked about their satisfaction with the hours of service offered by the PKP and the level of parental involvement in the PKP, results were mixed (see Table 3). Autism Program staff felt there were too few hours of service provided (*M* = 1.33, *SD* = 0.49), while all other groups felt there was an adequate number of hours of service offered. Autism Program staff, daycares, and kindergarten teachers all felt that there was too little parental involvement in the PKP (*M* = 1.08, *SD* = 0.29; *M* = 1.50, *SD* = 0.52; *M* = 1.50, *SD* = 0.52, respectively).

Overall Satisfaction was measured using the 5-point Likert agreement scale for all groups. The correlations between overall satisfaction ratings and ratings on individual social validity items varied across groups (see Table 2).

In the open-ended section of the questionnaire, 33% (21/64) of extended community members responded. The following themes emerged from the thematic analysis: a desire for more information on the program (6/64; 9%), a need for more parental involvement (5/64; 8%), a wish for more hours and longer duration (3/64; 5%), a lack of social skill development and peer interaction (4/64; 6%), and a need for a more individualized intervention (3/64; 5%). The most frequent theme in the open-ended responses, which was articulated by kindergarten teachers, family service workers, clinicians, and Autism Program staff, was that the PKP needed more parental involvement. A second theme that was frequently reported by the Autism Program staff and daycare staff was a need for a longer duration of the program and more hours of contact per day. Additionally, clinicians commented that the goals of the program were not realistic as the schedule of the day did not reflect a school setting, and there was no exposure to typically developing children. Family service workers also commented that the program seemed inaccessible to families living in rural areas.

Discussion

The goals, methods, and outcomes of a kindergarten-readiness behavioural intervention (the PKP) were generally acceptable to its indirect consumers, immediate community members, and extended community members. The program, operated by a publicly-funded community service agency, differed from typical EIBI principally by being shorter (7 to 9 months maximum), lower intensity (20 hr/week), classroom-based rather than home-based, and by having no required parent involvement. Parents and PKP staff tended to be more satisfied if they felt the program was more effective and they were satisfied with its outcomes. Additionally, parents tended to be more satisfied when there was greater parental involvement, whereas PKP staff were more satisfied when they felt the program was highly important. To our knowledge, this study was the first to systematically assess the social validity of a community-based modified EIBI program among a diverse range of stakeholder groups, as recommended by Schwartz and Baer (1991). Our findings differed from Neitzel (2004), in that we found parents were more satisfied with the program than staff; the reverse was true for Neitzel (2004). The discrepancy may relate to the fact that Neitzel (2004) evaluated a typical EIBI program; it was home-based, and longer and more intense than the PKP. The relationship between program features and social validity is an important area for future study.

It should be noted that Clinician ratings (see Table 1) were lower than most groups, including St.Amant staff. Our only information about the reason for this difference can be derived from comments provided by clinicians, which included (1) a desire to have more information about the program, (2) the belief that the goals of the PKP were not realistic and did not reflect a true school setting, and (3) a concern that there was no exposure to typically developing children in the PKP classroom.

Two significant areas of concern were identified in the open-ended questions by multiple populations. Firstly, parents of the PKP, non-PKP staff, family service workers, kindergarten teachers and clinicians (5/8 populations, 62.5%) identified a need for greater parental involvement in the PKP and additional training, resources, and support for parents. This finding supports the recommendations made by Tongue, Bull, Brereton and Wilson (2014), who stressed the importance of parental involvement in the intervention for a program to be effective. Secondly, PKP parents, non-PKP staff, daycares, and family service workers (4/8 populations, 50%) all indicated that they would have liked the program to be longer in duration; both in the number of hours provided per day and overall period of the program in months. This finding suggests that program duration and hours provided are not only highly associated with program efficacy (Eldevik et al., 2009), but also program social validity. That is, higher intensity and longer duration in an EIBI program tends to lead to better program outcomes and greater consumer satisfaction.

This study had several limitations. First, there was a limited and variable response rate across all populations (mean: 10 responses per group). Second, we were not able to compare demographic factors such as socioeconomic status, gender, and age within or between populations—these data were not collected to preserve respondent anonymity. Third, we were unable to ascertain social validity information from the direct consumers themselves (the children who participated in the PKP) as these young children were only 5 years old and would likely be limited or constrained in their verbal abilities. Finally, no clinical outcome data were available for participants to reflect on when responding to questions about program outcomes. We were only able to inform respondents about program attrition (i.e. completion rate).

Our findings suggest several areas for further research. Further systematic study of how program features relate to satisfaction among the stakeholder groups would help community providers to design programs that are both effective and acceptable to consumers. It would also be valuable to study how satisfaction among various stakeholder groups, especially parents, relates to individual clinical outcomes as well as to demographic variables. Finally, there is much to be learned about how and why different stakeholder groups differ in their satisfaction with the goals, methods, and outcomes of an intervention.

Regardless of the effectiveness of any given EIBI, if the components of the program are not acceptable to its consumers, the EIBI may not be serving its intended purpose to its fullest capacity and may need to be improved (Wolf, 1978). Therefore, it is vital that consumer input is incorporated into EIBI programs and that consumers find the components satisfactory, viable, and acceptable.

Key Messages From This Article

Professionals. When it comes to early intervention program satisfaction, parents and staff will tend to be more satisfied if they feel that the program is effective.

Policymakers. When creating and implementing interventions for children with autism, opinions (on program goals, procedures, and outcomes) of both the immediate and extended community should be taken into consideration.

Acknowledgments

We wish to thank Lindsay McCombe at St.Amant for her invaluable assistance in participant recruitment for this study. We also wish to thank Duong Ramon, Carly Thiessen, and Caroline Simard at St.Amant for allowing us to access their staff contact information for recruitment purposes and assisting us in getting our recruitment packages to clients. Without these wonderful ladies, this study simply would not have been possible.

References

Callahan, K., Hughes, H., Mehta, S., Toussaint, K., Nichols, S., Phoenix, S., …Wang, H. (2017). Social validity of evidence-based practices and emerging interventions in autism. *Focus on Autism and Other Developmental Disabilities*, *32*(3). https://doi.org/10.1177%2F1088357616632446

Carroll, R., & St. Peter, C. (2014). Methods for assessing social validity of behavioral intervention plans for children with attention deficit hyperactivity disorder. *Acta de Investigacion Psicologica, 4*, 1642-1656.

Eldevik, S., Hastings, R. P., Hughes, C. J., Jahr, E., Eikeseth, S., & Cross, S. (2009). Meta-analysis of early intensive behavioral intervention for children with autism. *Journal of Clinical Child & Adolescent Psychology, 38*, 439-450.

Elo, S., & Kyngas, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing, 62*, 107-115.

Gruson-Wood, J. F. (2016). Autism, expert disclosures, and subjectification: A critical examination of applied behavioural therapies. *Studies in Social Justice, 10*(1). https://doi.org/10.26522/ssj.v10i1.1331

Klintwall, L., Eldevik, S., & Eikeseth, S. (2013). Narrowing the gap: Effects of intervention in developmental trajectories in autism. *Autism, 19*, 53-63.

Murphy, D., Lee, I., Turnbull, A., & Turbiville V. (1995). The Family-Centered Program Rating Scale: An instrument for program evaluation and change. *Journal of Early Intervention 19*, 24-42.

Neitzel, J. (2004). *Understanding parent and professional satisfaction with family-centered early intervention services for young children with autism* (Doctoral dissertation). Retrieved from ProQuest (3140377)

Schwartz, I. S., & Baer, D. M. (1991). Social validity assessments: Is current practice state of the art? *Journal of Applied Behavior Analysis, 24*, 189-204.

Tews, L. (2007). Early intervention for children with autism: Methodologies critique. *Developmental Disabilities Bulletin, 25*(1/2), 148-168. Retrieved from ProQuest (232463823)

Tongue, B., Bull, K., Brereton, A., & Wilson, R. (2014). A review of evidence-based early intervention for behavioural problems in children with autism spectrum disorder: The core components of effective programs, child-focused interventions and comprehensive treatment models. *Current Opinion in Psychiatry, 27*, 158-165.

Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis*, *11*, 203-214.