

A Pilot of a Brief Positive Parenting Program on Children Newly Diagnosed with Autism Spectrum Disorder

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Disruptive behaviors can be of comparable or greater concern to parents than the core symptoms of Autism Spectrum Disorder (ASD). Provision of effective interventions to address these behaviors within the first year of initial diagnosis holds great potential for improving the child's, parents', and family's functioning. We piloted a four-session, manualized, positive parenting program on 21 parents of newly diagnosed children ages 2 through 12 years using a mixed methods design. Seventy-five percent of parents completed four sessions, with 100% reporting high levels of service satisfaction. Preliminary results indicated clinically and statistically significant reductions in child maladaptive behaviors, as well as improvements in parental and family functioning. Practitioners and parents identified several potential implementation adaptations, including additional sessions to focus on ASD education and real-time parent-child interactions. Taken as a whole, these data suggest that a brief positive parenting intervention may be a feasible way to improve child, parent, and family functioning during the first year of ASD diagnosis. Findings point to the need for additional research to determine treatment efficacy and to assist with the identification of moderators and mediators of effects.

Keywords: Positive Parenting; Autism Spectrum Disorder; Maladaptive Behaviors

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Autism Spectrum Disorder (ASD) is a prevalent, life-long neurodevelopmental disorder impacting social, communicative, and behavioral functioning (Zablotsky, Black, Maenner, Schieve, & Blumberg, 2015). In addition to experiencing impairments associated with the core symptoms of ASD, 50–70% of children also display a range of

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concomitant behavioral problems, including tantrums, noncompliance, aggression, and self-injury (Konst, Matson, & Turygin, 2013; Lecavalier, 2006). These behaviors can be of comparable or greater concern to parents than the core symptoms of ASD (Estes et al., 2012) and impact not only on the child's functioning, but also the functioning of the child's parents and family (Higgins, Bailey, & Pearce, 2005; Huang et al., 2014; McStay, Dis-sanayake, Scheeren, Koot, & Begeer, 2014).

While the efficacy of parent-mediated interventions (PMI) in reducing problem behaviors among neurotypical children has been well established (Kaslow, Broth, Smith, & Collins, 2012), less is known about the role of PMIs in decreasing these behaviors among children with ASD (Bearss, Johnson et al., 2015). *Historically, evidence-based PMI programs targeting children with ASD have relied on a "parent as therapist" model, teaching parents how to reduce core ASD symptomatology through the promotion of social interaction, communication, and/or imitation skills (Bearss, Burrell, Stewart, & Scahill, 2015). Of the PMIs that have targeted the reduction of maladaptive behaviors, none have addressed parent and family experiences at critical junctures in the family's life cycle—the first year of initial diagnosis.*

Parental stress is high at the time of first diagnosis, with researchers reporting up to 80% of parents experiencing significant distress during this period (Rivard, Terroux, Parent-Boursier, & Mercier, 2014). Considerable research has linked maternal stress to diminished parental functioning, failure to engage in services, and suboptimal developmental outcomes for children (Hall & Graff, 2011; Hayes & Watson, 2013; Huang et al., 2014; McStay et al., 2014). Relative to parents of children without disabilities, mothers of children with ASD report higher levels of stress and lower levels of parenting competence, with challenging child behaviors being a primary predictor of both maternal stress (Benson, 2010; Estes et al., 2012) and family functioning (Higgins et al., 2005; Sikora et al., 2013).

Parenting Competence and Child Behaviors

Learning that your child has ASD can cause parents to question their ability to parent competently (Zand, Braddock, Baig, Deasy, & Maxim, 2013). Parenting competence is a multidimensional construct that encompasses behavioral, affective, and cognitive components (Coleman & Karraker, 2000). A core cognitive aspect of parenting competence is parenting self-efficacy (PSE)—the belief that one will be able to perform parenting tasks successfully. While the specific influence of PSE on parenting behaviors and child functioning has varied across studies, consistently researchers have reported strong associations between PSE and these constructs (Jones & Prinz, 2005). Among children with developmental disabilities, interventions focusing on improving PSE have been linked with decreases in both punitive parenting practices and child externalizing behaviors (Mazzucchelli & Sanders, 2011; Roux, Sofronoff, & Sanders, 2013). Research on parents of children with ASD shows a positive association between maternal levels of confidence in their parenting skills and their active involvement in the promotion of their child's development (Kuhn & Carter, 2006). For these parents, PSE has also been shown to mediate the relationship between maternal stress and child externalizing behaviors (Hastings & Brown, 2002).

Family Functioning and Child Behaviors

Following a diagnosis of ASD, families engage in an ongoing process of adaptation (Manning, Wainwright, & Bennett, 2011). For these families, the convergence of multiple stressors and accumulating demands not only impacts parental functioning but also has been linked to lower levels of family quality of life (Higgins et al., 2005; Nealy, O'Hare,

Powers, & Swick, 2012) and increased family psychological distress (Sikora et al., 2013). It is common for families of children with ASD to report lower levels of family adaptability than families of children with other developmental disabilities (Hayes & Watson, 2013). To meet the continuous needs of the child with ASD, families are often forced to adopt specific routines. Additionally, concerns over unpredictable, and often socially unacceptable, behaviors may further restrict the family from participating in enjoyable activities in the community (Kinnear, Link, Ballan, & Fischbach, 2016; Nealy et al., 2012). Research suggests that challenging behaviors, rather than specific ASD symptoms, may be more stigmatizing for families due to negative responses and judgmental reactions from community members (Kinnear et al., 2016). Consequently, teaching parents strategies to manage, diminish, and prevent challenging behaviors may assist with reducing their negative impact on the family.

Primary Care Stepping Stones Positive Parenting Program

The Primary Care Stepping Stones Positive Parenting Program (PC SS Triple P) is a four-session, manualized intervention that aims to prevent and treat child behavior problems by enhancing parents' knowledge, skills, and confidence when parenting children with disabilities (Sanders, Mazzucchelli, & Studman, 2009). The program uses a "parent participatory model" that involves encouraging the development of parent self-regulation, the process where individuals are taught skills to modify their own and their child's behavior (e.g., self-sufficiency, parental self-efficacy, self-management, personal agency, and problem solving) (Bandura, 1991). PC SS Triple P treats the construct of self-regulation as the main mechanism for improving both family and child outcomes.

The Stepping Stones Positive Parenting Program (SS Triple P), a longer version of PC SS Triple P, has an extensive evidence base and has been subjected to multiple randomized controlled trials, with a recent meta-analysis reporting significant effects for children's behavioral outcomes, parenting styles, parenting satisfaction, parental adjustment, and PSE (Tellegen & Sanders, 2013). The meta-analysis included two randomized controlled trials (RCT) of variants of SS Triple P for parents of children with ASD. Both studies produced medium to large treatment effects for children with ASD, including significant improvements in child behavior and parental functioning (Tellegen & Sanders, 2014). These studies, however, did not implement a brief version of the intervention within the first year of initial diagnosis. Such interventions can provide parents with early support for handling challenging behaviors during the gap between diagnosis and securing services for the child. Additionally, brief interventions hold the potential to provide increased access to services for more clients, especially in the primary care setting (McMillin, Bultas, Wilmott, Grafeman, & Zand, 2015; Shah, Kennedy, Clark, Bauer, & Schwartz, 2016).

Current Study

To date, no RCTs have been conducted in the United States comparing the four-session version of SS Triple P, provided within the first year of initial ASD diagnosis, to a wait list control group. To begin to fill this gap, we used a mixed methods approach to assess the feasibility of implementing PC SS Triple P with parents of children newly diagnosed with ASD. Feasibility testing is warranted when there are few published studies using a specific intervention with a high need population. Based on Bowen and colleagues' framework for determining feasibility, the following domains were evaluated: (1) acceptability (i.e., the extent to which the intervention is satisfying and suitable to participants), (2) preliminary outcomes (i.e., whether the intervention produces the desired results under

controlled circumstances), and (3) adaptation (i.e., recommendations for program modifications) (Bowen et al., 2009).

METHODS

Design

The trial was registered on the United States Clinical Trials Registry (NCT02236650). Institutional Review Board approval was secured through a large Midwestern university. Parents who received PC SS Triple P provided acceptability data via a posttest survey. To investigate preliminary outcomes, a two-group, pretest/posttest design with random assignment to the PC SS Triple P intervention (PC SS Triple P; $n = 16$) versus the Wait List Control (Wait List Control; $n = 10$) was employed. Following posttest assessment, the Wait List Control parents were invited to receive PC SS Triple P. Semistructured telephone interviews with program completers, as well as practitioners' feedback during weekly supervisory sessions, were used to identify potential program adaptations. All data were collected from August 2014 through March 2016.

Participants

Table 1 summarizes child, parent, and family demographics. No statistically significant baseline demographic differences were found between parents in the PC SS Triple P group and the Wait List Control group.

The most frequent parent nominated targeted behavior was yelling ($n = 5$), followed by tantrums ($n = 4$), aggression ($n = 3$), not following directions ($n = 1$), destroying things ($n = 1$), smearing feces ($n = 1$), and communication problems ($n = 1$).

Procedures

Parents were recruited on a rolling basis from an urban ASD diagnostic center ($n = 15$), as well as from the community via recruitment flyers, radio and television interviews, and word of mouth ($n = 6$). To participate, parents had to be at least 18 years of age, the child's legal guardian, have primary responsibility for raising the child, and have a specific behavioral concern about their child. Parents were excluded from the study if they were unable to provide informed consent ($n = 0$), their child's ASD initial diagnosis had been given >1 year poststudy eligibility ($n = 4$), the child was too old for the study ($n = 2$) or the child did not meet diagnostic criteria for ASD ($n = 2$). Child inclusion criteria consisted of receiving a DSM-5 (American Psychiatric Association, 2013) ASD diagnosis within the past year (Mean = 98.62 days; $SD = 97.65$; Min. = 0; Max. = 325) from either a licensed clinical psychologist or pediatrician, being ≥ 2 and ≤ 12 years old, and displaying moderate to severe behavior problems (as measured by an Eyberg Intensity T-Score ≥ 60). All parents provided medical documentation of their children's diagnoses. Medical record review indicated that a DSM-5 interview had been conducted for all children; 10 children had been administered the Autism Diagnostic Observation Schedule-2 (Lord et al., 2012), an additional five screened positive on the Social Responsiveness Scale-2 (Constantino & Gruber, 2012), and an additional two children screened positive on the Social Communication Questionnaire (Rutter, Bailey, & Lord, 2003).

All meetings were scheduled at the parents' convenience and occurred during day or evening hours at a centrally located academic medical center. During each session, onsite childcare was available for parents who were unable to arrange alternative arrangements. Approximately 30% of the sample elected to use this option. After completing informed

TABLE 1
Sample Characteristics

Variable	Treatment (<i>n</i> = 12)	Wait List Control (<i>n</i> = 9)	Combined (<i>n</i> = 21)	<i>t</i> or χ^2 value	Effect Sizes ^a or ^b
Average age of target child	6.22 (<i>SD</i> = 3.04)	5.33 (<i>SD</i> = 2.84)	5.84 (<i>SD</i> = 2.92)	.68, <i>ns</i>	.05 ^a
Average age of caregiver	36.61 (<i>SD</i> = 7.18)	34.80 (<i>SD</i> = 5.69)	35.80 (<i>SD</i> = 6.45)	.61, <i>ns</i>	.02 ^a
Gender of target child					
Male	11	7	18	.81, <i>ns</i>	.20 ^{b,c}
Female	1	2	3		
Race of target child					
Caucasian	8	6	14	.02, <i>ns</i>	.03 ^b
African-American	3	2	5		
Bi-racial	1	1	2		
Average number of children in family	2.33 (<i>SD</i> = 1.15)	2.67 (<i>SD</i> = 1.23)	2.48 (<i>SD</i> = 1.17)	.003, <i>ns</i>	.0001 ^a
Gender of caregiver					
Female ^d	12	9	21	NA	NA ^c
Race of caregiver					
Caucasian	8	6	14	.02, <i>ns</i>	.03 ^b
African-American	4	2	6		
Bi-racial	0	1	1		
Marital status of caregiver					
Married	7	5	12	.11, <i>ns</i>	.07 ^b
Single	4	3	7		
Divorced/Separated	1	1	2		
Education level of caregiver					
<12 years	1	0	1	.69, <i>ns</i>	.04 ^b
HS grad or GED	2	0	2		
Some college/tech. school	4	6	10		
College grad	3	3	6		
Advanced degree	2	0	2		
Employment status					
Yes	7	4	11	.10, <i>ns</i>	.06 ^b
No	5	5	10		
Annual household income					
<\$20,000	6	3	9	.21, <i>ns</i>	.09 ^b
\$21,000 and \$50,000	2	2	4		
\$51,000 and \$79,000	0	2	2		
\$80,000+	4	2	6		

^a η^2_p .

^bCramers V.

^cExpected due to higher prevalence of disorder in males than females (Zablotsky et al., 2015).

^dAll women.

consent, parents completed the pretest tools. Subsequently, parents were sequentially randomized using a computer-generated code to either: (1) PC SS Triple P (*n* = 16), or (2) Wait List Control (*n* = 10). The average time between each of the four sessions was 12.86 days (*SD* = 4.67). Posttest measures were administered to all study parents upon completion of the program, which was approximately 4–8 weeks postbaseline. All parents received a twenty dollar gift card to a local discount retailer at the completion of each data collection point.

Within the PC SS Triple P group, two parents never initiated services: one due to moving out of the state and one due to her child recovering from heart transplant surgery. An

additional two parents were lost to follow-up after completing the first session. One Wait List Control parent was lost to follow-up. No posttest data were available on study non-completers, leaving full evaluable data on 81% (active = 12, WLC = 9) of the original sample (Figure 1).

Subsequent to completing the four Triple P sessions, one of the authors (MB) contacted parents to participate in a telephone feedback interview. Of the 12 program completers, eight (67%) agreed to be interviewed. Interviews ranged from 30 to 60 minutes.

Intervention

Primary Care SS Triple P is a manualized, brief, one-on-one, four-session intervention targeting 1–2 parent-identified maladaptive child behaviors (Sanders et al., 2009). During the sessions, the practitioner meets individually with the parent. In Session 1, parents learn to identify and monitor problematic behaviors. In Session 2, practitioners facilitate the development and self-evaluation of an actionable parenting plan. Parents select 1–2 techniques from a menu of 25 evidence-based strategies designed to foster positive relationships with their children, encourage desirable behaviors, teach new skills, and/or manage misbehaviors. Between sessions, parents complete homework assignments including monitoring the frequency, duration, and antecedents of problematic behavior, and making notes about difficulties they may have encountered while implementing their chosen techniques. During the third session, homework is discussed with the practitioner and, when needed, modifications are made to the parenting plan. Generalization-enhancement strategies are discussed during the fourth session (see Table 2).

Three doctoral level practitioners (one social worker, one nurse practitioner, and one psychologist) were trained and accredited in PC SS Triple P. Practitioners adhered to the manualized protocol. All practitioners participated in weekly peer supervision to discuss fidelity ratings, as well as to recommend potential program adaptations. The average

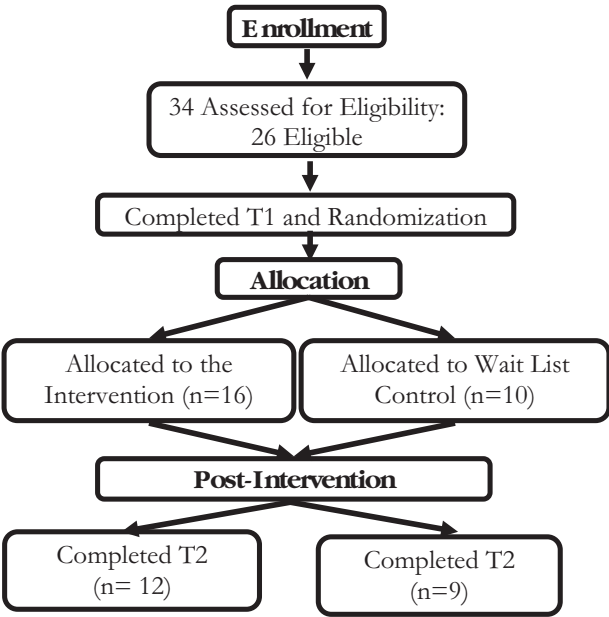


FIGURE 1. Study Flow Chart

TABLE 2
Baseline and 4 Week Scores on Key Outcome Measures^a

Measures	Mean Score (95% CI)		<i>F</i> (2,19)	<i>p</i>	Effect Size η^2_p
	PC SS Triple P (<i>n</i> = 12)	WLC (<i>n</i> = 9)			
Child Externalizing Behavior (ECBI)—Problem Score ^b					
Baseline	18.33 (13.9–22.8)	16.0 (11.8–20.2)	4.15	<.06	.18
4 weeks	10.83 (5.98–15.69)	14.33 (10.18–18.49)			
Child Externalizing Behavior (ECBI)—Intensity ^b					
Baseline	150.50 (134.2–166.8)	148.1 (136.8–159.5)	6.75	<.02	.26
4 weeks	115.8 (102.1–129.6)	139.9 (125.2–154.6)			
Overall Parenting Stress (PSI-SF-Total) ^c					
Baseline	96.5 (83.8–109.2)	107.8 (99.1–116.4)	11.07	<.005	.39
4 weeks	78.3 (64.0–92.7)	106.3 (99.0–113.7)			
Parenting Competence (PSOC) ^d					
Baseline	66.8 (58.6–75.1)	63.9 (56.2–71.6)	6.96	<.02	.27
4 weeks	76.2 (70.8–81.6)	63.8 (57.8–69.7)			
Family Functioning—Behavior Control (FAD-Behavior) ^e					
Baseline	1.7 (1.5–1.9)	1.8 (1.5–2.1)	4.57	<.05	.21
4 weeks	1.4 (1.2–1.6)	1.7 (1.4–2.1)			

^aData are presented as raw mean scores at baseline and least squares mean values for week 4 with 95% CIs for each assessment.
^bRange for ECBI-Intensity scale is 36–252 with higher scores indicating worse functioning.
^cLower scores indicate better functioning.
^dRange of scores is 16–96, with higher scores indicating great sense of parenting competence.
^eLower scores indicate better functioning.

duration of each PC SS Triple P session was 39.96 min (*SD* = 4.56). The overall mean time to completion of four sessions was 38.58 days (*SD* = 14.01). No statistically significant differences were found among practitioners on fidelity ratings, session duration, completion time, and program outcomes.

Measures

Demographics

The *Family Background Questionnaire* consists of 16 items and was used to collect demographic information on the family including: family composition, employment history, marital status, and family income.

Feasibility and fidelity measures

The *SS Triple P Client Satisfaction Questionnaire (CSQ)* is a 13-item, self-report tool addressing the quality of PC SS Triple P. Parents rate items on a 7-point scale, ranging from 1 (Quite Dissatisfied) to 7 (Very Satisfied), with higher scores being indicative of greater satisfaction. An overall score is created by calculating a mean of the thirteen items. The tool was completed at service closure. The reliability estimate from this study’s data was strong (α = .83).

Practitioners completed the *PC SS Triple P Practitioner Fidelity Checklist* at the conclusion of each session. The checklist provides an outline of session tasks. A fidelity score is calculated for each session based on the total number of tasks completed divided by the total number of tasks required.

To obtain parents' feedback on the acceptability of the intervention, as well on potential intervention adaptations, one of the authors (MB) created a 12-item semistructured *Telephone Interview Protocol*. Sample questions included: What worked best for you in the program? What worked least for you in the program? What were the barriers to implementing the parenting plan? In what way do you think the program helped you with your parenting skills? Interviews took 30–60 minutes to complete.

Outcome measures

The *Eyberg Child Behavior Inventory (ECBI)* (Eyberg & Pincus, 1999) is a parent-report tool that measures total problem (type and frequency of behavior problems), and intensity (degree to which parents find the behaviors problematic) of child behaviors. Items are rated on dichotomous and continuous scale, respectively. Ratings are summed for both scales, with higher scores reflecting greater maladaptive behaviors. The reliability estimates from this study's baseline data for the Problems ($\alpha = .79$) and Intensity ($\alpha = .86$) scales were strong.

The *Parenting Sense of Competence Scale (PSOC)* (Johnston & Mash, 1989) is a 16-item self-report tool that assesses parenting self-efficacy. Parents rate their agreement with a series of statements on a six-point scale (1 = strongly agree, 6 = strongly disagree). Responses are summed to create a Total Scale Score, with higher scores indicating a greater sense of self-competence. The reliability estimate from this study's baseline data was strong ($\alpha = .86$).

The *Parenting Stress Index-Short Form, 4th Edition (PSI-SF-4)* (Abidin, 2011) is an 18-item self-report tool that is rated on a five-point scale ranging from strongly disagree (1) to strongly agree (5). Higher scores on the scale indicate greater stress. Responses are summed to create a Total Stress Score. The reliability estimate from this study's baseline data was strong ($\alpha = .85$).

The Behavior Control Subscale of the *Family Assessment Device (FAD)* (Epstein, Baldwin, & Bishop, 1983) assesses how the family expresses and maintains behavioral standards. Comprised of nine items, parents rate their level of agreement/disagreement on specific family behaviors using a four-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree). An average scale score is calculated, with higher scores indicating poorer family functioning. The reliability estimate from this study's baseline data was adequate ($\alpha = .61$).

RESULTS

Analytic Plan

Retention patterns were investigated using both nonparametric and parametric statistics. Percent fidelity was calculated by dividing the total number of tasks practitioners completed by the total number of potential tasks to be conducted across all four sessions and multiplying the quotient by 100. Parents mean satisfaction score and total session attendance were used to determine intervention acceptance.

Prior to conducting quantitative analyses, frequency distributions were examined. All measures had normal distributions and did not require transformations. The mixed model provides unbiased estimates of treatment effects under the assumption that missing data are missing at random and are independent of response given observable data (Bell, Fiero, Horton, & Hsu, 2014). Analyses revealed that missing data occurred in a random manner (MAR). Outcome measures were analyzed using Repeated Measures Analysis of Variance with time as a within-subjects factor and group assignment (Intervention vs. Wait List Control) as a between-subjects factor. For statistical analyses, a p value $\leq .05$ was considered significant. To determine whether the magnitude of change was statistically reliable,

the Reliable Change Index (Jacobson & Truax, 1991) was calculated. Posttreatment scores were subtracted from pretreatment scores and divided by the standard error of the differences. If the absolute value >1.96 , then change was considered statistically reliable. Chi-square analyses were also performed to compare the number of parents in each group moving from a clinical to a nonclinical range (Kendall, Marrs-Garcia, Nath, & Sheldrick, 1999). All statistical procedures were performed using SPSS software, version 22.0 for Windows (IBM, 2013).

To acquire information on potential intervention adaptations, telephone interview data were transcribed verbatim and analyzed using qualitative description methods (Sandelowski, 2000, 2010). Practitioner feedback was examined informally for common themes discussed during supervision

Baseline Equivalence

T-tests and Chi-square analyses were conducted to identify between-group differences in sociodemographic characteristics. As shown in Table 1, no baseline differences emerged between the study groups (all *p*-values $>.05$). Subsequently, differences in baseline outcome variables were examined using *t*-tests. No statistically significant differences between the intervention and the wait list control group were found on (all *p*-values $>.05$) ECBI-Intensity ($\eta^2_p = .001$), ECBI-Problem ($\eta^2_p = .07$), PSOC ($\eta^2_p = .001$), PSI-SF-4 ($\eta^2_p = .03$), or Behavior Control Subscale of FAD ($\eta^2_p = .008$).

Retention

Nonparametric or parametric statistics yielded no statistically significant differences between the completers ($n = 21$) and noncompleters ($n = 5$) on baseline demographic characteristics or dependent variables.

Practitioner Fidelity

Practitioners completed 92.9% of checklist items ($SD = 18.8$) across all sessions. Fidelity median and mode were both 100%. Repeated measures ANOVAs revealed no statistically significant differences among practitioners across key outcome variables (all *p*-values $>.05$).

Parent Acceptability

Fourteen parents (88%) completed at least one session. Twelve parents (75%) completed four sessions, and two parents (13%) completed one session. The twelve parents who completed PC SS Triple P indicated high service satisfaction with a mean response of 6.6 on a 7-point Likert scale ($SD = 0.4$). Qualitative responses suggested some parents ($n = 2$) experienced increased feelings of closeness to their children following receipt of the PC SS Triple P intervention (i.e., “feel closer to my child” and “I can finally hug my child with a positive outcome”).

Preliminary Outcomes

As shown in Table 2, compared to the Wait List Control group, parents who received the intervention reported statistically and clinically significant positive changes four to six weeks postbaseline in child externalizing behavior-intensity $F(2,19) = 6.75$, $p < .02$, parenting stress $F(2,19) = 11.07$, $p < .005$, parenting competence $F(2,19) = 6.96$, $p < .02$, and family functioning $F(2,19) = 4.57$, $p < .05$. Change in the number of child problem behaviors trended toward significance $F(2,19) = 4.15$, $p < .06$.

Table 3 contains descriptive statistics and values for measures of clinical and reliable change. It is notable that significantly greater movement from the clinically elevated to nonclinical range was observed for the ECBI-Intensity score. The PS-SF-Total and PSOC trended in this direction. Additionally, a positive trend was observed for reliable improvement for the ECBI-Intensity Score, PSI-Total, and PSOC. These findings echo the results of the Sanders, Baker, and Turner (2012) study.

Intervention Adaptation (Qualitative Analysis)

Three members of the research team (DZ, MB, and SM) independently reviewed telephone transcripts and met to reach consensus on themes and groupings. More than 1 theme was present in most transcripts and a range of themes, not necessarily the normative responses, were identified. Themes were grouped into three categories: (1) implementation barriers, (2) assets of the program, and (3) recommended modifications. Specific barriers reported included: lack of coparent involvement and scheduling difficulties. Although sessions were flexibly scheduled, due to competing demands, some parents reported difficulties making time for the program and needed to bring their children to the session(s). Parent-identified program strengths including learning how to identify behavioral antecedents, as well as practitioner attunement. Some parents wanted services to be extended by adding PC SS Triple P booster sessions 6–12 months postcompletion and/or by immediately bringing together program completers to provide ongoing peer support on PC SS Triple P strategies.

Practitioners’ feedback focused on parents needing intensive case management, education about ASD, childcare services, and real-time coaching. Across practitioners, at service initiation, parents reported feeling isolated due to their child’s disruptive behaviors. Many parents had questions regarding accessing community-based therapies. Many parents brought the index child and/or siblings to the intervention. During these times, available research staff watched the children, while the parent engaged in the session. Practitioners reported approximately 30% of parents had difficulties implementing PC SS Triple P strategies in the home environment due to competing family demands, including younger siblings “acting out” when the parent attempted to carry out the behavioral management plan with the index child. For these parents, practitioners wanted to observe the parent implementing the strategies with their child within the family’s natural environment to provide real-time coaching and support.

TABLE 3
Clinical and Reliable Change at Postassessment (n = 21)

		Intervention <i>n/n</i> (%)		Control <i>n/n</i> (%)		Clinical Change		Reliable Change	
Measure		Clinically Improved	Reliably Improved	Clinically Improved	Reliably Improved	χ^2	<i>p</i>	χ^2	<i>p</i>
ECBI	Intensity	8/12 (67)	9/12 (75)	0/9 (0)	3/9 (33)	9.69	.002	3.65	.071
PSI-SF	Total	5/10 (50)	5/10 (50)	1/9 (11)	1/9 (11)	3.32	.091	3.32	.091
PSOC	Total	N/A ^a	6/12 (40)	N/A	1/9 (11)	N/A	N/A	3.50	.061
FAD	Behavior Control	4/12 (33)	7/12 (58)	1/9 (11)	2/9 (22)	1.40	.258	2.74	.113

Note. Clinically improved = score moved into nonclinical range for measure; Reliably improved = Reliable Change Index >1.96; χ^2 = Pearson’s chi-square (where expected cell frequencies are too low for chi-square, Fisher’s Exact Test is reported); ECBI = Eyberg Child Behavior Inventory; PSI-SF-Total = Parent Stress Index-Short form, 4th ed. Total score; PSOC = Parent Sense of Competence; FAD = Family Assessment Device (Behavior Control was only scale evaluated).

^aThis scale does not use a base clinical cutoff. Consequently, this score could not be calculated.

DISCUSSION

Our pilot study sought to provide information on the initial feasibility of conducting a manualized, one-on-one, four-session positive parenting program with parents of children (ages 2–12 years) newly diagnosed with ASD. To help determine whether the intervention was appropriate for further testing, we examined parent acceptability, preliminary outcomes, and recommendations for adaptation (Bowen et al., 2009).

Parent Acceptability

Results indicated that parents found the intervention to be acceptable, with 75% of the parents attending 100% of the sessions. Parents reported high levels of service satisfaction, with qualitative responses suggesting an unanticipated finding of increased feelings of closeness between parents and their children.

Preliminary Outcomes

We found both clinically and statistically significant treatment effects on the project's key dependent variables: parenting stress, intensity of child disruptive behaviors, parenting competence, and family functioning. Although parents reported a decline in the number of problem behaviors from pre- to posttest, this trend was neither statistically nor clinically significant. At this point, it is uncertain whether this finding is an artifact of the small sample size or if reduction in the number of problem behaviors may better be captured longitudinally after parents have time to generalize their skills. Outcome findings must be interpreted with caution. Statistically, a study with only a pre- and a posttest is unable to differentiate between real change and error. At least three measurement points are needed to make strong conclusions about change. Effect sizes for improved parenting competence ($\eta^2_p = .27$) and reduction of parental stress ($\eta^2_p = .39$) were similar to those found in larger scaled Triple P studies (Tellegen & Sanders, 2014; Whittingham, Sofronoff, Sheffield, & Sanders, 2009), suggesting that the study was sufficiently powered to detect changes in these domains.

Intervention Adaptation

Postintervention follow-up with parents identified potential areas for program adaptation. Some parents voiced a desire to have a follow-up interaction with their practitioner to address new or changing behaviors. The addition of a “booster” session 6–12 months postintervention completion may be warranted to address this request. Due to parents having many questions about ASD, as well as the process of finding services for their children, practitioners identified a strong need for ASD education and case management. Provision of a session focusing on ASD education, as well as rapid referral to case management services may help fill this gap. Similar to findings from prior research, many parents reported feeling isolated from friends and family due to their child's externalizing behaviors (Kinnear et al., 2016) and expressed a wish to extend the intervention to include peer support. Finally, practitioners reported that some families had difficulties implementing the intervention at home due to competing family demands. The addition of a home visit may address this implementation barrier by allowing the practitioner to provide real-time feedback on the intervention.

Limitations

Limitations of this study raise additional questions for future research. First, the study used a small, regionally drawn, volunteer sample. With only 12 parents in the treatment

group, firm conclusions regarding the program's efficacy cannot be made and are pending replication in a large scale, multiregional trial. Second, although the majority of parents were recruited from an ASD diagnostic clinic ($n = 15$), a little over a handful of parents were enrolled from the community ($n = 6$). Financial constraints prevented independent assessment of the children's ASD diagnosis using the ADOS-2 (Lord et al., 2012). Future research would benefit from administration of the ADOS-2 to all children to assist with diagnostic confirmation. Third, it is unclear what portion of the study's effects may be simply due to parents receiving one-on-one attention from practitioners. It will be important for future studies to use a time/attention control group to account for this factor, as well as to study the maintenance of these effects by including multiple follow-up points. Finally, the study relied heavily on single-informant, self-report instruments to assess fidelity and treatment outcomes. Although these instruments have strong psychometric properties and self-rating is the implementation fidelity standard for Triple P, future research would benefit from using a multi-informant, multimeasure approach in which observational data are also collected from multiple respondents on the same index child.

CONCLUSIONS

Study findings provide initial evidence of meaningful effects for using a four-session version of SS Triple P (PC SS Triple P) within the first year of initial ASD diagnosis. This model of intervention holds promise for reducing child maladaptive behaviors and improving parental and family functioning. This study lends support for the need for a large, multisite longitudinal, randomized control trial. Such research has the ability to demonstrate program efficacy and assist in identifying moderators and mediators of effects. The latter is essential for explaining variability in program outcomes, as well as for determining the "active ingredients" of the intervention and for whom the intervention would offer a "best fit."

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