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## Examining Parents' Preferences for Group and Individual Parent Training For Children with ADHD Symptoms

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### Abstract

Parent training (PT) programs have been found to reduce some behavioral impairment associated with children's attention deficit hyperactivity disorder (ADHD) as well as improve parenting competence, but poor uptake and participation by parents are formidable barriers that affect service effectiveness. We used a discrete choice experiment (DCE) to examine how parent preferences for treatment format (i.e. group versus individual) might influence their participation in PT. Participants were 445 parents seeking mental health services for children with elevated symptoms of ADHD in Ontario, Canada. Parents completed a discrete-choice experiment (DCE) composed of 30 choice tasks used to gauge PT format preference. Results showed that 58.7% of parents preferred individual PT; these parents were most interested in interventions that would make them feel more informed about their child's problems and in understanding—as opposed to solving—their child's problems. A minority of parents (19.4 %) preferred group PT; these parents were most interested in active, skill-building services that would help them solve their child's problems. About one-fifth of parents (21.9 %) preferred the Minimal Information alternative (i.e. receiving neither individual or group PT); these parents reported the highest levels of depression and the most severe mental health problems in their child. Results highlight the importance of considering parent preferences for format, and suggest that alternative formats to standard PT should be considered for multiply stressed families.

### Keywords

parent training; attention deficit hyperactivity disorder (ADHD); children's mental health; preferences; conjoint analysis

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Attention Deficit Hyperactivity Disorder (ADHD) is the most common mental health disorder of childhood, with 9.5% of children meeting diagnostic criteria in the US (Center

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for Disease Control, 2010). These youth<sup>1</sup> lag behind same-age peers in sustained attention, impulse control, and modulation of activity level, resulting in impaired relationships with adults and peers and problems in social situations and academic settings (APA, 2013). Childhood ADHD is estimated to cost 50–60 billion dollars annually and at least \$14,000 per individual per year, rivaling societal costs for stroke and depression (Pelham, Foster, & Robb, 2007). Treating ADHD is crucial to prevent problems from worsening and continuing into adulthood. An effective, well-established psychosocial treatment for child ADHD is behavioral parent training<sup>2</sup> (Pelham & Fabiano, 2008; Chronis et al., 2004; Sonuga-Barke et al., 2004). Parent training (PT) is a particularly important intervention for child ADHD given that parents are the primary socializing agents in a child's environment (Webster-Stratton et al., 2011). Although PT is solidly evidence-based for ADHD, the rates of improvement in children's functioning are typically 63–75% (Fabiano et al., 2009), so more work is needed to improve the percentage of children showing improvement. One factor that contributes to these rates is that many parents of youth with ADHD do not engage in PT or drop out of PT prematurely (Chacko et al., 2009; Chacko et al., 2013).

Poor alignment between parents' preferences and mental health treatment received might be related to treatment attrition (e.g., Kazdin, 1996). Parents are more likely to be dissatisfied and drop out if treatment misaligns with their expectancies (Nock & Kazdin, 2001), attributions, and preferences for treatment (Prinz & Miller, 1996; Vick & Scott, 1998). Morrissey-Kane and Prinz (1999) found that parents were more likely to seek help for treatment, engage and stay in treatment, and have better outcomes when services matched pre-treatment attributions and expectations. In addition, families attending a child clinic who had expectations that treatment would be with the identified child rather than with the parent and who received the opposite have been found to be less engaged in treatment (e.g., Burck, 1975). Parents' expectations about therapy likely reflect their underlying preferences. This finding highlights the importance of having an accurate measurement of parent preferences for specific service options before offering them. Alignment of parent preferences with treatment may improve participant adherence and engagement in treatment, thereby enhancing outcomes for youth and their families.

Traditional approaches to measuring preferences (e.g., rating scales, questionnaires, and interviews) may yield inaccurate estimates of true patient preferences. In brief, individuals tend to experience social desirability biases and over-simplify their decision-making process when completing traditional questionnaires, and these traditional survey situations often fail to mimic real-world choice-making scenarios (Cunningham et al., 2008; Reisberg, 2006). In contrast, health economists and marketing researchers use conjoint methods, such as discrete-choice-experiments (DCEs), to enhance accuracy when measuring preferences (Orme, 2013). DCEs present individuals with choice-tasks. Choice-tasks are questions on a survey that illustrate different combinations of service delivery options. Across choice tasks, combinations of service options vary systematically. Each option is comprised of different levels of service "attributes." Participants make trade-offs between competing attributes. For example, parents might be asked to choose between "A program that meets weekly in

<sup>1</sup>We use the term "youth" to refer to children and adolescents.

<sup>2</sup>We use the term "parent training" to refer to "behavioral parent training" throughout the text.

groups of 20 parents with a therapist” or “A program that meets monthly and individually with a therapist.” These type of multi-attribute choice tasks that require participants to make trade-offs offer several advantages over traditional methods of evaluating preferences: they better mimic real-world decision-making (Ryan & Gerard, 2003), reduce social desirability biases (Phillips, Johnson, & Maddala, 2002), and are more highly associated with actual behavior (Caruso, Rahnev, & Banaji, 2009). Conjoint methods (e.g., surveys using choice-tasks in DCE’s, described above) can yield excellent indicators of consumer preferences and may lead to service designs (in this case, BPT programs) that are more desirable to consumers (Orme, 2013). Likewise, they may yield more cost efficiency in health care settings.

There are several published studies that used conjoint analysis to examine parents’ preferences for children’s mental health services (e.g., Cunningham et al., 2008; Cunningham et al., 2013; Cunningham et al., 2014). Three studies examined preferences for medication interventions (Matza et al., 2005; Muhlbacher & Nubling, 2010; Secnik et al., 2005) and one study explored parents’ preferences for medication interventions as well as their preferences for components of social skills, classroom management, and parent training programs (Waschbusch et al., 2011). In many of these studies, parents showed different patterns of preference, and subgroups of parents could be segmented by their distinct pattern of preference. In Waschbusch et al. (2011), one segment of parents was outcome-focused (e.g., interested in improving their child’s social relationships, academic performance, and other areas of functioning), and less concerned about the format of treatment used to achieve these outcomes. Another segment of parents was influenced by a desire to avoid medication. These findings highlight the importance of examining segments of preference; failure to consider different segments’ preference may lead to inaccurate preference estimates.

Conjoint studies have also focused on parents’ preferences for psychosocial services for their child. Spoth and Redmond (1993) found that parents chose meeting time as the most important feature of family-focused interventions; parents generally preferred weekday night meetings over weekday morning meetings or weekend meetings. Cunningham et al. (2008) found that parents referred for children’s mental health services demonstrated specific treatment preference patterns. Some parents were more interested in action-oriented parenting solutions while others were interested in services that inform about potential parenting solutions (but do not involve step-by-step or active strategies) to their child’s mental health problems. Another set of parents were seemingly not interested in any parent-focused strategies; these parents reported more severe mental health problems in their children as well as higher levels of parental depression (Cunningham et al., 2008). Recently, Cunningham et al. (2013) assessed parents’ preferences for interim services while waiting for children’s mental health services, and found parents were especially influenced by the prospect of interim services including child participation. In a very recent study, parents showed different preferences for parenting programs as an interim service while waiting for children’s mental health treatments (Cunningham et al., in press). In this study, parents differed in their preference for the inclusion of parenting groups, telephone- and e-coaching support, and the pacing of services (Cunningham et al., in press). These studies show the value of conjoint methods for evaluating parent treatment preferences beyond what might be obtained about preference from traditional rating scales. They illuminate the priorities of

parents among competing alternatives and shed light on the trade-offs that they made in choosing an option. They also highlight that subgroups of parents or segments showed specific and distinct patterns of preference. It may be useful to apply this approach to understanding preferences for delivering ADHD treatment (e.g., what options should parents be offered first to increase palatability?). To date, only one study (i.e., Waschbuch et al., 2011) has assessed parent preferences for formats of family-based interventions for ADHD, and no studies have assessed parent preferences for treatment formats for other childhood based disorders. Outside of exploratory analyses (Cunningham et al., 2008; Cunningham et al., 2013; Cunningham et al., 2014), studies have not examined parents' treatment preferences for individual versus group formats.

Individual and group parent training (PT) models are efficacious treatments for ADHD (Pelham & Fabiano, 2008). Systematic evaluations (Lundahl, Nimer, & Parsons, 2006; Montgomery, Bjornstad, & Dennis, 2006; Zwi, Jones, Thorgaraard, York, & Dennis, 2011) comparing the effectiveness of each format have suggested that individual PT programs result in incremental gains over group PT approaches (e.g., Chadwick et al., 2001; Eyberg & Matarazzo, 1980; Hampson, Schulte, & Ricks, 1983; Tiedemann & Johnston, 1992). However, findings from other studies suggest that Group PT is just as effective as Individual PT for disruptive children (Pevsner, 1982; Webster-Stratton, 1984), and others show superior outcomes with Group PT (Cunningham et al., 1995).

While there is mixed evidence for the superiority of Individual PT versus Group PT, each option has advantages. When considering what parents want, findings from Cunningham et al. (2008) suggest that individual-based options are the preferred choice by many parents. Research has shown numerous advantages to individual approaches. These include the ability to tailor treatment to fit the needs of the individual child, the opportunity to adjust to each parent's mastery level, the possibility that a parent might disclose more information in meetings because there is no audience, and a decreased probability that some parents will "hide behind" the group, thereby increasing individual participation (Piper, 2011). Individual therapy might also afford greater accountability; for instance, if a parent is less engaged (as exhibited by repeated tardiness and/or failure to complete therapeutic "homework"), it is less likely to go unnoticed, and may be more likely to be addressed in individual versus group therapy. Despite these documented advantages of Individual PT, less is known regarding whether parents of children with ADHD prefer Individual PT. At the same time, Group PT offers advantages that Individual PT does not. Brightman et al. (1982) reported that Group PT requires at least half the professional time *per family* compared to Individual PT; thus, Group PT appears more time-efficient for agencies than Individual PT. Conducting PT in groups rather than individually is therefore more cost-effective because sharing therapist time, clinic space, and similar resources reduces the cost of treatment on a per-patient basis (Cunningham et al., 1995). Conjoint studies examining mental health professionals' preferences suggest that providers prefer learning models that are delivered to parents in groups as opposed to individually (Cunningham et al., 2009). Group approaches can also provide social support, offer extra solutions as specific techniques are suggested by individual members, and normalize individuals' experiences (Cox, Vinogradov, & Yalom 2008). These findings suggest that Group PT may be preferable over Individual PT to some parents and professionals.

Although Individual PT and Group PT may appeal to some families, parents might not want either. Further, parents may not want services despite the fact that they contacted a mental health agency about their child's problems. For example, parents may believe that treatment should involve their child with little or no role for themselves. In fact, Cunningham and colleagues (2008) found that multiply-distressed parents tended to choose information services that did not include parent components for their child's mental health problems. This finding is important because it suggests that the families who needed services the most might choose a service that does not include PT, which could result in families using a non-evidence-based option that does not help their child. Marketing and health economics research also suggests that methods of evaluating consumer preferences should always include an option to "opt out" of services; surveys without this option are over-estimating the proportion of consumers who would select the active treatments offered. It is also possible that some parents actually might opt for no service. Opting out might be more likely among parents who reluctantly followed through with a school personnel's or physician's referral with which they disagreed. One type of "opting out" is to go on a waiting list that provides more time for parents to think about whether they indeed want to participate in the services available. Another type of opting out is to receive minimal information (e.g., review brochures and/or pamphlets) without attending appointments or receiving any "active" services. To date, studies have not examined parents' preferences for a waiting list or minimal information options relative to evidence-based alternatives (i.e., Individual PT and Group PT). This information would be beneficial to clinics trying to engage these individuals. The present study attempts to address this gap in the literature by comparing parents' preferences for a minimal information option versus Individual PT and Group PT.

Beyond preferences for group size, parents may be influenced by other service components, such as the modality used to deliver supplemental material (e.g., DVD versus internet), where the meetings are held, and whether skills are actively or passively taught and learned. Indeed, parents are able to choose between a range of options for many service components; for example, they may acquire parenting skills via book or manual instruction, internet, audio/compact discs, or video/DVD. It is important to understand parents' preferences for these features as well as they might impact their overall preference for, participation in, and outcomes from a PT service. Parent preference may also be influenced by a host of child and parent factors; parental depression has consistently been found to be a significant and primary risk factor for child psychopathology (Downey & Coyne, 1990; Humphreys, Mehta, & Lee, 2012), and for this reason, we examined the influence of parental depression on parents' preferences. We also explored the influence of children's severity of externalizing symptoms on parents' preference.

## Study Goals

The purpose of the current study was to examine parents' preferences for individual and group PT among families of children with elevated ADHD symptoms who have contacted provincial agencies that provide mental health services for children. Using a discrete-choice experiment (DCE), parents were asked to make choices between service options that were systematically varied in content, process, and outcome attributes. By making trade-offs

between service options, parents provided information about which attributes were most important to them when making choices. Simulations were used to compose complex multi-attribute service options. Simulations are statistical techniques used in marketing (e.g., Orme, 2013) and mental health (e.g., Cunningham et al., 2013) research that involve modeling hypothetical services and predicting consumers' preferences for these hypothetical services based on their responses to various items on a survey. The study answered three questions related to parents' preferences for treating children's elevated ADHD symptoms. First, what is the share of preference for Individual PT versus Group PT versus a minimal information (MIN) alternative? Based on our clinical experiences in which most parents say that they would prefer to meet with a therapist alone, as well as utility values from Cunningham et al. (2008) showing that individual services had a higher utility than group services, it was hypothesized that most parents of youth with elevated ADHD symptoms would prefer<sup>3</sup> Individual PT over Group PT. Second, are distressed parents likely to prefer different treatment options than non-distressed parents? It was hypothesized that parents preferring MIN would report higher levels of depression than parents preferring the other two services, based on recent findings of Cunningham et al. (2013). As an exploratory question, we examined whether a variety of other demographic and psychological variables (e.g., marital status, family income, children's externalizing behavior severity) were associated with parents' preferences. Third, what aspects of treatment are most important to parents? We investigated which attributes of Group PT, Individual PT and MIN exerted the greatest influence on preference. We also examined the relative value of other design attributes to parents preferring Group PT, Individual PT, and MIN. It was hypothesized that parents preferring Group PT would be more solution-focused, much like the "action-oriented" segment observed in Cunningham et al. (2008), the Fast-Paced Personal Contact preferences found in Cunningham et al. (in press), and the solution-focused qualities of the Group Contact segment in Cunningham et al. (2013). For this reason, this segment was expected to be interested in solving their child's behavior problems using step-by-step solutions. Those preferring Individual PT were hypothesized to be more "information-oriented" (Cunningham et al., 2008); they were expected to prefer feeling informed about (as opposed to solving) their child's behavior problems.

## Method

### Participants

As described by XXXXX, 1730 parents seeking children's mental health services in Ontario, Canada agreed to complete a survey about parents' information preferences for children's mental health (CMH) services. Of those, 1194 participants agreed to complete the discrete-choice experiment (DCE) in accordance with Research Ethics Board approved protocols (XXXXX). In the current study, a subsample (n = 445) of the larger sample of XXXXX was used; the subsample consisted of parents whose children showed clinically-elevated symptoms of attention-deficit/hyperactivity disorder (ADHD) on the Brief Child and Family Phone Interview (BCFPI; Boyle et al., 2009; Cunningham, Boyle, Hong,

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<sup>3</sup>We use the term "prefer" instead of "predicted to prefer," language used by marketing researchers (Orme, 2013), here and throughout the manuscript to enhance readability of the text.

Pettingill, & Bohaychuk, 2009). Parents whose children scored + 1.5 SD (i.e.,  $T = 65$  or above) on the BCFPI scale measuring inattention, impulsivity, and high activity were included in this study. Children and families in the current sample were not more severe than other clinic/community samples (see Boyle & Cunningham, 2009; Cunningham, Pettingill, and Boyle, 2007). Additionally, compared to the original sample ( $n = 1194$ ), the subsample was not significantly different in demographic or other variables other than scores on the BCFPI for regulating attention. Importantly, parents with children at risk for ADHD were not necessarily presenting for treatment of ADHD as a primary concern, though it was a presenting problem; children could have presented with any type of internalizing or externalizing problem as the primary concern.

The current study differed from XXXXX in two ways. First, this study focused on parents of children at risk for ADHD. Research suggests that families of children with ADHD and other behavior problems might show a different pattern of preferences than parents of children with other difficulties included in the larger sample as the former group has consistently shown poor attendance in parenting programs and low adherence to program recommendations (e.g., Ambruster & Kazdin, 1994) and limited participant engagement (e.g., Power et al., 2009). Second, the current study used a different approach to segmentation of the data, specifically randomized first choice (RFC) simulations, than XXXXX, which used latent class analyses.

### Survey Development

The survey development process has been described in detail elsewhere (XXXXX). In brief, 20 elements (attributes) describing children's mental health information services were developed, including variations to content, process, and outcome within the service delivery model. Attributes were defined by four levels, one describing a common service feature, and three illustrating alternative design choices (XXXXX). For example, the attribute "group versus individual meetings" would be defined by a common group format, "is given to me in a group of 10 parents" as well as three actionable alternatives "is given to me alone" or "is given to me in a group of 20 parents" or "is given to me in a group of 50 parents." A partial profile Discrete Choice Experiment (DCE; Orme, 2013) with 30 choice tasks per participant was then developed. Per Patterson (2003), choice tasks in the current DCE presented three ways of providing treatment information to parents, with each way described by two levels of the same two elements.

Because conjoint methods allow researchers to compute the relative influence of variations in the levels of each attribute on participants' choices (i.e., importance scores), conjoint analysis is considered a decompositional approach (Cunningham et al., 2010; Lancsar & Louviere, 2008). Participants may show that the attribute is influential in decision-making if there is a wide spread (i.e., difference) in preference for the least versus the most preferred level (reflected by importance scores). Participants' choice of one level of the attribute over the others suggests that subcomponent is a preferred option (e.g., has higher utility values; more on this below). Recognizing influential attributes and preferable subcomponents of attributes proves helpful when trying to unpack participants' preferences for complex service options.

## Measures

**Demographic information**—Parent’s age, parent’s gender, parent’s education level, parent’s marital/relationship status, family income, child’s age, children’s first language, and child’s gender were queried. Parents were also asked to report their own and their child’s immigrant status.

**Child mental health problems**—Clinical interviewers with formal training in children’s mental health training assessed children’s mental health problems via the Brief Child and Family Phone Interview (BCFPI), a semi-structured, normed on a population sample, computer-assisted interview given over the phone to the child’s primary caregiver (Boyle et al., 2009; Cunningham et al., 2007). Interviewers first asked parents about their main concerns and then administered modules of the interview measuring different mental health problems; parents indicated symptom severity on a 4-point scale (i.e., “never, sometimes, often, or always true”). The current study included the BCFPI’s six-item scales measuring ADHD ( $\alpha = 0.82$ ), oppositional behavior ( $\alpha=0.83$ ), conduct problems ( $\alpha = 0.68$ ), anxiety ( $\alpha = 0.78$ ), and depression ( $\alpha = 0.84$ ). Because it is important to consider the impairments associated with these disorders (APA, 1994; 2013) the BCFPI Global Functioning of the Child scale was included ( $\alpha = 0.77$ ), which was composed of the 3-item Child’s School Participation and Achievement, the 3-item Child Social Participation, and the 3-item Quality of Children’s Relationships scales. These scales respectively measure the impact of children’s problems on school functioning, social activities, and relationships. We also examined the Global Family Situation Scale ( $\alpha = 0.77$ ), comprised of the 4-item Family Activities and 3-item Family Comfort scales, which respectively measures the impact of the children’s problems on family activities and family conflict/anxiety. Examination of the psychometric properties of the BCFPI found the test-retest reliability and validity comparable to those of other screening measures (e.g., CBCL; Boyle et al., 2009).

**Parental depression**—Parents reported their level of distress and depression on 6-item BCFPI parent mood scale ( $\alpha= 0.86$ ).

**Utility values and Importance scores**—Hierarchical Bayes theorem and a simulated Monte Carlo Markov Chain algorithm (e.g., Gibbs Sampling) were used to compute utility coefficients for each participant (Orme, 2013). The hierarchical model draws from two separate models, including (1) a lower-level model that estimates how well part-worth utilities fit choices of each respondent in the study sample, and (2) an upper-level model that borrows information from other respondents in the study sample to compute part-worth utility averages and variances for the entire study sample (Orme, 2013). Utility values were standardized (zero-centered), setting the average utility value range of all attributes to 100. Utility values show the relative influence of each attribute level on participant choices; higher values suggest stronger preferences. To estimate each respondents’ sensitivity to variations in the levels of an attribute, importance scores were calculated by computing the percentage of range in utilities (maximum minus minimum) across attributes (Orme, 2013). Higher importance scores indicate greater influence of one attribute above all others on participant choices.



**Simulations**—First, Individual PT, Group PT, and MIN were modeled. Table 1 presents the attribute levels that were selected for each manipulated attribute of Individual PT, Group PT, and MIN. These options did not have a label such as parent training or another title as they were instead a combination of generic service components.

Randomized first choice market simulations were used to model parental response to the treatments. Randomized first-choice (RFC) simulators are forecasting tools that predict individuals' responses to the combinations of attribute levels. Attribute levels reflect service subcomponents that may be available in the real world. For example, in this study, subcomponents of services (i.e., attribute levels) can be arranged to build parenting programs (e.g., individual and group PT). Simulations are then run to predict what percentage of parents would want each service option (i.e., in this study, Individual PT versus Group PT). Simulations assume that parents would choose a parenting program that maximizes utility. Simulations estimated the proportion of parents preferring each treatment by determining the service that maximized parents' preference score across attributes, and estimated attribute and program variability error (Huber, Orme, & Miller, 2007).

Simulations attempted to model the complexity of real world parenting programs, to estimate which features influenced choices, as well as to estimate the value of other features that were not experimentally manipulated in the simulation. We examined all of the utility values to explore the third question of the study. We explored attributes that were manipulated because each alternative (MIN, Individual PT, and Group PT) was composed by varying several attributes at once (see Table 1) and it is important to determine which of the manipulated attributes (and levels) accounted for the difference. It is also possible that parents differed in their preferences of non-manipulated attributes, and for this reason, we examined utility values of attributes that were not manipulated in the simulation. We discuss manipulated and non-manipulated attributes when large effects ( $d > .8$ ) were obtained as many between-segment differences were significant. Those with the largest effect sizes suggest the greatest variability in importance scores and utility values between segments.

## Results

### Prediction of Treatment Preference

RFC simulations predicted that 21.9% of parents would prefer Minimal Information (MIN), 19.4% of parents would prefer Group PT, and 58.7% of parents would prefer Individual PT.

### Predictors of Parent Preferences

Chi square analyses and multivariate analyses of variance (MANOVAs)<sup>4</sup> were used to test whether demographic characteristics and/or other parent, child, and family characteristics varied among those preferring each treatment package. Family status and child's first language were the only demographic variables that differed across the parents who preferred different treatment options (Table 2). Parents who preferred Individual PT were more likely

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<sup>4</sup>We ran MANOVAs for two reasons, including (1) there were several correlated dependent variables and we aimed to study whether segments differed on a set of variables (e.g., child/family functioning) before looking at individual results; and (2) we wanted to explore how segment membership influenced patterning of response on several dependent variables.

to be from two-parent than from single-parent families, who were more likely to prefer MIN. Parents who preferred Group PT were more likely to be of children whose first language was not English; parents who preferred Individual PT were more likely to be of children whose first language was English. Preference was unrelated to parents' gender, children's immigrant status, parents' age, family size, parents' education level, or family income (Table 2).

A MANOVA comparing the three segments, i.e., Group PT, Individual PT, and MIN, across BCFPI measures of child, family, and parental functioning was significant,  $F(142, 332) = 1.26$ ;  $p = 0.02$ . Univariate ANOVA follow up tests (see Table 3) showed that parents preferring MIN reported that their children exhibited more ADHD symptoms than parents preferring Individual PT or Group PT ( $g = .34$ ). Parents who preferred MIN also reported that their children exhibited more severe externalizing problems and impairments in social relationships and family activities and reported greater symptoms of depression than parents preferring Individual PT ( $g$  range = .3-.5; Table 3). Importantly, parents who preferred Group PT versus Individual PT did not report significant differences in severity of externalizing problems or in impairments in social, school, or family relationships (Table 3).

### Differences in Service Attributes by Treatment Package

MANOVAs across the importance scores,  $F(40,844) = 14.30$ ;  $p < 0.001$ , and utility values  $F(160, 724) = 10.29$ ;  $p < 0.001$ , yielded significant segment effects. One-way ANOVAs and post-hoc Dunnett's C comparisons are presented in Tables 4 and 5. Importance scores (Table 4) and utility values (Table 5) show that the three segments differ on many attributes ( $g$  range from .3–1.3). As mentioned above, it is important to examine utility values that were significantly different from one another across each segment (Group PT, Individual PT, and MIN) even if they were manipulated in the simulation (see Table 1) in order to determine which attributes of these complex service options were associated with treatment preference. The preferences of each segment and the attributes that differentiated them are presented below.

### Parents Preferring Individual Parent Training

Parents preferring Individual PT (58.7%) were most interested in “feeling informed” (Table 4)<sup>5</sup>. They preferred educational elements—not necessarily skill-building tools—that would allow them to understand their child's behavioral and emotional problems (See *Behavior Problems* and *Emotion Problems* utility values; Table 5). They desired programs that helped them to feel more informed, more confident, and less anxious about their child's mental health problems (Table 5). They were interested in services delivered individually, information provided in pamphlets or books, and programs supported mostly by research (Table 5).

### Parents Preferring Group Parent Training

Parents preferring Group PT (19.4%) preferred to obtain services in groups with 10 other parents, relative to obtaining services alone or with groups of 20 or 50 other parents. They

<sup>5</sup>The following sections refer to Tables 4 and 5, i.e., results from importance scores and utility values.

chose active services that taught step-by-step solutions to children's emotional and behavioral problems and offered advocacy information. These parents preferred evidence-based services that maximized how informed and confident they felt. Relative to parents preferring Individual PT or MIN, who desired book-delivered materials, Group PT parents preferred that information be delivered by video or DVD.

### Parents Preferring Minimal Information

Parents preferring MIN (21.9%) strongly preferred services delivered individually. They showed a strong preference for materials delivered by book or pamphlet but would be willing to obtain information via the internet. MIN parents avoided active treatment ingredients (e.g., skill-building techniques). Despite their reports of elevated depressive symptoms, these parents were not interested in feeling more confident or informed, nor were they interested in reducing their stress, anxiety, and guilt. They accepted the responsibility to seek out materials as opposed to receiving information that their therapist found helpful or material that was automatically given to all parents.

### Parents' Preferences for Different Sizes of Group Parent Training

Sensitivity analyses were conducted as a post-hoc analysis to understand parents' preferences for Group PT offered in various sizes of groups. Sensitivity analysis is a technique that can be used in market simulation that provides a vehicle to report preference scores for each level of each product attribute (Orme, 2013). The sensitivity analysis approach demonstrates how much a product's preference can improve (or deteriorate) by changing its attribute levels one at a time, while holding all other attributes constant. Sensitivity analysis begins with simulating shares of preference among products in a "base case" market (Orme, 2013). Then, product characteristics are changed one level at a time (holding all other attributes constant), and the market simulation is run repeatedly to capture the incremental effect of each attribute level upon product choice (Orme, 2013). Sensitivity analyses indicated that the predicted share of preference among the 445 parents in the study depended on the size of the group of parents. Specifically, the shares of preference for a PT program with a therapist alone, or with 10, 20, and 50 other parents and a therapist, are 40.2%, 26.1%, 20.1%, and 13.6% respectively.

## Discussion

Results from this study supported the three main hypotheses. Consistent with the first hypothesis, most parents of youth with elevated ADHD symptoms preferred Individual PT over Group PT and Minimal Information (MIN). Supporting the second hypothesis, findings showed that parents who preferred MIN reported higher levels of depression than parents preferring the other two services. Results also supported the third hypothesis; parents preferring Group PT were more interested in solving their child's behavior problems using step-by-step solutions while parents preferring Individual PT were more interested in feeling informed about their child's behavior problems. Moreover, parents preferring the MIN option were the most likely to prefer passive learning strategies.

## Current Findings and Previous Research

These results are consistent with general themes from studies exploring the utilization of PT. First, results may help to explain previous findings showing high rates of drop out from Group PT (relative to other programs). Barkley et al. (2000) found greater drop out among parents receiving a group PT program relative to those receiving a classroom-based intervention. Cunningham et al. (2000) found a low percentage of enrollment in group PT among single-parents, parents of immigrant background, and families with limited extracurricular child activities. That said, Group PT is clearly valuable to some parents. Cunningham et al. (1995) found that parents receiving group PT showed greater improvement over 6-month follow-up relative to parents receiving individual PT. The current finding that a subset of parents (21%) preferred MIN, suggesting that parents would opt out of either PT option offered in this study, concurs with previous studies showing high drop-out rates from PT (Kazdin, 1996). It is conceivable that these MIN parents are those who do not enroll in PT (Cunningham et al., 1995; Cunningham et al., 2000).

Additionally, current findings showing that parents of children speaking English as a second language were more likely to prefer group over individual PT are consistent with previous research by Cunningham et al. (1995). Cunningham and colleagues (1995) found that immigrant families, those using English as a second language, and parents of children with severe behavior problems were significantly more likely to enroll in Community/Groups than in Clinic/Individual PT. There are at least two reasons for a higher preference for and enrollment in group treatment among individuals speaking English as a second language. First, it might be that group treatments are preferable among individuals with collectivist (versus individualist) ideals; indeed, research has also shown that those with collectivistic ideals prefer group over individual models (Bellon, 2010). Second, parents of children using English as a second language might also prefer group treatment if they find meeting with an individual therapist uncomfortable; they may worry that the therapist will differ in philosophical and cultural beliefs and push these views onto them. They may prefer to “hide” behind members of the group (Piper, 2011) if they worry about the mismatch in cultural view between themselves and the therapist.

Parents preferring Individual PT, Group PT, and MIN showed similar patterns of preference to those of parents documented in previous studies. Parents who chose Individual PT (58.7%), desiring educational elements that enabled an understanding of their child’s emotional and behavior problems as well as hoping to feel more informed and confident, showed preferences consistent with those of the Information-oriented segment described in Cunningham et al. (2008). Parents preferring Group PT (19.4%), in their preference for step-by-step solutions to children’s emotional and behavioral problems, small-group services, as well as advocacy information, showed preferences similar to the Action-oriented segment (Cunningham et al., 2008), the Fast-Paced Personal Contact segment (Cunningham et al., in press), the Group Contact segment described previously (Cunningham et al., 2013). It is not surprising that parents preferring groups also appear more action-oriented across studies. Group approaches provide social support, offer extra solutions as specific techniques are suggested by individual members, and normalize individuals’ experiences (Cox, Vinogradov, & Yalom 2008), and each of these factors may appeal to action-oriented parents. Parents

who chose MIN (21.9%), reporting the highest level of externalizing problems and functional impairment in their children relative to the other two parent-segments, showed preferences commensurate with the Overwhelmed segment (Cunningham et al., 2008), the Limited Contact parents (Cunningham et al., 2013), and the Slow-Paced E-Contact segment (Cunningham et al., in press). Despite presenting for treatment of their child's mental health problems, these parents were less interested in the parenting services offered. Although they reported higher levels of depression than Group PT and Individual PT parents, MIN parents were less interested in services that made them feel more confident or informed, patterns observed in multiply stressed parents in previous studies (Cunningham et al., 2008; Cunningham et al., 2013).

### Implications for Research, Policy, and Practice

Results from the current study suggest the benefit of offering more—not fewer—options of PT services to maximize utilization. In order to increase the likelihood that parents receive a program that fits their preferences, choices on a conjoint survey might be considered at the outset of treatment using a shared decision process that provides information about a full range of options. This process could facilitate a better understanding of parents' needs and expectations pre-treatment. This approach has been applied in health care settings; for example, Fraenkel and colleagues have used conjoint surveys with rheumatology patients to offer treatments that match their preferences (Orme, 2013).

Given the evidence base for youth with ADHD and youth at risk for ADHD (Pelham & Fabiano, 2008), and findings from the current study showing a high share of preference for Individual PT, individually based parent programs should continue to be offered for children at risk for ADHD. Offering Individual PT could maximize the uptake of PT services; although meta-analyses have shown a link between preference and adherence (Swift et al., 2011), it remains unknown whether offering Individual PT to most families would result in greater service utilization, cost-effectiveness, and outcome. Given the expense of this program relative to Group PT—both in terms of increased therapist time and resources (e.g., Cunningham et al., 1995)—clinics might elect to offer Individual PT only to parents who decline Group PT or display a strong preference to meet individually with a therapist.

Group PT can still be an option for parents of children at risk for ADHD, especially given its popularity with some parents (19% in this study) and documented effectiveness (Pelham & Fabiano, 2008). Given that share of preference increased from 19% to 26% when group size decreased from 20 to 10 parents, respectively, utilization of PT might be maximized if offered in smaller groups. Again, alternatives to Group PT should be considered as results from this study show that many parents are not interested in group parent programs, especially when groups were large (i.e., 20 plus members). These results are consistent with themes from utilization studies of PT showing poor attendance (Barkely et al., 2000) and enrollment (Cunningham et al., 2000) in general among parents in Group PT. Poor attendance in Group PT among multiply stressed families (e.g., Chacko et al., 2012; Chacko et al., 2009; Chronis et al., 2004) augments the need for wide-ranging service options for some families and suggests that a more flexible, adaptive approach—instead of offering only one option or “convincing” parents to attend an option that seems to have low utility—may

yield more engagement. Given that group parent programs were preferred among some subgroups (e.g., parent using English as a second language in the current study and immigrant families in Cunningham et al.; 1995), offering individual *and* group PT may maximize treatment utilization. Offering Group PT with 10 or fewer parents may also extend program reach.

Simulations suggest that one in five parents sampled would opt out if all they were offered were the proposed parenting interventions. This finding is important because it suggests that the families who need services the most may not want PT, which we know to be an effective and arguably the first line psychosocial intervention for ADHD. It is unclear at the present time whether parents preferring this service would be interested in options that are not parent-directed, such as child-focused interventions (e.g., Webster-Stratton et al., 2011), peer-focused interventions (e.g., Children's Summer Treatment Program; Pelham et al., 2005a) or school-based interventions (e.g., Fabiano et al., 2008; Pelham et al., 2005b), even if the belief among professionals is that parental involvement is a necessary component of these other services. Parents might also prefer medication instead of psychosocial interventions for their child, as suggested by findings showing that parents of children with more severe ADHD symptoms were more interested in medication options (Waschbusch et al., 2011). It is important to note that the current study found no difference in the importance of medication information across parents but some (Individual PT and Group PT-preferring parents) showed interest in services that provided step-by-step information about medications and others (MIN-preferring parents) were interested in services that provided general information about medications. These findings are somewhat consistent with Waschbusch's et al. (2011) findings showing that parents uniformly indicated that high doses of medication for their child were unacceptable, and that parents also demonstrated a consistent preference for therapy or a combination of medication-plus-therapy over medication-only treatments. As Waschbusch et al. (2011) found that parents reporting greater severity in children's ADHD symptoms were more open to medication interventions (especially lower doses), it is possible that MIN parents in the current study might be more open to medication options. Offering an MIN service that involves providing minimal information to families may also be an appropriate avenue as it would allow service providers to maintain contact with the family. Given that high-risk families (e.g., those with higher levels of parental depression and marital problems) are more likely to drop out of treatment (McMahon, Forehand, Griest, & Wells, 1981), maintaining contact builds on the hope that we could offer an effective, active, preferable treatment over time to the families who need it the most. For this reason, MIN, in the form of brochures as modelled in this study might be offered first to multiply distressed families to begin contact and over time; formal treatment (e.g., Group or Individual PT) may be initiated when stressors have become more manageable for the family. Another alternative is to offer MIN first and then refer afterward to therapeutic services that may directly address the source of stress impacting the family.

### Limitations and Future Directions

This study has limitations. First, although discrete choice experiments (DCEs) may provide a more ecologically valid methodology to examine actual decision making compared to

traditional rating scales (e.g., Phillips et al., 2002), DCEs may not perfectly predict intention to use, or actual use of, services in the real world. Of course, intention to behave is an imperfect predictor of actual behavior (Fogarty & Shaw, 2010; Goulet et al., 2010). However, research shows that intention mediates the relationship between past behavior and future behavior (Armitage & Sprigg, 2010), and stated intention is the best predictor of actual behavior (Armitage & Conner, 2001). Second, these preferences are based on a survey of parents' views at one particular point in time; with more exposure to, and experience with, mental health practices and other contextual variables, parents' preferences may be subject to change. Third, this study examined parents' preferences of children at risk for, and not necessarily presenting with, ADHD; also, ADHD might not have been the primary concern. It is unclear whether these findings are generalizable to parents of children meeting diagnostic criteria for ADHD and/or to parents of children for whom ADHD is the primary concern. It is important to note, however, that given that we found that there was no difference in shares of preference for Group PT, Individual PT, and MIN among parents of children with internalizing problems suggests that the degree to which internalizing disorders was present did not significantly influence parents' choices (see Table 3). Nevertheless, it remains possible that parents' principal reason for referring their child could impact their desire to obtain BPT. Future research should examine whether primary versus secondary internalizing and externalizing problems influence parents' preferences for parent training and other treatments. Fourth, since children at risk for ADHD might have shown impairments at home *or* at school, it is possible that parent preferences differed depending on the setting in which impairments occurred; in this way, parents of children with predominantly school-based impairments might have opted out of parenting interventions but would have preferred an active school-based intervention. Interestingly, however, parents preferring MIN (who opted out of a parenting intervention) did not report a greater severity of impairments in school functioning but did report that children's problems interfered with family activities and social functioning more than parents preferring Group or Individual PT. These findings suggest that parents preferring MIN opted out of parenting programs despite the fact that they reported that these problems impacted social and family functioning more than Group PT and Individual PT-preferring parents. However, it is plausible that these parents opted out of parent programs if they preferred a social skills or peer-focused intervention to address social problems. One can infer that parents did not opt out because of school problems, as would have been suggested by higher levels of school impairment. Fifth, race and ethnicity were not measured; given findings showing relationships between race/ethnicity and accessibility of services (e.g., McKay et al., 1996), race/ethnicity might have influenced preferences in the current study. Sixth, while some effect sizes were in the moderate to large range (e.g., importance of Group and phone support and Modality of information) effect sizes of the difference in other variables among the three segments (e.g., differences among the segments across BCFPI scores of children's attention problems or parental depression) were in the small range. As such, results showing small effects should be interpreted with caution as segments appear to differ modestly on severity of children's externalizing problems, family stress, and parental depression. Finally, this study examined preferences of individuals seeking treatment in Canada, and it is unclear whether their preferences generalize to those of parents in other countries and regions of the world (e.g.,

United States) with differing health care systems, approaches to treatment, cultural views about mental health problems, and information available.

Findings from the current study warrant future research to understand better parents' preferences for real-world evidence-based services. To address the limitations of the current study, future studies might connect more tightly what parents perceive as the "presenting problem" to preferences for treatment, regardless of whether the presenting problem is psychiatric (e.g., ADHD) or functional in nature (e.g., social skills problems). Research that directly examines the tradeoffs parents make among a variety of parent-focused, child-focused, and medication interventions would provide further information about potential service utilization. Instead of simulating MIN, other parent-focused therapeutic services directly addressing the source of stress (e.g., parental depression) could be offered. Also, although child-focused treatments were not simulated in current study, research suggests that some parents are interested in child-directed interventions over parent-directed options (Morrissey-Kane & Prinz, 1999; Prinz & Miller, 1994). A recent study using a DCE found that parents on waiting lists for children's mental health services preferred that children be fairly involved in interim mental health services (Cunningham et al., 2013). In Cunningham's et al. (2013) study, child participation exerted influence on interim service preferences among all four segments. Additionally, if modeled and directly tested, medication interventions may be valued over competing alternatives among some parents (Waschbusch et al., 2011). Research examining parents' preferences for school-versus community-based interventions for youth at risk for ADHD is an unstudied area that would inform parents' preferences for a broad array of psychosocial interventions. Further, now that the measurement of preference has been refined through conjoint methods, future studies should explore whether families remain and are more engaged in interventions that align with pre-treatment preferences.

## Conclusions

Parents seem to have different preferences regarding treatments for children at risk for ADHD. Some parents were open to a group PT program, but most preferred individual or a small-group services. A sizable segment of parents, who reported the greatest severity in children's behavior problems and higher levels of parental depression, preferred a minimal information alternative relative to PT. To target the range of parents' preferences, multiple services should be offered. Providing group and individual PT, as well as an MIN alternative, would allow for the greatest potential for program reach, especially for multiply stressed families. It is also worth considering the sequence in which these services should be offered. MIN, which would offer minimal content and demand little time, might be offered first for multiply-stressed families and stepped up to more intensive, effective options as stressors become manageable. Once studies identify more acceptable alternatives (e.g., child-directed interventions) for some families, then MIN might be offered as an alternative to or step toward parenting interventions. Group PT might be offered to everyone else given its evidence-base and cost-effectiveness. Those who decline Group PT might be offered Individual PT and those who refuse it might be offered MIN to build on the hope of offering an effective treatment in time.



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**Table 1**  
Content, Process, and Outcome Attribute Levels that Differed Among the MIN, Individual PT, and Group PT Options

Treatment Option/Attribute	MIN	Individual PT	Group PT
<u>CONTENT:</u>			
<i>Epidemiology</i>	(1) Doesn't tell about cause, what's normal, or what to expect as my child gets older	(3) Tells me what's normal for my child's age	(3) Tells me what's normal for my child's age
<i>Advocacy</i>	(1) Does not help me advocate for my child	(2) Tells me about my rights as a parent	(2) Tells me about my rights as a parent
<i>Behavior problems</i>	(1) Does not help with my child's behavior problems	(4) Helps me solve, step-by-step, my child's behavior problems	(4) Helps me solve, step-by-step, my child's behavior problems
<u>PROCESS:</u>			
<i>Pull vs. push Information</i>	(1) Is given only if I ask	(3) Is given if my therapist thinks it would be helpful	(3) Is given if my therapist thinks it would be helpful
<i>Active vs. passive Learning</i>	(1) Does not include review questions or skill building practice	(4) Includes review questions so I understand and practice with my child	(4) Includes review questions so I understand and practice with my child
<i>Recommendation</i>	(1) Does not have a recommendation	(4) Is recommended by my child's therapist or doctor	(4) Is recommended by my child's therapist or doctor
<i>Time demand to acquire and use</i>	(1) Takes 30 minutes to get, read, view	(3) Takes 5 hours to get, read, view	(4) Takes 10 hours to get, read, view
<i>Group size</i>	(4) Is given to me alone	(4) Is given to me alone	(2) Is given in a group of 20 parents
<i>Group and phone support</i>	(1) Is used by me alone	(1) Is used by me alone	(2) Includes weekly meetings with other parents
<i>Content selection process</i>	(4) What I want to know	(3) What experts think parents of children like mine should know	(3) What experts think parents of children like mine should know
<u>OUTCOME:</u>			
<i>Effect on feeling informed</i>	(2) Does not change how informed I feel	(3) Helps me feel more informed	(3) Helps me feel more informed
<i>Effect on feeling confident</i>	(2) Does not change how confident or hopeful I feel	(3) Helps me feel more confident or hopeful	(3) Helps me feel more confident or hopeful
<i>Effect on stress, anxiety, guilt</i>	(2) Does not change my stress, anxiety, or guilt	(3) Reduces my stress, anxiety or guilt a little	(3) Reduces my stress, anxiety or guilt a little

Table 2

## Demographic Characteristics of the Study Sample of Parents

	Service Preferred				$\chi^2$
	n	MIN	IPT	GPT	
<i>Total</i>	445	21.9	58.7	19.4	
<i>Family status</i>					6.67*
Single parents	135	27.4%	49.6%	23.0%	
Two-parent family	308	19.5%	62.7%	17.9%	
<i>Parent</i>					0.79
Mother	335	21.5%	59.1%	19.4%	
Father	80	21.3%	58.8%	20.0%	
Guardian	28	28.6%	53.6%	17.9%	
<i>Child's immigrant status</i>					0.76
Nonimmigrant	401	22.4%	58.4%	19.2%	
Immigrant	42	16.7%	61.9%	21.4%	
<i>Child's first language</i>					12.30*
English	403	22.1%	60.5%	17.4%	
Another language	40	20.0%	40.0%	40.0%	
<i>Age of Parent</i>					11.05
Age 18–39	240	24.0%	56.4%	19.6%	
Over age 40	197	19.3%	61.4%	19.3%	
<i>Children in family</i>					17.06
None	17	5.9%	64.7%	29.4%	
One	113	22.1%	54.9%	23.0%	
Two	179	19.0%	60.9%	20.1%	
Three	102	27.5%	58.8%	13.7%	
More than Three	32	28.1%	56.3%	15.6%	
<i>Informant education level</i>					1.00
High School (HS)	163	21.5%	61.3%	17.2%	
Less Than HS	280	22.1%	57.1%	20.7%	
<i>Family income level</i>					6.89

	Service Preferred				$\chi^2$
	n	MIN	IPT	GPT	
Under \$20,000	70	24.3%	60.0%	15.7%	
\$20,000–29,000	53	24.5%	49.0%	26.4%	
\$30,000–59,000	32	25.6%	57.6%	16.8%	
\$60,000 and over	23	17.6%	61.0%	21.4%	
Prefer not to answer	12	19.4%	64.5%	16.1%	
<i>Child's Gender</i>					9.09
Male	258	21.3%	61.2%	17.4%	
Female	183	21.9%	55.7%	22.4%	

Note. MIN = Minimal Information; IPT = Individual PT; GPT = Group PT.

**Table 3**  
Means and Standard Deviations of BCFPI Tt-Scores for Individuals Preferring MIN, Individual PT, and Group PT

	MIN (n = 97) M (SD)	IPT (n = 260) M (SD)	GPT (n = 86) M (SD)	F	Dunnett's C	g
<i>Child mental health problems</i>						
ADHD	77.7 (6.3)	75.6 (5.5)	75.3 (5.5)	5.90*	M > I, G	0.34
Oppositionality	75.0 (9.9)	73.8 (10.9)	74.4 (10.4)	0.52		
Conduct problems	78.7 (25.0)	72.0 (24.4)	71.0 (23.3)	3.14		
Composite externalizing	81.5 (8.4)	78.7 (8.6)	78.7 (8.5)	3.96*	M > I	0.32
Managing anxiety	58.9 (16.9)	60.6 (14.8)	62.4 (15.1)	1.12		
Managing mood	69.5 (18.9)	68.7 (15.8)	70.3 (15.4)	0.36		
Composite internalizing	65.2 (15.3)	67.1 (14.0)	69.2 (13.4)	1.75		
<i>Impact on Child Functioning</i>						
Global child functioning	78.7 (12.6)	75.7 (11.6)	77.3 (13.4)	2.20		
Social relationships	72.0 (11.0)	67.5 (11.4)	68.9 (11.4)	5.56**	M > I	0.40
School participation	72.3 (15.7)	69.0 (15.4)	69.7 (16.1)	1.48		
Social participation	77.9 (16.8)	76.7 (15.8)	77.8 (16.5)	0.25		
<i>Impact on Family Functioning</i>						
Global impact on family	91.6 (21.9)	85.9 (18.5)	88.9 (22.1)	2.82		
Family activities	99.5 (37.1)	85.0 (30.0)	87.8 (32.3)	5.90**	M > I	0.41
Conflict and anxiety	77.6 (14.4)	78.5 (12.8)	82.2 (14.6)	2.62		
<i>Parental Functioning</i>						
Parental depression	64.9 (15.0)	59.3 (14.2)	62.0 (13.7)	5.48**	M > I	0.39

Note. Means, standard deviations, and F-values obtained from analysis of variance (ANOVA). When significant results were obtained, separate one-way analysis of variance (ANOVA) and Dunnett's C comparisons were computed, and these statistics were reported here. MIN = Minimal Information; IPT = Individual PT; GPT = Group PT; M = Minimal Information; I = Individual parent training; G = Group parent training. For g, .2 < g < .5 indicates a small effect, while .5 < g < .8 indicates a moderate effect and .8 < g < 1.0 indicates a large effect.

\* p < 0.05,

\*\* p < 0.01



**Table 4**

Importance Scores for MIN, Individual PT, and Group PT Segments

	Segment						F	Dunnnett's C	g
	MIN (n = 97)	IPT (n = 260)	GPT (n = 86)	R	M	(SD)			
<b>Process Attributes</b>									
Group and phone support	1	7.4 (2.5)	13	4.7 (2.1)	10	5.0 (1.8)	57.27***	M > I, G	1.25
Modality of information	2	7.3 (1.9)	11	4.8 (2.2)	16	3.7 (1.7)	77.36***	M > I > G	1.21
Pull vs. pushing information	3	6.4 (2.3)	17	4.0 (1.8)	15	3.9 (1.4)	64.38***	M > I, G	1.29
Group size	5	6.1 (2.4)	7	5.6 (2.1)	18	3.2 (1.5)	51.66**	M, I > G	0.24
Location of information	6	5.5 (2.2)	12	4.7 (2.1)	13	4.2 (2.2)	9.09***	M > I, G	0.38
Passive vs. active learning materials	15	4.1 (1.5)	15	4.5 (1.5)	8	5.5 (1.4)	22.50***	G > I, M	-0.27
Timing of Information	16	4.1 (1.7)	10	4.8 (1.4)	14	3.9 (1.3)	17.37***	I > M, G	-0.49
Recommendation	17	3.9 (1.4)	16	4.5 (1.6)	12	4.3 (1.4)	4.11*	I, G > M	-0.34
Content selection process	19	3.6 (1.5)	18	3.5 (1.4)	17	3.2 (1.3)	1.9	NS	0.07
Time demand to acquire and use	20	3.0 (1.3)	19	3.4 (1.3)	19	2.8 (1.1)	6.04	M, I > G	-0.26
<b>Content Attributes</b>									
Emotional problems	7	5.5 (2.4)	2	6.6 (2.1)	2	7.9 (1.8)	28.17***	G > I > M	-0.51
Behavior problems	8	5.3 (2.0)	3	6.2 (2.0)	1	7.9 (1.6)	45.88***	G > I > M	-0.48
Information on epidemiology	9	5.3 (2.0)	9	5.3 (1.5)	9	5.2 (1.5)	.21	NS	0.21
Advocacy	12	4.5 (1.8)	8	5.4 (1.7)	5	6.4 (1.5)	27.47***	G > I > M	-0.52
Medication information	13	4.3 (1.6)	14	4.5 (1.7)	11	4.6 (1.8)	.81	NS	-0.12
Specificity/relevance	14	4.2 (1.5)	20	3.3 (1.4)	20	2.7 (1.2)	30.28***	M > I > G	0.68
Supporting evidence base	18	3.9 (1.8)	6	5.6 (1.6)	7	5.7 (1.3)	48.08***	I, G > M	-1.11
<b>Outcome Attributes</b>									
Effect on stress, anxiety, and guilt	4	6.1 (1.7)	5	5.9 (1.9)	6	6.3 (1.9)	1.39	NS	0.10
Effect on feeling informed	10	4.9 (1.7)	1	6.7 (1.9)	3	6.9 (1.8)	41.45***	I, G > M	-0.86
Effect on confidence	11	4.7 (1.6)	4	6.1 (1.7)	4	6.8 (1.4)	39.20***	G > I > M	-0.84

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Note. Means, standard deviations, and F-values obtained from analysis of variance (ANOVA). When significant results were obtained, Dunnett's C comparisons were computed and the results were reported here. Across segments, the highest importance score for an attribute is bolded.

$\eta^2$  R = relative rank of importance scores within each segment. MIN = Minimal Information; IPT = Individual PT; GPT = Group PT. M = Minimal Information; I=Individual parent training; G=Group parent training For  $g$ ,  $.2 < g < .5$  indicates a small effect, while  $.5 < g < .8$  indicates a moderate effect and  $.8 < g < 1.0$  indicates a large effect.

\*  $p < 0.05$ ,

\*\*  $p < 0.01$ ,

\*\*\*  $p < 0.001$

**Table 5**  
Standardized (Zero-Summed) Utility Value Descriptives for MIN, Individual PT, and Group PT Segments

Attribute	Segment				F	Dunnnett's C	g
	MIN (n = 97)	IPT (n = 260)	GPT (n = 86)				
<b>Content of attribute level</b>	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )			
<b>Process Attributes</b>							
<i>Group and phone support</i>							
Is used by me alone	81.0 (51.5)	18.1 (47.1)	-48.6 (22.2)	193.60***	M > I > G	1.41	
Includes weekly meetings with other parents	-29.9 (31.0)	-24.1 (30.9)	23.2 (26.9)	92.27***	G > I > M	-0.19	
Includes weekly calls from a therapist	-14.8 (34.3)	5.9 (34.6)	-4.0 (24.4)	14.67***	G > I, M	-0.63	
Includes weekly calls from a therapist + meetings with other parents	-36.4 (38.2)	0.1 (34.0)	29.4 (28.8)	86.46***	G > I > M	-1.07	
<i>Modality of information</i>							
Is on an audio tape or CD	-59.9 (23.6)	-34.3 (27.0)	-21.5 (25.2)	54.11***	G > I > M	-0.98	
Is on a video or DVD	-37.4 (34.4)	-10.7 (33.6)	12.4 (31.8)	51.21***	G > I > M	-0.80	
Is at an internet site	33.0 (42.8)	13.6 (36.7)	0.2 (31.0)	18.40***	M > I > G	0.52	
Is in a pamphlet or book	64.3 (33.5)	31.5 (35.0)	8.9 (29.3)	64.05***	M > I > G	0.97	
<i>Pull vs. push information</i>							
Is given only if I ask	28.3 (28.8)	-4.3 (28.1)	-21.1 (23.2)	80.53***	M > I > G	1.19	
Is up to me to get	40.7 (35.8)	-0.1 (31.8)	-17.0 (24.5)	86.58***	M > I > G	1.29	
Is given if my therapist thinks it would be helpful	-6.7 (31.0)	13.2 (29.8)	13.7 (23.0)	18.14***	I, G > M	-0.69	
Is automatically given to all parents	-62.2 (40.0)	-8.8 (40.4)	24.5 (36.5)	114.73***	G > I > M	-1.35	
<i>Group size</i>							
Is given in a group of 50 parents	-39.5 (25.0)	-44.7 (19.8)	-30.0 (21.6)	15.42***	G > I, M	0.24	
Is given in a group of 20 parents	-29.6 (21.7)	-23.6 (20.5)	2.9 (16.9)	71.15***	G > I, M	-0.30	
Is given in a group of 10 parents	-2.7 (21.5)	8.4 (18.4)	22.3 (16.8)	40.23***	G > I > M	-0.59	
Is given to me alone	71.8 (37.8)	59.8 (34.4)	4.8 (21.8)	111.76***	M > I > G	0.36	
<i>Location of information</i>							
Is at public libraries	-25.3 (37.2)	-31.0 (30.3)	-29.4 (29.7)	1.11***	NS	0.18	

Attribute	Segment						Dunnnett's C	g
	MIN (n = 97)		IPT (n = 260)		GPT (n = 86)			
	M	(SD)	M	(SD)	M	(SD)		
<b>Content of attribute level</b>								
Is at schools	-29.9	(38.9)	-18.5	(36.8)	-0.4	(36.8)	14.45 <sup>***</sup>	G > I > M -0.30
Is at CMH clinics or hospitals	<b>33.9</b>	(37.6)	<b>29.1</b>	(35.6)	<b>17.7</b>	(36.1)	4.96 <sup>**</sup>	M, I > G 0.13
Is at doctor's offices	21.3	(35.0)	20.3	(27.7)	12.1	(21.3)	3.12 <sup>*</sup>	M, I > G 0.04
<i>Passive vs. Active Learning Materials</i>								
Does not include review questions/skill-building practice	<b>34.0</b>	(36.8)	-42.3	(31.0)	-62.6	(22.5)	275.10 <sup>***</sup>	M > I > G 2.46
Includes review questions I answer so I understand	-16.5	(20.9)	-3.4	(21.5)	-3.7	(16.3)	15.32 <sup>***</sup>	I, G > M -0.64
Includes practice with my child to improve my skills	0.2	(24.0)	17.4	(20.8)	26.5	(17.4)	38.85 <sup>***</sup>	G > I > M -0.82
Includes review questions I answer so I understand and practice with my child	-17.7	(24.5)	<b>28.3</b>	(23.0)	<b>39.8</b>	(18.0)	187.11 <sup>***</sup>	G > I > M -2.06
<i>Timing of Information</i>								
Is available after treatment is completed	-28.8	(27.3)	-50.5	(20.3)	-39.8	(18.0)	37.25 <sup>***</sup>	M > G > I 1.00
Is available when I am facing a crisis	9.4	(37.8)	0.0	(30.3)	-1.3	(26.2)	3.76 <sup>*</sup>	NS 0.30
Is available when my child is being assessed or treated	<b>12.9</b>	(28.7)	<b>27.8</b>	(23.3)	18.3	(22.8)	14.75 <sup>***</sup>	I > M, G -0.61
Is available while my child is waiting for treatment	6.5	(23.2)	22.7	(20.4)	<b>22.8</b>	(17.2)	23.83 <sup>***</sup>	I, G > M -0.79
<i>Recommendation</i>								
Does not have a recommendation	<b>14.2</b>	(32.9)	-35.6	(25.6)	-44.5	(23.5)	144.38 <sup>***</sup>	M > I > G 1.84
Is recommended by parents of a child like mine	-12.2	(35.0)	-2.7	(31.4)	13.9	(25.6)	16.36 <sup>***</sup>	G > I, M -0.30
Is recommended by a national professional organization	-5.1	(22.9)	6.3	(21.1)	9.6	(18.1)	13.55 <sup>***</sup>	I, G > M -0.54
Is recommended by my child's therapist or doctor	3.1	(32.4)	<b>32.0</b>	(27.1)	<b>21.1</b>	(23.8)	38.87 <sup>***</sup>	I > G > M -1.04
<i>Content selection process</i>								
Is what my therapist thinks I should know	-14.4	(31.3)	-22.7	(26.5)	-25.7	(24.1)	4.57 <sup>**</sup>	M > G 0.30
Is what experts think all parents should know	-2.1	(23.8)	-7.8	(22.4)	-2.9	(20.3)	3.09 <sup>*</sup>	NS 0.26
Is what experts think parents with children like mine should know	<b>20.1</b>	(23.2)	<b>19.4</b>	(19.5)	12.7	(16.8)	4.33 <sup>**</sup>	M, I > G 0.04
Is what I want to know	-3.6	(30.2)	11.0	(26.3)	<b>16.0</b>	(22.5)	14.78 <sup>***</sup>	I, G > M -0.55
<i>Time demand to acquire and use</i>								
Takes 30 minutes to get, read, view	<b>8.6</b>	(22.7)	14.8	(20.5)	<b>14.3</b>	(18.0)	3.38 <sup>*</sup>	NS -0.30

Attribute	Segment						Dunnnett's C	g
	MIN (n = 97)		IPT (n = 260)		GPT (n = 86)			
	M	(SD)	M	(SD)	M	(SD)		
<b>Content of attribute level</b>								
Takes 1 hour to get, read, view	-0.7	(23.7)	<b>17.3</b>	(20.0)	13.3	(19.5)	26.87 <sup>***</sup>	I, G > M -0.87
Takes 5 hours to get, read, view	5.8	(26.8)	-8.6	(28.7)	-9.2	(20.9)	11.08 <sup>***</sup>	M > I, G 0.53
Takes 10 hours to get, read, view	-13.7	(26.2)	-23.6	(22.1)	-18.4	(20.9)	7.09 <sup>***</sup>	M > I 0.43
<b>Content Attributes</b>								
<i>Emotional problems</i>								
Does not help with my child's emotional problems	<b>50.7</b>	(47.7)	-81.0	(41.8)	-101.7	(33.5)	415.15 <sup>***</sup>	M > I > G 3.15
Helps me understand my child's emotional problems	7.6	(28.0)	<b>28.8</b>	(20.6)	28.1	(16.8)	35.47 <sup>***</sup>	I, G > M -0.97
Tells me about ways to solve my child's emotional problems	-21.5	(21.9)	24.3	(23.2)	29.0	(22.5)	162.59 <sup>***</sup>	I, G > M -2.01
Helps me solve, step-by-step, my child's emotional problems	-36.8	(25.5)	27.9	(26.3)	<b>44.7</b>	(21.2)	296.30 <sup>***</sup>	G > I > M -2.56
<i>Behavior problems</i>								
Does not help with my child's behavior problems	<b>29.5</b>	(44.4)	-73.7	(34.4)	-101.8	(27.6)	381.61 <sup>***</sup>	M > I > G 2.89
Helps me understand my child's behavioral problems	15.4	(27.2)	<b>29.8</b>	(22.2)	31.5	(21.1)	15.94 <sup>***</sup>	I, G > M -0.63
Tells me about ways to solve my child's behavioral problems	1.7	(22.5)	21.5	(20.8)	26.4	(20.1)	39.40 <sup>***</sup>	I, G > M -0.94
Helps me solve, step-by-step, my child's behavioral problems	-46.6	(26.2)	22.3	(28.0)	<b>43.9</b>	(22.7)	315.76 <sup>***</sup>	G > I > M -2.58
<i>Information of epidemiology</i>								
Doesn't tell me about cause, what's normal, or what to expect as my child gets older	<b>49.7</b>	(39.2)	-52.7	(35.9)	-57.9	(30.5)	320.08 <sup>***</sup>	M > I, G 2.86
Tells me the cause of my child's problems	-32.1	(27.8)	11.1	(30.4)	<b>20.8</b>	(26.3)	96.48 <sup>***</sup>	G > I > M -1.48
Tells me what's normal for my child's age	7.9	(21.1)	<b>24.3</b>	(23.1)	17.3	(17.6)	20.57 <sup>***</sup>	G > I > M -0.75
Tells me what to expect as my child gets older	-25.4	(28.2)	17.3	(27.4)	19.8	(24.0)	98.54 <sup>***</sup>	I, G > M -1.58
<i>Advocacy</i>								
Does not help me advocate for my child	<b>38.0</b>	(40.2)	-50.3	(32.2)	-66.2	(32.5)	283.59 <sup>***</sup>	G > I > M 2.58
Tells me about my rights as a parent	-23.5	(27.6)	-3.4	(24.6)	-2.1	(24.5)	24.81 <sup>***</sup>	I, G > M -0.79
Tells me about my child's rights	-13.3	(21.9)	8.8	(17.6)	14.1	(14.8)	65.61 <sup>***</sup>	G > I > M -1.21
Tells me what I can say and do to advocate for my child	-1.1	(27.8)	<b>45.0</b>	(23.9)	<b>54.2</b>	(16.7)	164.19 <sup>***</sup>	G > I > M -1.95
<i>Medication information</i>								

Attribute	Segment					Dunnnett's C	g
	MIN (n = 97)		IPT (n = 260)		GPT (n = 86)		
	M	(SD)	M	(SD)	M		
<b>Content of attribute level</b>							
Does not tell me about medication	8.4	(45.0)	-37.0	(38.9)	-42.9	(33.2)	54.65 <sup>***</sup> I, G > M 1.15
Tells me about general information about medications for children	<b>25.9</b>	(23.0)	11.1	(21.3)	1.6	(17.1)	32.04 <sup>***</sup> G > I > M 0.70
Tells me about specific medications for my child	-19.4	(27.1)	4.2	(27.6)	9.8	(25.2)	33.60 <sup>***</sup> I, G > M -0.87
Helps me think step-by-step about medications for my child	-14.9	(26.8)	<b>21.7</b>	(27.6)	<b>31.6</b>	(24.5)	84.46 <sup>***</sup> G > I > M -1.36
<i>Specificity/relevance</i>							
Is for all parents	11.8	(32.0)	-14.1	(24.8)	-3.8	(21.1)	35.77 <sup>***</sup> M > I > G 1.00
Is for parents of children with any kind of mental health problem	<b>25.4</b>	(23.8)	0.8	(23.1)	0.5	(20.8)	44.41 <sup>***</sup> M > I, G 1.08
Is for parents of children like my child	-8.0	(25.0)	0.4	(24.1)	0.4	(23.0)	4.63 <sup>**</sup> I > M -0.35
Is specific to my child and family	-29.2	(31.9)	<b>12.9</b>	(30.4)	<b>2.9</b>	(26.4)	69.23 <sup>***</sup> G > I > M -1.40
<i>Supporting evidence base</i>							
Is based only on opinions	-24.2	(34.0)	-58.7	(27.0)	-61.7	(22.9)	60.59 <sup>***</sup> M > I, G 1.23
Is based mostly on opinions plus some research	12.3	(19.6)	3.7	(18.5)	1.9	(16.1)	9.50 <sup>***</sup> M > I, G 0.47
Is based mostly on research plus some opinions	<b>22.4</b>	(26.5)	<b>43.9</b>	(20.6)	<b>45.1</b>	(17.9)	38.86 <sup>***</sup> I, G > M -1.00
Is based entirely on research	-10.5	(26.4)	11.1	(29.5)	14.7	(21.1)	25.98 <sup>***</sup> I, G > M -0.79
<b>Outcome Attributes</b>							
<i>Effect on stress, anxiety, and guilt</i>							
Increases my stress, anxiety, or guilt	-4.3	(46.4)	-58.8	(35.9)	-64.6	(27.0)	87.25 <sup>***</sup> M > I > G 1.47
Does not change my stress, anxiety, guilt	<b>49.5</b>	(30.2)	1.2	(28.8)	-17.6	(20.2)	153.83 <sup>***</sup> M > I > G 1.74
Reduces my stress, anxiety, guilt a little	-3.5	(25.1)	28.3	(20.9)	28.2	(14.1)	88.47 <sup>***</sup> I, G > M -1.53
Reduces my stress, anxiety, guilt a lot	-41.6	(39.6)	<b>29.3</b>	(39.2)	<b>54.0</b>	(29.8)	172.22 <sup>***</sup> G > I > M -1.88
<i>Effect on feeling informed</i>							
Makes me feel confused	-3.5	(48.3)	-69.8	(31.9)	-68.6	(29.8)	128.94 <sup>***</sup> M > I, G 1.85
Does not change how informed I feel	<b>27.2</b>	(31.2)	-25.4	(26.7)	-38.8	(20.4)	174.64 <sup>***</sup> M > I > G 1.97
Helps me feel more informed	-0.5	(33.2)	47.4	(23.2)	49.0	(19.9)	139.34 <sup>***</sup> I, G > M -1.90
Helps me feel much more informed	-23.2	(33.3)	<b>47.8</b>	(26.4)	<b>58.5</b>	(22.9)	276.75 <sup>***</sup> G > I > M -2.58

Attribute	Segment								
	MIN (n = 97)		IPT (n = 260)		GPT (n = 86)		F	Dunnnett's C	g
	M	(SD)	M	(SD)	M	(SD)			
<b>Content of attribute level</b>									
<i>Effect on confidence and hopefulness</i>									
Makes me feel less confident or less hopeful	-2.9	(37.6)	-66.2	(25.3)	-71.9	(24.6)	199.36***	M > I, G	2.23
Does not change how confident/hopeful I feel	<b>36.9</b>	(26.4)	-15.1	(26.6)	-30.5	(18.2)	198.41***	M > I > G	2.06
Helps me feel more confident or hopeful	-1.6	(27.1)	<b>42.7</b>	(22.0)	47.6	(17.5)	156.85***	I, G > M	-1.97
Helps me feel much more confident or hopeful	-32.4	(32.2)	38.6	(26.8)	<b>54.8</b>	(21.8)	299.87***	G > I > M	-2.61

Note. Means, standard deviations, and F-values from analysis of variance (ANOVA). Within segments, the highest utility value for each attribute is bolded. When significant results were obtained, Dunnnett's C comparisons were computed MIN = Minimal Information; IPT = Individual PT; GPT = Group PT; M = Minimal Information; I= Individual parent training; G=Group parent training. For *g*, .2 < *g* < .5 indicates a small effect, while .5 < *g* < .8 indicates a moderate effect and .8 < *g* < 1.0 indicates a large effect.

\* *p*<0.05,  
 \*\* *p*<0.01,  
 \*\*\* *p*<0.001.