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Using Consumer Preference Information to Increase the Reach and Impact of Media-Based Parenting Interventions in a Public Health Approach to Parenting Support

Carol W. Metzler[a], **Matthew R. Sanders**[b], **Julie C. Rusby**[a], and **Ryann Crowley**[a]

[a]Oregon Research Institute [b]The University of Queensland [a]Oregon Research Institute

Abstract

Within a public health approach to improving parenting, the mass media offer a potentially more efficient and affordable format for directly reaching a large number of parents with evidence-based parenting information than do traditional approaches to parenting interventions that require delivery by a practitioner. Little is known, however, about factors associated with parents' interest in and willingness to watch video messages about parenting. Knowledge of consumer preferences could inform the effective design of media interventions to maximize parental engagement in the parenting messages. This study examined parents' preferred formats for receiving parenting information, as well as family sociodemographic and child behavior factors that predict parents' ratings of acceptability of a media-based parenting intervention. An ethnically diverse sample of 162 parents of children ages 3–6 years reported their preferences for various delivery formats for parenting information and provided feedback on a prototype episode of a video-format parenting program based on the Triple P Positive Parenting Program. Parents reported the strongest preference for self-administered delivery formats such as television, online programs, and written materials; the least preferred formats were home visits, therapists, and multiweek parenting groups. Parents' ratings of engagement, watchability, and realism of the prototype parenting episode were quite strong. Parents whose children exhibited clinical levels of problem behaviors rated the episode as more watchable, engaging, and realistic. Mothers also rated the episodes as more engaging and realistic than did fathers. Lower income marginally predicted higher watchability ratings. Minority status and expectations of future problems did not predict acceptability ratings. The results suggest that the episode had broad appeal across groups.

Keywords

parenting; consumer preferences; media

The prevention of serious conduct problems in children has increasingly targeted parents. Parent Management Training interventions, derived from social learning, functional analysis, and cognitive–behavioral principles, are considered the interventions of choice for conduct problems in young children and are the parenting programs with the strongest

Correspondence addressed to: Carol W. Metzler, Ph.D., Oregon Research Institute, 1715 Franklin Blvd. Eugene, OR 97403, Phone: 541-484-2123, Fax: 541-484-1108, carolm@ori.org.

evidence base (McMahon & Kotler, 2004; Prinz & Jones, 2003; Sanders & Ralph, 2004; Taylor & Biglan, 1998). Despite their demonstrated effectiveness, however, few parents actually participate in evidence-based parenting programs (Sanders, Markie-Dadds, Firman, & Baig, 2007). Evidence-based parenting interventions are not typically available on a widespread basis, especially outside of major metropolitan areas (Connell, Sanders, & Markie-Dadds, 1997). They are often not offered by service agencies due to perceived lack of staff time and resources (Baggett et al., 2010). Furthermore, poor participation by parents in parenting groups stands as the most formidable barrier to widespread effective implementation of parenting programs (Dumka, Garza, Roosa, & Stoerzinger, 1997; Spoth & Redmond, 2000). Low recruitment and retention rates in parenting programs are common. The primary reasons for families' lack of participation include logistical difficulties such as scheduling conflicts, transportation, and child care; fatigue; and insufficient motivation to get out (Dumka et al., 1997; Spoth & Redmond, 2000).

The Problem of Poor Reach

In a South Carolina population survey, only 14% of parents of children aged birth to 7 years reported involvement in a parenting program (Prinz & Sanders, 2007). Similarly, population surveys in Australia (Sanders et al., 1999) found low parental exposure to any established evidence-based parenting program. The major consequence of low program availability and poor participation rates is inadequate program reach. The public health impact of a program is a function of its reach and its efficacy, as articulated by Glasgow and colleagues (Glasgow, Vogt, & Boles, 1999) in the RE-AIM framework. In the RE-AIM framework, the public health impact of a program is determined by the product of the program's Reach, Efficacy, Adoption rate, Implementation effectiveness, and Maintenance over time. Limited program reach means that many families who could benefit receive no parenting support services at all. When few families derive the benefits of receiving an evidence-based parenting program, the public health potential of parenting programs to reduce the prevalence of adverse outcomes for children in the entire population is diminished, and the value of proven programs becomes limited (Biglan & Metzler, 1998; Glasgow et al., 1999). Hence, alternate forms of reaching parents with scientifically valid parenting information are needed (Sanders & Turner, 2002). Indeed, there is increasing emphasis in the literature and in society on the need for more efficient delivery of and improved access to effective mental health and health interventions in general (Bennett-Levy et al., 2010; Richards & Suckling, 2008). Information from parent consumers about their preferences for and engagement in a variety of delivery formats for parenting supports is critical for informing the design of parenting interventions to maximize population reach. This issue provides the focus for this paper.

The Utility of a Public Health Approach for Improving the Reach of Parenting Programs

Reducing the prevalence of children's behavior problems will require that a large proportion of the population be reached with effective parenting strategies (Biglan, 1995). To address the difficulties of poor population reach of parenting programs, a public health approach to improving parenting is needed (Sanders, 1999, 2008). A public health approach focuses on ensuring that evidence-based parenting intervention strategies are widely available in easily accessible formats and delivery mechanisms, in order to reach as many parents as possible. A public health approach to promoting healthy behavior change often involves the mass media as an important vehicle for influencing individuals' knowledge, attitudes, and behaviors and for changing public norms (Hornik, 2002). One sophisticated example of a public health approach to improving parenting is the Triple P system (Sanders, 2008). The Triple P Positive Parenting Program is a comprehensive population-level system of

parenting and family supports, involving five levels of intervention of increasing intensity and narrowing population reach. The levels range from universal media and communication strategies to highly intensive practitioner-delivered interventions for the highest risk families. Various components of the Triple P system have been subjected to a series of controlled evaluations, and have consistently shown positive effects on observed and parent-reported child behavior problems, parenting practices, and parents' adjustment (de Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008; Sanders, 2008; see www.pfsc.uq.edu.au for a current list of all evaluation studies). Most notably, two recent large-scale population trials of the entire Triple P system have demonstrated reductions in population-level indices of child maltreatment and coercive parenting practices (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009; Sanders, Calam, Durand, Liversidge, & Carmont, 2008).

The Potential Value of the Media in a Public Health Approach to Improving Parenting

The mass media, particularly television, have the potential to offer a more efficient and affordable format for providing quality information about parenting directly to families than do traditional approaches to parenting interventions. Clearly, some families require the more intensive support of a clinical intervention. But the media may also directly affect parenting practices as part of a larger system of supports available to families, complementing more intensive clinical interventions in a stepped-care public health model of increasingly intensive supports for increasing levels of need (Richards & Suckling, 2008; Sanders, 2008) and extending the reach of parenting programs to those who might not otherwise be reached. In the multilevel Triple P system, the media complement practitioner-delivered interventions and are utilized extensively in a strategic manner to impart parenting information directly to parents, normalize the difficulties of parenting experiences, reduce parents' sense of social isolation regarding parenting, destigmatize getting help, and alter the community context for parenting (Sanders, 1999). A primary advantage of a mass media-based strategy is its capacity to dramatically increase the reach of parenting programs by going directly to the consumer, compared to traditional parent education methods that rely on parents attending a parenting group or individual sessions. Furthermore, the mass media have a pervasive impact on people's lives (e.g., Brown & Walsh-Childers, 2002). The popularity of television suggests that it exerts an enormous influence over attitudes, beliefs, awareness, and behavior, making it potentially one of the most powerful teaching tools in today's society (Hofstetter, Schultze, & Mulvihill, 1992; Viswanath & Finnegan, 2002; Zimmerman, 1996). Singhal and Rogers (2002) underscore the potential value of the mass media as agents of entertainment-education, in which educational messages are embedded in entertainment programming to improve audience reach, enhance message reception, and diffuse an advocated practice throughout a target audience (Rogers, 2002).

Because they are self-administered, media-based parenting programs overcome barriers to attendance, increase the accessibility of services to both mothers and fathers, substantially reduce the cost of service delivery, and allow parents more power and flexibility in the learning process. Self-administered parenting programs have shown positive, clinically meaningful effects on parents' knowledge, behavior, and attitudes and on child outcomes, even with high-risk families (Brown, Yando, & Rainforth, 2000; Connell, Sanders, & Markie-Dadds, 1997; Gordon, 2000; Sanders, Markie-Dadds, Tully, & Bor, 2000; Webster-Stratton, Hollinsworth, & Kolpacoff, 1989). Furthermore, three randomized clinical trials have demonstrated the potential positive effects of parents' viewing of television programs that depict positive parenting and child management principles being implemented by parents (Calam, Sanders, Miller, Sadhnani, & Carmont, 2008; Sanders et al., 2008). The television series *Driving Mum and Dad Mad,* which showed five families of children with conduct problems participating in a Group Triple P intervention, had positive effects on

child behavior, parenting practices, and parental affect (Sanders et al., 2008). Parents whose children exhibited more problem behaviors were more likely to watch all episodes, whereas those with low self-efficacy and high levels of coercive parenting were more likely to drop out of the study (Calam et al., 2008). Also, parents with greater conflict with their partner were less likely to watch all episodes. These findings point to the importance of further research to better understand the factors that might influence a parent's inclination or preparedness to watch a media message about parenting skills.

Engaging Parents in Media Messages about Parenting

Much of the research on determinants of parental engagement in parenting programs has examined the role of sociodemographic and preintervention characteristics of parents. Most of this research has focused on the factors that predict engagement in face-to-face interventions (e.g., Morawska & Sanders, 2006; Spoth, Goldberg, & Redmond, 1999) and to a lesser extent self-administered interventions (e.g., Haggerty, MacKenzie, Skinner, Harachi, & Catalano, 2006). However, very little research has been conducted on the factors associated with parents' interest in and willingness to watch media messages directed at parenting. There is a pressing need for this kind of research, as it can inform the design of the media interventions themselves to optimize the attractiveness and watchability of the program. Program content, mode of delivery, and type of program format are potentially manipulable variables that could affect parents' willingness to initially watch and complete a program. For example, families with few resources may find delivery formats that involve transportation and child care costs less preferable than programs that can be accessed at home. Thus, this paper examines the extent to which family sociodemographics (parent gender, minority status, household income), level of child behavior problems, and parents' expectation of future child behavior problems predict their ratings of the acceptability of a media-based parenting intervention.

These variables were selected because of their potential relationship to parents' interest in parenting programs in general, and media-based parenting interventions in particular. For example, those who engage in face-to-face and self-administered parenting interventions are more likely to be mothers than fathers (Sanders, Dittman, Keown, Farruggia, & Rose, 2010), in higher income brackets (Morawska & Sanders, 2006; Sanders, 2008; Zubrick et al., 2005), and nonminority populations, and they are more likely to have children with more severe behavior problems (Sanders, Bor, & Morawska, 2007). Little is known, however, to what extent these limitations apply to engagement in media-based parenting interventions. Calam et al. (2008) is one of few studies to examine the variables that predict parents' engagement in a media message about parenting. As reported above, more child behavior problems and less conflict between partners were associated with watching all of the episodes of the *Driving Mum and Dad Mad* series; it is notable, however, that degree of dysfunctional parenting, parental depression and stress, and sociodemographic risk did not predict parents' watching. Evidence that media-based parenting interventions could engage a broader population of parents than face-to-face or traditional self-administered parenting interventions would underscore the value of the media in a public health approach to improving parenting.

In addition, knowledge about consumers' views on the acceptability, interest value, and usefulness of program formats and content can be used to design more engaging and effective parenting messages. Gathering feedback from potential consumers is central to a formative development and evaluation process that seeks out and incorporates feedback from potential users and accounts for factors that will facilitate or interfere with program usage (Stetler et al., 2006). Contemporary models of managing product innovation also underscore the importance of soliciting consumer feedback early and often in an iterative

process of development to ensure that the product will meet consumer needs (Crawford & DiBenedetto, 2009; Kroll & Kruchten, 2003). Consumer feedback is an extremely valuable source of information concerning consumer acceptability of parenting advice through the media and has the potential to increase the social validity and cultural acceptability of the parenting messages.

Consumer involvement in the delivery and evaluation of mental health services has involved documentation of the views of potential consumers as an important element of intervention development. This process helps to ensure that the proposed program or service is responsive to the client's needs (Kent & Read, 1998). The involvement of the consumer in program design has been argued to lead to greater research quality and clinical relevance due to the unique perspective the consumer can offer to an area of research (Boote, Telford, & Cooper, 2002). The participatory action research paradigm (PAR; Whyte, Greenwood, & Lazes, 1989) highlights the productive involvement of the consumer in program development. PAR involves direct involvement of the consumer in determining the research questions, designs, methods, analyses, and products (Torre & Fine, 2006). The inclusion of the consumer in program development facilitates the introduction of new information and ideas, which may contribute to advances in intervention theory and practice (Ozanne & Saatcioglu, 2008; Singhal & Rogers, 2002; Whyte et al., 1989).

Traditional methods of seeking consumer feedback include the use of facilitated focus groups involving representatives of the intended target audience. These kinds of facilitated focus groups are widely used in testing the audience appeal of new TV shows and new products; this method has the advantage of dynamic interactive discussion and the ability of the facilitator to probe certain questions in depth. In an experimental evaluation, Choe, Kim, Lehto, Lehto, and Allebach (2006) found that consumer feedback data from facilitated focus groups significantly improved the usability of a self-help technical support website. However, facilitated focus groups typically use small sample sizes, participants can potentially be influenced by those who are very vocal and express strong opinions within the group, and different results across separate focus groups can be difficult to interpret. An alternative method involves the use of the Internet, where participants can view a video segment in private and be asked specific, structured questions to solicit their opinions. This method allows for structured input from a larger group representing the broad population of potential consumers, uncontaminated by the views of others watching the program.

The present study represents the first phase in the Triple P Parenting Media Project, which is testing the efficacy of a media series on parenting for improving parent–child interaction and reducing children's conduct problems. This study illustrates the value of using web-based, individually administered focus group methods to solicit feedback concerning the attractiveness and likely effectiveness of a planned media intervention at the program design stage, before the program is complete and too costly to change. The views of an ethnically diverse sample of parents of preschool-aged children were examined. Specifically, we examined (a) parents' preferred delivery modalities for receiving information about parenting (e.g., TV, Internet, attending a parenting group), and (b) parents' ratings of acceptability (i.e., interest, entertainment value, intention to watch, and degree of realism) of one prototype episode of a 10-episode media series based on the Triple P Positive Parenting Program (Sanders, 2008). The extent to which acceptability of the episode could be predicted by families' sociodemographic characteristics (gender, ethnicity, household income), the degree to which the child has conduct problems (clinical vs. nonclinical levels), and the degree of anticipatory worry the parent reported about the child's future conduct was examined. Based on the findings of Calam et al. (2008), it was hypothesized that child behavior problems and parents' expectations of future child problems would be associated

with better acceptability ratings, but that acceptability ratings would be robust across sociodemographic variables.

Method

Design

The focus group was conducted entirely online. Participants were recruited and screened online, viewed a prototype "Shopping Successfully with Children" episode of the Triple P Parenting Media Series online, and provided private feedback through an online survey.[1]

Participants

Participants were 162 parents of children ages 3–6 years old, recruited through advertisements posted in online classified ads in various cities across the U.S. The advertisement was framed in terms of an opportunity to "provide valuable feedback on a TV show on parenting," "learn some strategies for making shopping with children more successful," and get paid. A sample was selected that met the following criteria: (a) parent was over the age of 20; (b) child was 3–6 years old; (c) parent was living with the child; and (d) parent had access to high-speed Internet. In addition, the sample was selected such that half of the sample reported clinically elevated levels of child behavior problems and half of the sample was in the normal range on child behavior, as measured by the Eyberg Child Behavior Inventory (ECBI; Eyberg & Ross, 1978; see Measures). Ethnicity targets were set such that the ethnic diversity of the sample roughly reflected that of the U.S. population, across both clinical and nonclinical groups. An additional target was to have both women and men represented in the sample.

Participants lived across all regions of North America. The sample of parents was 78% female and 22% male, with 63% non-Hispanic White, 14% African American, 10% Hispanic, 9% Asian or Pacific Islander, and 4% other. The majority of participants were the mother of the target child (78%), between 25 and 34 years old (61%), and living with a partner (93.4%). The median household income was $50,000–$70,000 per year. The children were well represented by males and females, with 42.6% of the children being female. Fifty-three percent of participants were experiencing clinical levels of child problem behaviors, as measured by the ECBI, and 47% were in the normal range. Table 1 displays the descriptive statistics of the total sample, as well as of the clinical and nonclinical subgroups.

There were few statistically significant differences between the characteristics of the clinical and nonclinical subgroups. The clinical subgroup was significantly more likely to be working outside the home than the nonclinical subgroup ($X^2(1) = 4.34$, $p = .037$). The difference in the percentage of female vs. male parent participants in the clinical and nonclinical subgroups approached significance ($X^2(1) = 3.74$, $p = .053$); a larger proportion of male parents was represented in the clinical subgroup than the nonclinical subgroup.

Procedures

The online advertisement included a link to the project website, which described the study in detail and provided a link to the online screening form. Interested individuals were asked to

[1]Participating parents were shown two different versions of the prototype "Shopping Successfully with Children" episode of the Triple P Parenting Media Series. The two versions did not differ in length, parenting strategies depicted, or production quality. As a function of the randomized efficacy trial currently underway, however, one of the versions was enhanced with embedded messages intended to address self-efficacy, expectancies of success, goal-setting, and dealing with difficult thoughts and feelings. Participants were randomized to viewing condition (order of presentation of the two versions), and the two versions were shown in counterbalanced order (100 were assigned to view the standard version first; 109 to view the enhanced version first).

complete the screening form and were informed that if they qualified and were selected, they would be invited via e-mail to participate. The screening form asked about parent age, gender, race/ethnicity, and access to high-speed Internet; and child gender, age, relationship to and custody of the child. Those who qualified on these variables were then asked about child behavior problems (ECBI). The screening form also asked for parents' e-mail addresses so that they could be invited to participate if selected.

Several steps were taken during the screening to ensure the veracity of the online participants. Individuals who changed their answers on the screening form by pressing the "back" button on their web browser were excluded. Records for all duplicate Internet protocol (IP) addresses (indicating multiple entries into the screening form from the same computer) were examined to (a) exclude individuals who had entered the screening form repeatedly and changed their answers, and (b) allow only one participant per household. Finally, participants in a previous online study on parenting at Oregon Research Institute were excluded.

A total of 2,060 individuals responded to the online advertisement by visiting the project website and completing the screening form. Of these, 1,080 met basic sociodemographic eligibility criteria, and 748 of these qualified on the basis of their children's behavior. From those who qualified, participants were selected to fill eight different "bins": parent race/ethnicity groupings (Caucasian, African American, Hispanic, and Asian/Pacific Islander/Other) crossed with child clinical vs. nonclinical groupings. For feasibility, when there were more individuals who qualified than were needed per stratum (Caucasian clinical and nonclinical female parents, and Asian/Pacific Islander/Other clinical female parents), a random sample of individuals was selected from each of these subgroups and invited to participate. A total of 209 individuals were invited to participate.

Individuals who were invited to participate received an e-mail with a link to the online consent form. If they consented to participate, participants were then automatically linked to the feedback questionnaire, which included video streaming of the sample 12-minute episode. Of the 209 invited to participate, 168 (80%) consented to participate, and 162 reviewed the sample episode and completed the feedback questionnaire. The prototype video episode that parents viewed was embedded in the feedback questionnaire; parents did not participate in any further intervention activities.

Measures

Clinical status—Clinical status of the participants was defined by the frequency and intensity of their child's misbehaviors, measured during the online screening process with a subset of 15 items from the Eyberg Child Behavior Inventory (ECBI; Eyberg & Ross, 1978). The ECBI asks parents to rate the frequency of 36 different child misbehaviors on a 7-point response scale (Intensity scale) and the degree to which those misbehaviors are a problem for the parent (Problem scale). The ECBI has been normed on children ages 2 through 16, and both scales reliably discriminate clinical from nonclinical children; have high internal consistency, test–retest reliability, and strong construct validity; and show sensitivity to change (Eyberg & Ross, 1978; Robinson, Eyberg, & Ross, 1980; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). The subset of 15 ECBI items used in this study were selected on the basis of being highly correlated with the original ECBI: The Intensity scale of the 15-item ECBI correlated .94 with the Intensity scale of the 36-item ECBI and had a Cronbach's alpha of .91 (compared to .96), and the Problem scale of the 15-item version correlated .95 with the 36-item ECBI and had an alpha of .86 (compared to .94). Clinical cutoff scores for each subscale were adjusted proportionately for the shorter version (55 or more for the Intensity scale and 6 or more behaviors identified as a "problem" for the parent (i.e., a score of 6 or more, with No = 0 and Yes = 1).

The clinical subgroup was defined as scoring above the clinical cutoff on both the Intensity and Problem scales (n = 455 of those screened were eligible on this basis); the nonclinical subgroup scored below the clinical cutoff on both scales (n = 293 of those screened). Those who were above the clinical cutoff on one scale and below on the other were ineligible to participate in the study (n = 322 of those screened). Parents were not provided with their child's ECBI scores to prevent bias on their ratings of the video episode.

Demographics—Participants were asked a series of demographic items, including parent gender, age, race/ethnicity, household income, employment status, partner status, target child gender, and relationship to the target child. For the purposes of these analyses, parent gender was coded as a dummy variable indicating female gender (1 = female, 0 = male), race/ethnicity was coded as a dummy variable indicating racial or ethnic minority status (1 = minority, 0 = Caucasian), and household income was measured as a continuous variable with higher values indicating larger household incomes. Race/ethnicity was dummy coded as minority vs. Caucasian because the sample size was not large enough to support analyses at the level of each individual minority subgroup.

Expectations of future problem behaviors—To measure parents' anticipatory concern about their children's likelihood of experiencing a variety of problems in their teen years, parents were presented with a list of five adolescent problem behaviors (skipping school, smoking cigarettes, drinking alcohol regularly, failing in school, and using illegal drugs) and asked to rate their "child's chances of experiencing these problems when he or she is a teenager," on a 7-point response scale. A score of 1 indicated certainty "that your child will NOT experience this problem when he or she is a teenager," and a score of 7 indicated certainty "that your child WILL experience this problem when he or she is a teenager." Ratings across all five problem behaviors were averaged for a single composite score (Cronbach's alpha = .85).

Parent preferences for methods of receiving information about parenting—Parents were asked to rate their preferences for nine parenting information delivery methods using a 5-point scale ranging from "not interested" to "very interested." Specifically, parents were asked, "If you were interested in getting good, useful information about parenting strategies for young children, how would you prefer to receive that information? Please rate your level of interest in each of the following formats." The nine delivery formats included parenting groups or class over several weeks, one-time parenting workshops or seminars, home visits, online program, TV program, self-paced workbook, resource center with material checkout, individual sessions with a therapist, and written materials (brochure, article, book). Preference ratings were dichotomized into "quite" or "very interested" as preferred and all other responses as not preferred.

Acceptability ratings—After viewing the 12-minute video episode, parents were asked a series of questions about their perceptions of the acceptability of the episode. Acceptability was measured by the participants' reports of (a) their *engagement* in the episode, (b) the *watchability* of the episode, and (c) the *realism* of the episode.[2]

Engagement was defined by participants' report of "how useful" and "how interesting and entertaining" they found the episode on a 5-point scale ("not at all" to "very").

[2]Engagement and watchability scores were averaged together across the two versions of the prototype Shopping episode to create a single mean composite score. To reduce participant burden and because the ratings about realism were not expected to vary across versions, questions about realism were asked only once, after the first version was viewed. The ratings for engagement and watchability for each version viewed were compared across the two different versions of the episode. There were no significant version or order effects in engagement or watchability, so only overall scores are reported here.

Watchability was defined by the participants' report, on a 5-point scale, "definitely not" to "definitely," of the likelihood that if this episode and others like it were on TV, they would watch it.

Realism was computed by averaging parents' ratings of the following five items: (1) How realistic did the parents' behavior seem to you?, (2) To what extent did a parent in the episode say or do something you might have done in that same situation?, (3) How realistic did the children's behavior seem to you?, (4) Can you see yourself shopping in a store like this with your child?, and (5) How much did these families' situations seem familiar to you? These items were rated on a 5-point scale, "not at all" to "very much." The realism composite had good reliability (Cronbach's alpha = .81).

Analysis Plan: Analyses were conducted using SPSS version 15. To evaluate parents' preferences for methods of receiving information about parenting, the delivery methods were rank ordered according to the percentage of respondents preferring each method. Chi-square analyses were conducted to examine differences in preferences by risk status (clinical vs. nonclinical).[3]

Multiple regression analyses were conducted to investigate the ability of the predictors to estimate the three acceptability ratings (engagement, watchability, and realism). The predictors include (a) clinical status on the measures of child problem behavior, (b) participant gender, (c) household income, (d) minority status, and (e) the parent's expectation of their child's future problem behaviors.

Results

Complete data were available for 88% of the entire sample ($n = 162$). Key covariates were investigated to evaluate the randomness of the missing responses. Missing data could not be predicted by parent gender, minority status, risk status (clinical vs. nonclinical), age, current employment, single parent status, or household income.

Table 2 displays the means of child behavior problems, expectations of future problem behaviors, and acceptability ratings for the total sample and for the clinical and nonclinical subgroups. The ECBI mean scores and their ranges in the clinical subgroup indicate that these families were experiencing high levels of difficulties with their children. As would be expected based on how the sample was selected, parents in the clinical subgroup reported substantially more problem behavior in their children than did parents in the nonclinical subgroup, $t(160) = -21.47$, $p < .001$ for Intensity scale; $t(160) = -28.42$, $p < .001$ for Problem scale. Participants in the clinical subgroup were also more likely to anticipate that their children would have a variety of problem behaviors as teenagers, $t(148) = -3.70$, $p < .001$.

Parent Preferences for Methods of Receiving Information about Parenting

Participants were asked how they would prefer to receive "good, useful information about effective parenting strategies for young children," by indicating their level of interest (on a 5-point scale) in each of nine delivery formats. The results are displayed in Figure 1. For the total sample, the highest preference ratings were given for obtaining parenting information through a TV program, followed by other self-administered approaches (online program, written materials). The most common evidence-based approaches (home visits, therapists,

[3]For the analysis of parents' preferences, variables were dichotomized and a Chi-square analysis performed because generally accepted criteria for treating ordinal variables as continuous were not met. To be analyzed as a continuous variable, a variable needs to have five or more levels *and* the sample size needs to be greater than $n = 200$ (West, Finch, & Curran, 1995).

multi-week parenting groups) were the formats least preferred by parents. Chi-square analyses showed that participants with clinical levels of child behavior problems had a stronger preference than nonclinical participants for the following formats: TV program ($p = .011$), written material ($p = .028$), resource center ($p = .021$), therapist ($p < .001$), and home visit ($p = .027$). They also showed a trend for preferring workbooks ($p = .052$). Although clinical and nonclinical participants' preferences for online information, one-time parenting workshops, and multi-week parenting groups followed the same general trend of stronger preferences among clinical participants, these differences were not significant.

Ratings of Acceptability

Participants' ratings of their engagement in, watchability of, and realism of the Shopping episode were quite strong. As displayed in Table 2, the mean rating for engagement in the episode for the total sample was 3.93 on a 5-point scale ($SD = .79$); 90% of the participants found the shopping episode "somewhat," "quite," or "very" interesting, entertaining, and useful. The mean rating for watchability was 4.08 ($SD = .81$), with 74% of participants reporting that they would "probably" or "definitely" watch the program if it were on TV. The mean for realism was 4.04 ($SD = .68$); 34% of participants reported that the episode was "somewhat" realistic, and 61% reported that the episode was "quite a bit" or "very much" realistic. The means for the clinical sample on all three acceptability measures were significantly higher than the means for the nonclinical sample ($p = .006$, .009, and .006, respectively).

Participant Characteristics Predicting Acceptability

Bivariate correlations—As displayed in Table 3, the bivarite correlations between the three ratings of acceptability (engagement, watchability, and realism) were moderately to strongly correlated with one another, ranging between .54 and .77. The relationships between the ratings of acceptability and the participant characteristics were relatively weak, however, with 11 of the 15 bivariate correlations below .20. Female parents and clinical status were associated with higher acceptability ratings.

Multiple regression models—To examine simultaneously the extent to which participant characteristics predict parents' ratings of acceptability of the episode, multiple regression analyses were performed; these results are reported in Table 4. All necessary assumptions of the multiple regression analyses were met, including but not limited to multicollinearity of items. Given the observed alpha level, the number of predictors, observed R-squared, and sample size, the following regression models had an observed power of .85 to .91.

The multiple regression using participant characteristics to predict the ratings of engagement was significant ($F(5,136) = 2.90$, $p = .016$, Adjusted $R^2 = .06$). Clinical status ($t = 2.41$, $p = .017$) and parent gender ($t = 2.00$, $p = .048$) were the only significant predictors of engagement. Parents of children exhibiting clinical levels of problem behaviors and female parents rated the episodes as more engaging.

The multiple regression analysis using participant characteristics to predict the ratings of watchability was significant ($F(5,136) = 3.05$, $p = .012$, Adjusted $R^2 = .10$). Clinical status was the only significant predictor of watchability ($t = 2.46$, $p = .015$), although household income was almost significant ($t = 1.97$, $p = .051$). Those whose children were exhibiting clinical levels of problem behaviors rated the episodes as more watchable, and those in lower income households showed a strong trend toward higher watchability ratings.

The multiple regression analysis using participant characteristics to predict the ratings of realism was significant ($F(5,136) = 4.38$, $p = .001$, Adjusted $R^2 = .11$). Again, clinical status ($t = 3.24$, $p = .002$) and parent gender ($t = 3.36$, $p = .001$) were the only significant predictors of realism ratings. Parents of children exhibiting clinical levels of behavior problems and female parents rated the episodes as more realistic.

Discussion

Two notable sets of findings emerged from this study. First, the parent preference ratings showed that media-based approaches to delivering parenting information are highly favored by parents over more intensive approaches, including the parents of highly problematic children (the clinical subsample). It is ironic that the most commonly used evidence-based approaches involving group and individual consultation are in the formats least preferred by parents, and that the fewest evidence-based resources exist in the formats most preferred. Parents are looking for evidence-based approaches to parenting support (Sanders, Haslam, Calam, Southwell, & Stallman, 2010), which underscores the importance of developing evidence-based approaches in formats favored by parents. There can be a considerable mismatch between what parents are looking for and what is available and has been shown to be effective.

Second, acceptability ratings (engagement, watchability, and realism) for the prototype video-based Triple P episode were all favorable, indicating that media directed at parenting can be created in a manner that parents find useful, realistic, interesting, and entertaining. Only level of child problem behaviors and parent gender predicted engagement and realism. Only level of child behavior problems significantly predicted watchability, although a strong trend was also found for income, with lower income parents rating slightly higher watchability. Otherwise, income, ethnic minority status, and expectations of future problems were not significant predictors of engagement, watchability, or realism, indicating that the episode was acceptable across income groups, ethnic groups, and expectancy for future problem behaviors. Power was sufficient to detect effects had they been present. The present findings concerning the acceptability of media interventions are consistent with other research showing that evidence-based parenting interventions can be effective across diverse ethnic groups (e.g., Leung et al., 2003). This appeal to diverse audiences has important implications for achieving broad population reach, an essential component of public health impact within the RE-AIM framework (Glasgow, Vogt, & Boles, 1999).

These findings extend previous research on face-to-face interventions, non-media-based self-administered interventions, and media-based interventions (Calam et al., 2008), by showing that an infotainment-style television program on parenting is highly acceptable to parents of young children with conduct problems. Indeed, the fact that families of children with high levels of behavior problems rated the prototype episode as significantly more engaging, watchable, and realistic suggests that the intervention has potential to reach the parents most in need. The findings that female parents rated the episode as more engaging and more realistic is not surprising, given that mothers often function as the “primary parent,” tend to be more engaged in parenting interventions, and are more likely to be interested in media related to health and safety issues than are men (Pew Research Center for the People and the Press, 2008). Of course, the most important test of a media message about parenting goes beyond engagement and acceptability to look at its actual efficacy in improving parenting practices and children’s outcomes; the Triple P Parenting Media series is currently undergoing a rigorous randomized trial to test this very question. Engagement and acceptability are still critically important questions, however, because parents must first be engaged in a message for it to have an impact on them.

This study also shows the value of collecting consumer feedback online. Consumer feedback on intervention materials can be obtained online without the potential pitfalls of in-person focus groups, in which those who are very vocal and express strong opinions can exert undue influence on the opinions of others through a social influence process. Although no studies could be found that directly compared the relative utility of online versus in-person focus groups for obtaining consumer feedback to guide the development process, it is likely that the two data sources would complement one another. The sort of "online focus group" conducted here allowed the participation of a much larger and broader population (both ethnically and geographically), and is a more efficient and cost-effective method for obtaining feedback from a large number of people than are in-person focus groups. This consumer input informed the development of the Triple P Parenting Media Series to help increase the likelihood that it will attract, engage, and retain the target audience. For example, on the basis of parents' feedback, more video examples with fathers and with multiple children were incorporated into the series.

Implications of the Study

There are several important implications of this study. First, paying attention to parent preferences can produce better population reach and delivery of interventions in the most efficient and cost-effective manner possible. The need for parenting support at a population level will never be met through clinically oriented, practitioner-delivered interventions alone. Responding to parents' apparent preference for self-administered, nonclinically oriented parenting support methods will help foster the development of multiple modes of intervention delivery, with varying levels of practitioner involvement, which can dovetail and complement one another to maximize population reach and public health benefit (Kazdin & Blase, 2011).

Second, consumer acceptability research such as that described here can assist with the creation of intervention materials that appeal to parents. This idea is central to the formative development and evaluation process that is part of new product development models, in which consumers' feedback is obtained early and often to ensure compatibility with their needs (e.g., Stetler et al., 2006). Third, use of the Internet to conduct this research can help ensure a broader geographic and sociodemographic reach in recruiting samples of parents.

And finally, the robustness of parents' positive acceptability ratings across sociodemographic variables (race/ethnicity, income) is noteworthy. Although the present sample had a somewhat truncated income range, these findings do begin to challenge assumptions about the necessity of creating completely different parenting programs tailored to the unique needs of families based solely on sociodemographic characteristics. These assumptions potentially restrict families' access to program content they might benefit from. Meeting the needs of diverse populations is an important challenge for program developers. These findings suggest that it is possible to develop programs that have broad appeal by using parents and children from diverse backgrounds to ensure a multicultural mix, and by using examples that have universal resonance. The Triple P Parenting Media Series depicts Australian, British, and American families, creating not only a multicultural but a multinational feel, and parents appear to be accepting of it. Furthermore, a video-based delivery format is amenable to dubbing and translation for multiple audiences. If there is no need to re-develop a different version of a program for every new population, the cost of bringing these products to market is significantly reduced.

Limitations of the Study

These findings must be interpreted in the light of the study's limitations. First, the sample was recruited and assessed online – thus, it was a "wired" sample comfortable with

technology to begin with. Given this, higher preference ratings for online interventions may not be surprising, although an online population would not necessarily be more likely to favor television-based materials. Second, parents' stated preferences may not correspond to the choices they actually make when seeking help; future research could examine the preferences among those families who actually have presented for traditional therapy. Third, the lower income range was somewhat truncated; the sample was largely middle income. The fact that families are online, however, does not automatically mean that they are economically advantaged and not experiencing child behavior problems. An increasingly high proportion of low-income families are gaining Internet access (Rainie, 2010). Finally, because of subsample sizes, race/ethnicity was dummy coded into minority/nonminority classifications. This analysis allowed examination of potential differences in ratings between White non-Hispanic and minority subgroups, but obscured potential differences among ethnic minority subgroups. A more thorough examination of difference across racial/ethnic groups is an important area for future research.

A final question concerns how often input is required from consumer groups. It may be impractical to conduct consumer acceptability research every time an intervention is rolled out, as it may slow down the implementation and dissemination process. However, short term costs may be outweighed by longer term gain if better sustainability is achieved. The present approach sought to harness the benefits of true consumer perspective with an efficient method for collecting this information in a way that informs program design.

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References

Baggett K, Davis B, Feil E, Sheeber LB, Landry S, Carta J, Leve C. Technologies for expanding the reach of evidence-based intervention: Preliminary results for promoting social-emotional development in early childhood. Topics in Early Childhood Special Education. 2010; 29:226–238.10.1177/0271121409354782 [PubMed: 20454545]

Bennett-Levy, J.; Richards, DA.; Farrand, P.; Christensen, H.; Griffiths, KM.; Kavanagh, DJ.; Ritterband, L., editors. Oxford guide to low intensity CBT interventions. Oxford, UK: Oxford University Press; 2010.

Biglan A. Translating what we know about the context of antisocial behavior into a lower prevalence of such behavior. Journal of Applied Behavior Analysis. 1995; 28:479–492.10.1901/jaba.1995.28-479 [PubMed: 8557621]

Biglan, A.; Metzler, CW. A public health perspective for research on family-focused interventions. In: Ashery, RS.; Robertson, EB.; Kumpfer, KL., editors. Drug abuse prevention through family interventions. NIDA Research Monograph 177, NIH Publication NO. 994135. Washington, DC: National Institute on Drug Abuse; 1998. p. 430-458.

Boote J, Telford R, Cooper C. Consumer involvement in health research: A review and research agenda. Health Policy. 2002; 61:213–236.10.1016/S0168-8510(01)00214-7 [PubMed: 12088893]

Brown M, Yando R, Rainforth M. Effects of an at-home video course on maternal learning, infant care and infant health. Early Child Development and Care. 2000; 160:47–65.10.1080/0030443001600105

Brown, JD.; Walsh-Childers, K. Effects of media on personal and public health. In: Bryant, J.; Zillmann, D., editors. Media effects: Advances in theory and research. Mahwah, NJ: Lawrence Erlbaum Associates; 2002. p. 453-488.

Calam R, Sanders MR, Miller C, Sadhnani V, Carmont SA. Can technology and the media help reduce dysfunctional parenting and increase engagement with preventative parenting interventions? Child Maltreatment. 2008; 13:347–361.10.1177/1077559508321272 [PubMed: 18641169]

Choe P, Kim C, Lehto MR, Lehto X, Allebach J. Evaluating and improving a self-help technical support web site: Use of focus group interviews. International Journal of Human–Computer Interaction. 2006; 31:33–354.10.1207/s15327590ijhc2103_4

Connell S, Sanders MR, Markie-Dadds C. Self-directed behavioral family intervention for parents of oppositional children in rural and remote areas. Behavior Modification. 1997; 21:379–408.10.1177/01454455970214001 [PubMed: 9337598]

Crawford, CM.; Di Benedetto, A. The new products process. In: Crawford, CM.; Di Benedetto, A., editors. New products management. 9. Burr Ridge, IL: Irwin-McGraw Hill; 2009.

de Graaf I, Speetjens P, Smit F, de Wolff M, Tavecchio L. Effectiveness of the Triple P Positive Parenting Program on behavioral problems in children. Behavior Modification. 2008; 32:714–735.10.1177/0145445508317134 [PubMed: 18475003]

Dumka LE, Garza CA, Roosa MW, Stoerzinger HD. Recruitment and retention of high-risk families into a preventive parent training intervention. Journal of Primary Prevention. 1997; 18:25–39.10.1023/A:1024626105091

Eyberg SM, Ross AW. Assessment of child behavior problems: The validation of a new inventory. Journal of Clinical Child Psychology. 1978; 7:113–116.10.1080/15374417809532835

Glasgow RE, Vogt T, Boles S. Evaluating the impact of health promotion interventions: the RE-AIM framework. American Journal of Public Health. 1999; 89:1322–1327.10.2105/AJPH.89.9.1322 [PubMed: 10474547]

Gordon DA. Parent training via CD-ROM: Using technology to disseminate effective prevention practices. Journal of Primary Prevention. 2000; 21:227–251.10.1023/A:1007035320118

Haggerty KP, MacKenzie EP, Skinner ML, Harachi TW, Catalano RF. Participation in “Parents Who Care”: Predicting program initiation and exposure in two different program formats. The Journal of Primary Prevention. 2006; 27:47–65.10.1007/s10935-005-0019-3 [PubMed: 16421658]

Hofstetter CR, Schultze WA, Mulvihill MM. Communications media, public health, and public affairs: Exposure in a multimedia community. Health Communication. 1992; 4:259–271.10.1207/s15327027hc0404_2

Hornik, RC. Evidence for behavior change. Mahwah, NJ: Lawrence Erlbaum; 2002. Public health communication.

Kazdin AE, Blase SL. Rebooting psychotherapy research and practice to reduce the burden of mental illness. Perspectives on Psychological Science. 2011; 6:31–37.10.1177/1745691610393527

Kent H, Read J. Measuring consumer participation in mental health services: Are attitudes related to professional orientation? International Journal of Social Psychiatry. 1998; 44:295–310.10.1177/002076409804400406 [PubMed: 10459513]

Kroll, P.; Kruchten, P. Introducing the Rational Unified Process. In: Booch, G.; Jacobson, I.; Rumbaugh, J., editors. Addison-Wesley Object Technology Series: The Rational Unified Process made easy: A clinician’s guide to the RUP. Boston, MA: Addison-Wesley; 2003. p. 3-26.

Leung C, Sanders MR, Leung S, Mak R, Lau J. An outcome evaluation of the implementation of the Triple P Positive Parenting Program in Hong Kong. Family Process. 2003; 42:531–544.10.1111/j.1545-5300.2003.00531.x [PubMed: 14979223]

McMahon, RJ.; Kotler, JS. Treatment of conduct problems in children and adolescents. In: Barrett, PM.; Ollendick, TH., editors. Handbook of interventions that work with children and adolescents. Chichester, UK: John Wiley & Sons; 2004. p. 475-488.

Morawska A, Sanders MR. Self-administered behavioural family intervention for parents of toddlers: Effectiveness and dissemination. Behaviour Research and Therapy. 2006; 44:1839–1848.10.1016/j.brat.2005.11.015 [PubMed: 16458853]

Ozanne JL, Saatcioglu B. Participatory action research. Journal of Consumer Research. 2008; 35:423–439.10.1086/586911

Prinz, RJ.; Jones, TL. Family-based interventions. In: Essau, CA., editor. Conduct and oppositional defiant disorders: Epidemiology, risk factors, and treatment. Mahwah, NJ: Lawrence Erlbaum; 2003. p. 279-298.

Prinz RJ, Sanders MR. Adopting a population-level approach to parenting and family support interventions. Clinical Psychology Review. 2007; 27:739–749.10.1016/j.cpr.2007.01.005 [PubMed: 17336435]

Prinz RJ, Sanders MR, Shapiro CJ, Whitaker DJ, Lutzker JR. Population-based prevention of child maltreatment: the U.S. Triple P System Population Trial. Prevention Science. 2009; 10:1–12.10.1007/s11121-009-0123-3 [PubMed: 19160053]

Rainie, L. Internet, broadband, and cell phone statistics. 2010. Retrieved from Pew Internet & American Life Project website: http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx

Richards DA, Suckling R. Improving access to psychological therapy: The Doncaster demonstration site organisational model. Clinical Psychology Forum. 2008; 181:9–16.

Robinson EA, Eyberg SM, Ross AW. The standardization of an inventory of child conduct problem behaviors. Journal of Clinical Child Psychology. 1980; 9:22–29.10.1080/15374418009532938

Rogers EM. Diffusion of preventive innovations. Addictive Behaviors. 2002; 27:989–993.10.1016/S0306-4603(02)00300-3 [PubMed: 12369480]

Sanders MR. Triple P Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. Clinical Child and Family Psychology Review. 1999; 2:71–90.10.1023/A:1021843613840 [PubMed: 11225933]

Sanders MR. Triple P Positive Parenting Program as a public health approach to strengthening parenting. Journal of Family Psychology [Special issue: Public health perspectives on family interventions]. 2008; 22:506–517.10.1037/0893-3200.22.3.506

Sanders MR, Bor W, Morawska A. Maintenance of treatment gains: A comparison of enhanced, standard, and self-directed Triple P Positive Parenting Program. Journal of Abnormal Child Psychology. 2007; 35:983–998.10.1007/s10802-007-9148-x [PubMed: 17610061]

Sanders MR, Calam R, Durand M, Liversidge T, Carmont SA. Does self-directed and web-based support for parents enhance the effects of viewing a reality television series based on the Triple P Positive Parenting programme? Journal of Child Psychology and Psychiatry. 2008; 49:924–932.10.1111/j.1469-7610.2008.01901.x [PubMed: 18492040]

Sanders MR, Dittman CK, Keown LJ, Farruggia S, Rose D. What are the parenting experiences of fathers? The use of household survey data to inform decisions about the delivery of evidence-based parenting interventions to fathers. Child Psychiatry and Human Development. 2010; 41:562–581.10.1007/s10578-010-0188-z [PubMed: 20449648]

Sanders, MR.; Haslam, DM.; Calam, R.; Southwell, C.; Stallman, HM. Designing effective interventions for working parents: A web-based survey of parents in the UK workforce. 2010. Manuscript submitted for publication

Sanders MR, Markie-Dadds C, Firman D, Baig N. Using household survey data to inform policy decisions regarding the delivery of evidence-based parenting interventions. Child: Care, Health and Development. 2007; 33:768–783.10.1111/j.1365-2214.2006.00725.x

Sanders MR, Markie-Dadds C, Tully LA, Bor W. The Triple P-Positive Parenting Program: A comparison of enhanced, standard, and self-directed behavioral family intervention for parents of children with early onset conduct problems. Journal of Consulting and Clinical Psychology. 2000; 68:624–640.10.1037//0022-006X.68.4.624 [PubMed: 10965638]

Sanders, MR.; Ralph, A. Towards a multi-level model of parenting intervention. In: Hoghughi, M.; Long, N., editors. Handbook of parenting. Vol. 3. Chichester, UK: Wiley; 2004. p. 353-368.Theory, research and practice

Sanders MR, Tully LA, Baade P, Lynch ME, Heywood AH, Pollard GE, Youlden DR. A survey of parenting practices in Queensland: Implications for mental health promotion. Health Promotion Journal of Australia. 1999; 9:105–114.

Sanders MR, Turner KM. The role of the media and primary care in the dissemination of evidence-based parenting and family support interventions. Behavior Therapist. 2002; 25:156–166.

Schuhmann EM, Foote RC, Eyberg SM, Boggs SR, Algina J. Efficacy of parent-child interaction therapy: Interim report of a randomized trial with short-term maintenance. Journal of Clinical Child Psychology. 1998; 27:34–45.10.1207/s15374424jccp2701_4 [PubMed: 9561935]

Singhal A, Rogers EM. A theoretical agenda for entertainment-education. Communication Theory. 2002; 12(2):117–135.10.1093/ct/12.2.117

Spoth R, Goldberg C, Redmond C. Engaging families in longitudinal preventive intervention research: Discrete-time survival analysis of socioeconomic and social-emotional risk factors. Journal of Consulting and Clinical Psychology. 1999; 67:157–163.10.1037/0022-006X.67.1.157 [PubMed: 10028221]

Spoth R, Redmond C. Research on family engagement in preventive interventions: Toward improved use of scientific findings in primary prevention practice. Journal of Primary Prevention. 2000; 21:267–284.10.1023/A:1007039421026

Stetler CB, Legro MW, Wallace CM, Bowman C, Guihan M, Hagedorn H, Smith JL. The role of formative evaluation in implementation research and the QUERI experience. Journal of General Internal Medicine. 2006; 21:S1–S8.10.1111/j.1525-1497.2006.00355.x [PubMed: 16637954]

Taylor TK, Biglan A. Behavioral family interventions: A review for clinicians and policymakers. Clinical Child and Family Psychology Review. 1998; 1:4–60.10.1023/A:1021848315541

Torre, ME.; Fine, M. Participatory Action Research (PAR) by youth. In: Sherrod, L.; Flanagan, C.; Kassimir, R., editors. Youth activism: An international encyclopedia. Westport, CT: Greenwood Publishing Group; 2006. p. 456-462.

Viswanath, K.; Finnegan, JR, Jr. Reflections on community health campaigns: Secular trends and the capacity to effect change. In: Hornik, RC., editor. Public health communication. Evidence for behavior change. Mahwah, NJ: Lawrence Erlbaum; 2002. p. 289-312.

Webster-Stratton C, Hollinsworth T, Kolpacoff M. The long-term effectiveness and clinical significance of three cost-effective training programs for families with conduct-problem children. Journal of Consulting and Clinical Psychology. 1989; 57:550–553.10.1037//0022-006X.57.4.550 [PubMed: 2504794]

West, SG.; Finch, JF.; Curran, PJ. Structural equation models with non-normal variables: Problems and remedies. In: Hoyle, R., editor. Structural equation modeling: Concepts, issues, and applications. Newbury Park, CA: Sage; 1995. p. 56-75.

Whyte WF, Greenwood DJ, Lazes P. Participatory action research: Through practice to science in social research. The American Behavioral Scientist. 1989; 32:513–551.10.1177/0002764289032005003

Zimmerman JD. A prosocial media strategy: “Youth against violence: Choose to de-fuse”. American Journal of Orthopsychiatry. 1996; 66:354–361.10.1037/h0080186 [PubMed: 8827259]

Zubrick SR, Ward KA, Silburn SR, Lawrence D, Williams AA, Blair E, Sanders MR. Prevention of child behavior problems through universal implementation of a group behavioral family intervention. Prevention Science. 2005; 6:287–304.10.1007/s11121-005-0013-2 [PubMed: 16160760]

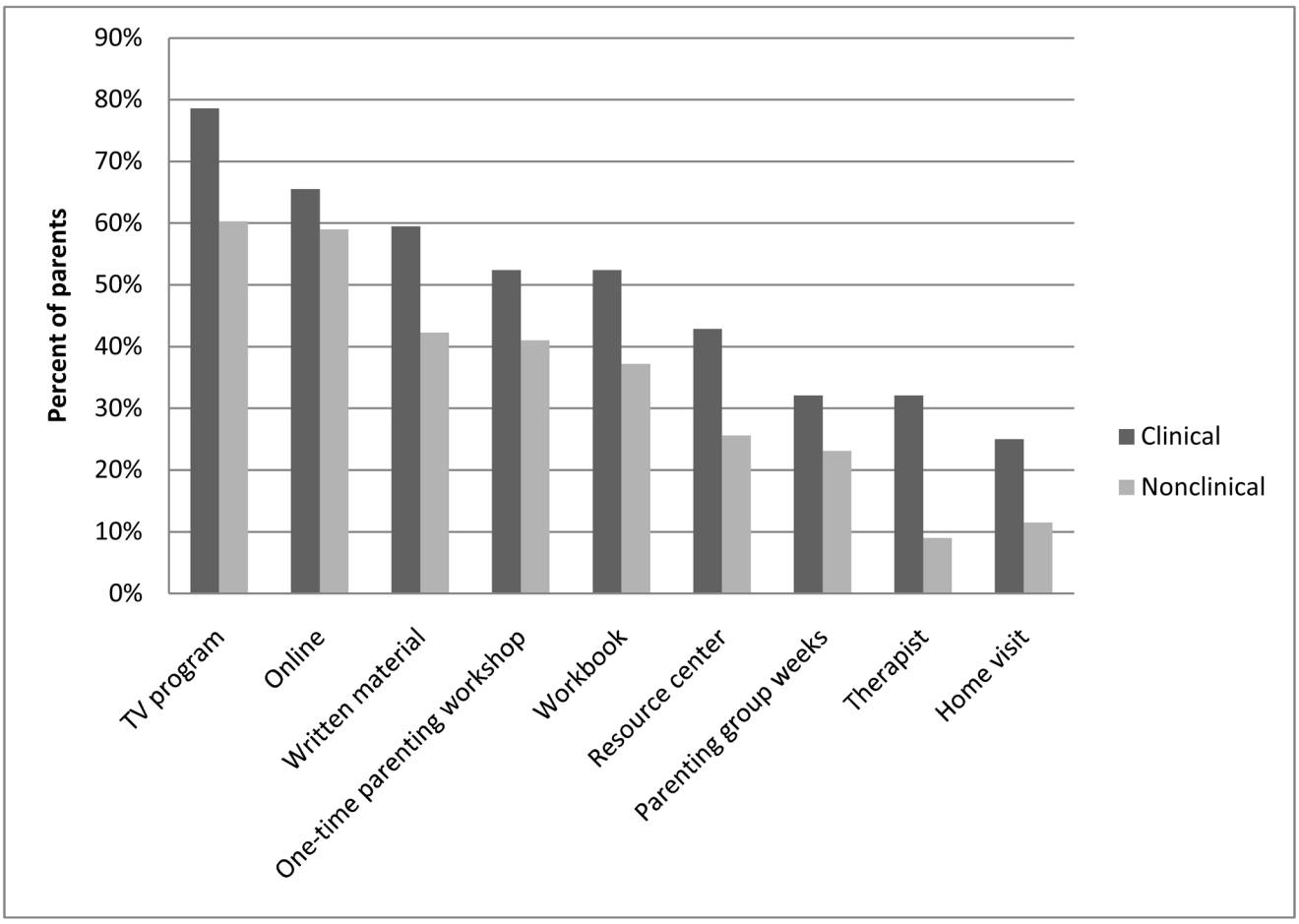

Figure 1.
Percent of parents indicating “quite” or “very” interested in receiving parenting information in each of nine formats, split by clinical status.

Table 1

Demographic Statistics by Clinical Status on Child Behavior Problems

				Significance Test	
	Total Sample (*N* = 162)	**Nonclinical (*N* = 78)**	**Clinical (*N* = 84)**	**$X^2(1)$**	***p*-value**
			Participant		
Minority	37.1%	35.7%	38.3%	0.11	.746
African American	13.9%	8.6%	18.5%	3.10	.078
Hispanic	9.9%	11.4%	8.7%	0.33	.568
Asian/Pac. Islander	9.3%	12.9%	6.2%	1.99	.158
Other	4.0%	2.9%	4.9%	0.43	.514
Female[a]	79.1%	85.9%	73.2%	3.73	.053
Age					
Under 25	3.3%	5.6%	1.2%	2.35	.126
25–34	60.8%	54.9%	65.9%	1.91	.168
Older than 34	35.9%	39.4%	32.9%	0.70	.403
Work outside home	47.1%	38.0%	54.9%	4.34	.037
Living with partner	93.4%	90.0%	96.3%	2.41	.121
Income					
less than 30K	9.7%	13.5%	6.2%	2.38	.123
30K–70K	63.9%	56.8%	70.4%	3.11	.078
over 70K	26.5%	29.7%	23.5%	0.78	.376
			Target Child		
Female	42.6%	42.3%	42.9%	.005	.944

[a]Two female participants were not the mother of the target child; one was the grandmother and one was an “other” relative.

Table 2

Descriptive Statistics of Child Behavior Problems, Expectations of Future Problem Behaviors, and Acceptability Ratings

	Total Sample (*N* = 162)		Nonclinical (*N* = 78)		Clinical (*N* = 84)		Significance Test		
	M	***SD***	***M***	***SD***	***M***	***SD***	***T***	***df***	***p***
ECBI Intensity (55=clinical)	54.18	18.83	37.40 [a]	7.93	69.76[b]	10.90	−21.47	160	<.001
ECBI Problem (6=clinical)	7.66	5.13	2.81[c]	1.85	12.17[d]	2.30	−28.42	160	<.001
Expect problem behaviors in teen years	2.09	1.01	1.77	0.78	2.36	1.11	−3.70	148	<.001
Engagement	3.93	0.79	3.76	0.79	4.10	0.75	−2.81	160	.006
Watchability	4.08	0.81	3.90	0.82	4.23	0.77	−2.64	156	.009
Realism	4.04	0.68	3.89	0.65	4.18	0.68	−2.78	156	.006

[a] Range of scores = 20–54.

[b] Range = 56–97.

[c] Range = 0–5.

[d] Range = 7–15.

Table 3

Bivariate Correlations

	Variables	1	2	3	4	5	6	7	8
1.	Engagement	--							
	N								
2.	Watchability	.77**	--						
	N	158							
3.	Realism	.60**	.54**	--					
	N	158	158						
4.	Female	.15	.12	.21**	--				
	N	153	153	153					
5.	Minority	−.08	−.12	−.08	−.02	--			
	N	151	151	151	151				
6.	Household Income	−.17	−.17	−.06	−.10	−.04	--		
	N	155	151	151	146	144			
7.	Clinical Status	.22**	.21*	.22**	−.16*	−.03	−.02	--	
	N	162	158	158	153	151	155		
8.	Expect future problem behaviors	.04	.05	.03	−.16*	.13	−.06	.29**	--
	N	150	150	150	150	149	143	150	

* $p < .05$.

** $p < .01$.

Table 4

Multiple Regression Models Predicting Engagement, Watchability, and Realism

Variable	Standardized Beta	*t*	*p*-value
	Engagement		
Female	**.170**	**2.00**	**.048**
Clinical Status	**.208**	**2.41**	**.017**
Minority	−.062	−0.75	.453
Household Income	−.147	−1.77	.078
Expect Future Problems	.027	0.31	.760
	Adjusted R^2 = .06	F = 2.90	.016
	Watchability		
Female	.136	1.61	.110
Clinical Status	**.212**	**2.46**	**.015**
Minority	−.105	−1.28	.204
Household Income	−.163	−1.97	.051
Expect Future Problems	.012	0.14	.889
	Adjusted R^2 = .07	F = 3.05	.012
	Realism		
Female	**.278**	**3.36**	**.001**
Clinical Status	**.274**	**3.24**	**.002**
Minority	−.056	−0.69	.492
Household Income	−.037	−0.46	.654
Expect Future Problems	.022	0.26	.799
	Adjusted R^2 = .11	F = 4.38	.001

Note: boldface type indicates statistically significant predictors.