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Parenting Group for Externalizing Youth with Side Benefits for Parents

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Parenting Group for Externalizing Youth with Side Benefits for Parents

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Abstract

Background/Purpose: Mental health problems in the form of externalizing behaviors in children continues to climb. The financial burden, along and increased risks of long-term adverse effects, are a critical area that are improved with interventions such as parent management training (PMT). PMT is an evidence-based treatment for disruptive and externalizing child behaviors. Even brief interventions can improve parents' perceptions of challenging behavior and benefit parental well-being through stress reduction and self-efficacy. *Purpose:* To provide PMT concepts through a group format and improve parental perceptions of externalizing behaviors and stress reduction. *Methods:* Provide a six-session parent group with discussion, video, and role-play. Pre-intervention and Post-intervention data from the Eyberg Child Behavior Inventory (ECBI) and Parent Stress Inventory (PSI-4-SF) were compared to evaluate outcomes. *Results:* Total number of participants was three. Five out of six sessions were attended by 66% of the participants. The intensity and perception of the externalizing behaviors went down in two-thirds of the participants, but parental stress increased in all of the participants. *Conclusions:* The novel coronavirus pandemic impacted recruitment and fatigue in the use online platforms for groups. Brief PMT interventions are beneficial in community settings. Quality improvement in this area reduces financial strains, improves externalizing behaviors, and may reduce parental stress overtime as a sleeper effect.

Keywords: parent management training, externalizing behavior, behavior problem, and behavior difficulties

Parenting Group for Externalizing Youth with Side Benefits for Parents

Prevention of child mental health problems is the gold standard. Early identification of externalizing behaviors is a challenge when developmentally these behaviors are typical in younger children. Parents of children with externalizing behaviors find that tantrums typical for younger children grow out of control. Evidence-based treatment ought to be available in community settings to assist parents from the earliest opportunity.

Background

Childhood mental health problems rarely materialize in isolation and frequently are seen as co-occurring or comorbid conditions. Mental health is vital to overall well-being. According to the Centers for Disease Control and Prevention (CDC) estimates, 13 to 20 percent of children in the United States (US) suffer from mental health disorders costing about \$247 billion yearly (CDC, 2019). The impact is far-reaching beyond the child and family, to communities, schools, and the US healthcare system, creating a serious public health issue.

Disruptive behavior disorders (DBD) are conditions such as attention deficit hyperactivity disorder (ADHD), explosive disorder (ED), oppositional defiant disorder (ODD), disruptive mood dysregulation disorder (DMDD), and conduct disorder (CD). Each of these diagnoses has behaviors such as fighting, arguing, screaming, temper tantrums, aggressiveness, and noncompliance that result in the most frequent numbers of referrals for child and adolescent treatment (Kaminski & Claussen, 2017; Kjøbli & Ogden, 2012; Nock & Kazdin, 2005). DBD rates are rising, and prevalence is estimated at six percent (Boat, 2015). A parental-child coercive cycle may develop that is difficult to manage without intervention. The coercive process occurs when children's externalizing behaviors are used to avoid parental direction or criticism, and

parents then increase punishment which escalates more of the same (Steiner & Remsing, 2006). The American Academy of Child and Adolescent Psychiatry (AACAP) action statement recommends that clinicians include the evidence-based practice of parent management training (PMT) for families of youth with ODD (Steiner & Remsing, 2006). The authors report that PMT is a best practice approach with extensive empirical evidence in treating disruptive behaviors. PMT helps target the coercive cycle in which the parent(s) make demands to gain control and unintentionally reinforce the disruptive, non-compliant behaviors (Steiner & Remsing, 2006).

Problem Statement

Children ages four to twelve with externalizing behaviors are at risk for adverse long-term outcomes, including negative experiences of self, educational failures, limited employment opportunities, increased financial needs, incarceration, comorbid psychosocial problems including substance abuse as well as a cycle of coercive parent-child interaction (Holtrop et al., 2013; Colalillo & Johnston, 2016; Levac et al., 2008; McGilloway et al., 2013). Adverse outcomes result from a lack of early intervention and limited access to PMT in the community setting. This quality improvement (QI) project was to provide an intervention to make an evidence-based intervention available, which reduces externalizing child behavior while supporting parents with a resource to improve their stress and self-efficacy in the community setting.

Organizational Gap Analysis

In southeastern Connecticut, there are a limited number of parenting resources available. The PMT offered through the state system is the “Triple P Program,” which is the Positive Parenting Program. This program runs over eight to ten sessions

to train parents. However, these services require traveling many miles away with priority given to foster families in the Department of Child and Family (DCF) services through a gatekeeper and available to others should a spot open (Parenting Support Services, n.d.). Private resources are considerably farther away. Community knowledge of PMT is deficient, representing a gap, especially within marginalized populations (Martinez & Eddy, 2005). The desired outcome of this project's desired outcome was to target two adjacent towns, Waterford and New London, to increase the group dynamic's diversity and depth. The opportunity to improve with this intervention is significant for improving access in a cost-efficient format with substantial supporting evidence.

Review of Literature

The literature from the University of Massachusetts library in the databases of CINAHL, Academic Search Premier, PsycInfo, and ERIC was searched simultaneously using the terms "parent management training," "externalizing behavior," "behavior problem," or "behavior difficulties." Articles reviewed were limited to peer-reviewed journals between 2010 and 2020, producing 228 in total. The search was limited to English publications while excluding those with specific diagnoses such as autism spectrum disorder, medical conditions, and developmental disabilities within the titles and abstracts. Abstracts were screened for evidence based PMT interventions, and of those chosen, the reference lists were reviewed for articles not constrained by dates to include hallmark studies for a total review of 110. After applying the above exclusions, the final yield resulted in 13 articles. A matrix was used to organize the materials. Melnyk's Hierarchy of Evidence or Melnyk's Levels rated each piece as Level I, the highest to Level VII, the lowest research strength (Melnyk & Fineout-Overholt, 2015).

In this review, three of the journal articles contained the highest level of evidence from systematic reviews of randomized controlled trials (RCTs). The review included seven RCTs of high quality. Also, three qualitative studies were included because of interviews with participants about the impact of their involvement. Gaps in the research about parental experiences of secondary outcomes are widely noted (Colalillo & Johnston, 2016 [Melnik's Level I]).

In the RCTs, brief PMT interventions increase parental motivation, attendance, adherence to training with standardized tests to measure outcomes without any material enhancements (Kazdin et al., 2017 [Melnik's Level II]; Kjøbli & Ogden, 2012; Nock & Kazdin, 2005 [Melnik Level II]). Brief PMT interventions were between three to six sessions.

Brief PMT

According to the study by Kazdin et al. (2017), which compared two forms of brief PMT, including one with fringe benefits or material perks for the parents participating thought to be the root of some placebo effects, there was no difference. Treatment was only six sessions in the study and decreased externalizing behaviors with statistically significant scores in the Child Behaviors Checklist (CBCL) performed at baseline and post-intervention likewise across both groups (Kazdin et al., 2018). In an earlier study, Nock and Kazdin (2005) compared the evidence based PMT intervention, including verbal enhancements educating about the importance of attending the sessions, prompting with motivational encouragements, and planning for possible barriers of treatment. The verbal enhancements showed significant improvement with adherence in the end. While both groups effectively reduced externalizing behaviors as expected from brief PMT, the enhanced group reported greater willingness and ability to make changes in their parenting behaviors (Nock & Kazdin, 2005). Other research compared brief PMT with treatment as usual, both in primary care settings and child's behavior change in school settings (Kjøbli &

Ogden, 2012). More parents completed the brief PMT and had statistically significant improvement in the behaviors in the home, but minimal if any improvements at school for either group. The findings suggest parent reports of improvements do not translate into the classroom setting might indicate a lack of validity of parental scores. Nonetheless, teachers cannot offer the same attention to behaviors or selectively ignore other behaviors during class, supporting that other techniques need to be used in schools (Kjøbli & Ogden, 2012).

Barriers to PMT

Barriers have been studied in research to make brief PMT interventions work. The most significant barrier in using PMT is attrition. Parents drop out of programs because of parental stress, lack of social supports, financial strain, lack of faith in the treatment, poor connection with the clinician, cultural content, and feeling awkward or uncomfortable using different ways of parenting (Colalillo & Johnston, 2016; Holtrop et al., 2013 [Melnik's Level VI], Kjøbli & Ogden, 2012; Nock & Kazdin, 2005; Martinez & Eddy, 2005 [Melnik's Level II]; Wilkerson et al., 2019 [Melnik Level VI]). Some approaches to address these barriers follows.

Brief PMT interventions are effective, have fewer parents leaving before completion, and fewer financial burdens over time (Nock & Kazdin, 2005; Kjøbli & Ogden, 2012). According to Holtrop et al. (2013), role-playing during group improved discomfort and continued practice at home with the option of returning the following week to problem-solve any difficulties. Some parents and cultures struggled with the program's applicability for real-world practice, but accommodations balanced with flexibility and respect deliver opportunities for appropriate changes (Holtrop et al., 2013; Martinez & Eddy, 2005). Offering the program in a group format within a community setting other than a mental health care facility or child welfare agency reduces stigma (Martinez & Eddy, 2005). A "sleeper effect" may be present in Latino

communities where repeated exposure of the material decreases its immediate effectiveness. However, later improvements have been noted over the following two and a half years (Martinez & Eddy, 2005).

As in all treatment or interventions, therapeutic rapport helps to foster understanding and allows a sense of trust to develop improving outcomes. Providing a level of transparency, non-judgmental presentation, and enhanced support, fosters attendance and motivation (Nock & Kazdin, 2005; Holtrop et al., 2013). Also, augmentation with help from telephone contact between sessions and supplying a binder with weekly session worksheets for reference at home was effective for added support (Nock & Kazdin, 2005). Some parents preferred an email to check-in or opportunities to chat with group members on social media (Wilkerson et al., 2019 [Melnyk Level VI]). Using an online format with group-based intervention diminishes the attrition rate allowing for meaningful changes within the family (Wilkerson et al., 2019).

Parental Stress as Side Benefit

Parental stress levels are a barrier, especially if more than a moderate range, which was improved as a secondary outcome of the intervention (Colalillo & Johnston, 2016). Seven of the thirteen articles reviewed revealed improvement in stress together with growth in parental self-efficacy (Colalillo & Johnston, 2016; Dretzke et al., 2009 [Melnyk's Level I]; Levac et al., 2008; Maaskant et al., 2017 [Melnyk's Level II]; McGilloway et al., 2014 [Melnyk's Level II]; Nock & Kazdin, 2005; Wilkerson et al., 2019).

The authors also found that PMT significantly impacted parental wellness, regardless of ethnicity (Dretzke et al., 2009). However, PMT did not help clinical depression in the parent(s), which often influences externalizing youth behaviors, so screening for depression may provide opportunities to offer additional supports for parents for improved outcomes (Colalillo &

Johnston, 2016). Remarkably, as measured through Parental Stress Index (PSI), parental stress reductions improved regardless of improvements in the children's externalizing behaviors, possibly as a function of feeling more in control of their interactions (Colalillo & Johnston, 2016). General stress reduction had differing findings. Two of the articles found that mothers had more benefits than fathers concerning stress reduction (Colalillo & Johnston, 2016; Maaskant et al., 2017). Most studies had a lack of fathers, which limit the differences found in gender.

When comparing treatment as usual (without PMT), the intervention of PMT resulted in a significantly more robust decrease in parenting-related stress and feelings of competence (Maaskant et al., 2017). These results had considerable benefits in parents' abilities to avoid coercive cycles, which have been shown to worsen with stress. In the study looking at foster parenting specifically, parenting behaviors improved with competence and well-being, which prevented an interruption or failure of the child placements (Maaskant et al., 2017). The parent-child relationship is different in most foster-care situations than the biological family of origin, which may account for the reduction of externalizing behaviors in these homes, improved parental stress, without significant change in parenting behaviors found here with PMT (Maaskant et al., 2017). These children are often from neglectful or abusive environments, but PMT helps foster-parents avoid or disrupt the coercive cycle compared to treatment as usual at an earlier point. The "sleeper effect" is also noted within this study group, so despite initial stress reduction, improvement in children's externalizing behaviors was noted later (Maaskant et al., 2017). Group dynamics offered a shared experience that boosted self-efficacy feelings that improved coping with externalizing behaviors (Wilkerson et al., 2019).

Group Work

Group settings were not inferior to individual or family treatment with PMT but were cost-effective, better for lower socioeconomic areas, and showed more benefit for specific races and ethnicities such as African Americans and Hispanics (Gross et al., 2019 [Melnyk's Level II]). Likewise, groups succeeded in real-world conditions outside of the research settings with PMT leaders from varying disciplines (Michelson et al., 2013 [Melnyk's Level I]). According to McGilloway et al. (2014), PMT groups were low cost with evidence of short-term and long-term benefits for up to twelve months following PMT with decreasing financial needs for mental health services later.

Evidence-based Practice: Verification of Chosen Option

Overall, the literature agrees that brief PMT in a group format is an evidence-based approach to treating youth's externalizing behaviors. This DNP project provided this QI in an online setting to meet this need during a pandemic. Parental well-being was assumed to be a side benefit of this process. The intervention aimed to provide cost-effective and successful treatment of externalizing behavior.

Theoretical Framework

This project used Bandura's Social Learning Theory (SLT) as the theoretical framework describing humans' abilities to learn different behaviors by their recent experiences or watching others' experiences (Bandura, 1977). The four principles of this framework help examine the intervention related to the current evidence to propose an explanation as to why it yields results within specific norms and limits (Appendix A). Wheeler (2020) provides an outline of these principles and how they pertain to educating others. The four principles are attention, retention, reproduction, and motivation.

Attention

The underpinnings of the SLT are that people observe others and imitate the behaviors of others. In the project, parents in a group setting receive support and the opportunity to see others role-playing various scenarios for mitigating children's externalizing behaviors. When something is taught freshly, attention is likely peaked (Wheeler, 2020).

Retention

Role-play for responding to targeted behaviors helps the information to be retained for future use. Further practice of their actions, skills, and knowledge solidifies this information (Wheeler, 2020).

Reproduction

Skills taught may be repeated later in a new setting. The ability to have a manualized plan also promotes a consistent format for presenting material to future parents.

Motivation

As previously noted, parental motivation was crucial for making changes in their parenting practices. Motivation is both internal and external force. These forces guide parents to follow programming and continuing them at home.

Methods

This QI project included an educational and practice intervention using a modality with over 30 years of research to treat externalizing childhood behaviors. The educational plan was based on a manualized approach (see Appendix B). The DNP student conducting the program was a PMT participant and later trained in administering professional PMT through a certified instructor in May 2020.

A convenience sample of parents was recruited by advertising with local pediatricians' offices, schools, behavioral health offices, and community centers after the Institutional Review

Board (IRB) approval for this quality improvement intervention on September 28, 2020 (see Appendix C). A group approach was taken to help parents develop self-efficacy and stress reduction was based on the Kazdin Method of PMT. These strategies taught parents to predict what may happen in various situations, identify positive opposites for their child's behavior patterns, and how consequences of attention may increase or decrease behaviors (Kazdin & Rotella, 2014). A six weeklong hour group session was conducted via a professional and protected internet host site, Zoom®.

Goals and Objectives

The goal was to improve the availability of evidence-based practice in the community. Also, the primary expected outcome was to provide an opportunity for parents to see improvement of their children leading to the family unit's wellness. The specific objectives of this project are described below:

1. Ten to twenty parents would receive informed consent and participate, with five being the minimum number to be screened before beginning.
2. 100% of parents in the group would receive binders and handouts before each of the six weekly sessions.
3. 100% of the parents in the group would complete pretests and posttests.
4. 80% of the parents in the group will decrease the posttests scores compared to the pretests.

Project Site

This QI project was recruited through several local southeastern Connecticut community organizations such as schools, pediatricians, family service bureaus, and behavioral health offices (see Appendix C). Initially, the proposed sites of the project included community family

services. As a result of the health advisories and uncertainty due to the novel coronavirus pandemic, a safer and secure internet meeting via Zoom[®], which is compliant with the Health Insurance Portability and Accountability Act (HIPAA), was used for the groups. This internet platform allowed access for 100 participants.

Population

The participants in this project were three parents. To be eligible for this project, the parents had to meet the following criteria: parent or caregiver to a child four to twelve years of age, the child needed to have externalizing behaviors such as screaming, arguing, tantrums, oppositional behaviors, or aggression, and excluding those with specific diagnoses such as autism spectrum disorder, serious medical conditions, and developmental disabilities. The participants enrolled were classified as attendees (n=2; 66%) and non-attendee (n= 1; 33%) participants. These groupings were made after completing the project to shed light and understanding of the results. The non-attendee was a mother who developed the novel coronavirus and received handouts weekly and completed the pre and posttest but did not attend any sessions due to her illness. The attendees were participants in the online group for five to six of the weekly sessions.

Intervention

In the first session, group rules were discussed, as well as the format of each session. Participants were encouraged to attend for a total of six weeks, with each session lasting one hour (see Appendix B). The program was based on Kazdin Method's content with animated videos, lively lectures, and detailed handouts that promoted the theoretical framework working to maintain the group's attention (Kazdin, 2009; Kazdin & Rotella, 2014). The parent(s) were provided with a meeting identification number and stayed in a virtual waiting room until this

DNP student let the group members into the group weekly. Session handouts were supplied for the participants via email by Wednesday each week with the opportunity to ask questions privately before the session via email, which were used with permission (see Appendix D). This resource provided an opportunity for retention according to the SLT to review material before group. Also, the handouts served as tools to practice with their children at home. Later, the opportunity was given at the start of the next session to problem-solve different approaches to the issues that came up during the week.

As previously noted, parental motivation was crucial for making changes in their parenting behaviors. The motivation was elicited through positive comments and praise and from the fruit of their work during each session. In a group setting, the mere discussion of other parents' successes might motivate the group to press forward, resonating with the PMT material's validity. This awareness increased attention to further information and instructions for modifications of parenting behaviors.

The three women gave informed consent after an email or telephone screening. They were provided a written copy of the informed consent and used DocuSign for electronic signatures. The participants' demographic data included 100% of the participants being self-identified as mothers. No fathers were involved during the sessions. (see **Table 1**).

Table 1

Parenting Group Participants Demographic Data

Participants	1	2	3
Age	47	47	38
Gender	female	female	female
Race	Caucasian	Caucasian	Caucasian

Child's Age	11	10	9
Child's Gender	female	male	male
Child's Race	Caucasian	Mixed race	Caucasian
Previous Medical or Psychiatric Diagnosis	Yes	Yes	Yes
Previous Treatment for Challenging Behaviors	Yes	Yes	No
Number of Sessions Attended	5	6	0

Measurement Instruments

The parents consented and completed standardized tests in pretest and posttest standardized tests on week one and week six via email using PARiConnect, a secure platform. The inclusion of testing supports the SLT in allowing the process to be replicated to evaluate the results. The tests included the Eyberg Child Behavior Inventory (ECBI) and the Parent Stress Index (PSI-4-SF) found in the studies from the literature review as validated, standardized tests (Colalillo & Johnston, 2016; Dretzke et al., 2013; Kjøbli & Ogden, 2012; Maaskant et al., 2016; McGilloway et al., 2014; Michelson et al., 2013). These two tools were used to collect data before the first session to form a baseline (pre-intervention test) and following the end of the sixth session (post-intervention test).

The ECBI was developed in 1990 and has been used to assess behavioral problems in children between two and sixteen. The tool was given to parents to rate both the intensity of the behaviors and the number of conduct issues with cut-off scores of 127 and 11, or higher, respectively, which suggested the need for treatment (Boggs et al., 1990). The tool also signals providers to the parents' tolerance of 36 behaviors and the parental distress. The ECBI has good

internal consistency (0.95 and 0.93), taking five minutes to complete with good reliability and validity (Boggs et al., 1990). This tool works across race, ethnicity, and socioeconomic status. Many of the studies in the literature included the ECBI or the CBCL. The CBCL was not chosen as it requires more advanced skills to interpret. Other mental health care providers replicate this testing with confidence for ongoing groups in the future community.

The PSI-4-SF was a ten-minute, 36 item test given covering four domains, which included total stress (TS), parental distress (PD), parent-child dysfunctional interaction(P-CDI), and difficult child (DC). This test has good validity and reliability across diverse groups and internal consistency of 0.97 to 0.99 (Barroso et al., 2016). The tool was written at a fifth-grade level. However, the scoring is more complex. The findings for those who score above the 85th percentile show clinically significant distress (Barroso et al., 2016). None of the testings addressed parental depression.

Data Collection

The project involved using a Plan-Do-Study-Act (PDSA) organization model for improvement (Joshi, Ransom, Nash, & Ransom, 2014). Three questions were asked in this model, which included: 1) what was hoped to be accomplished, 2) how it was known if there is an improvement, 3) what change needs to be implemented in the future (Joshi et al., 2014, p.89). With the quality issue identified, the project implemented a parenting group using components of PMT. The assumption was that a knowledge deficit exists in PMT as an evidence-based intervention.

The data was collected pre-intervention and post-intervention using emailed online examinations of the ECBI and the PSI-4-SF. Also, the number of sessions attended was recorded. Because the program's length is brief, the number of sessions greatly impacted both

the participating parents' support and skills. The test results and number of sessions attended were recorded and stored in aggregate form.

Data Analysis

A faculty expert statistician, Dr. Lisa Chiodo, was consulted. Descriptive statistics was attempted using SPSS software. The analysis included running paired t-test and determination of effect size. The analysis could not be done due to the small size of the convenience sample. An overall improvement in scores was the goal. The scores were compared for ECBI and PSI-4-SF before and after the intervention in the results section below (See **Table 2**).

Cost-Benefit Analysis/Budget

The cost-benefit analysis is an integral part of planning an intervention to determine whether the project is worthwhile and feasible. In considering this intervention for externalizing youth behaviors, the high cost of disruptive disorders is far more.

Estimated Costs

The majority of this quality intervention was the cost of the Professional Zoom[®] subscription, testing, and office supplies for an online group. The cost of staff and childcare providers involved initially in this project does not exist based on this platform. The total cost for implementation of this 6-week program was **\$557.93**. The complete cost-benefit analysis details are attached (Appendix E).

Estimated Savings

The estimated savings for the direct or public cost weighs in at 1.7 to 2.3 million dollars per child over their lifetimes (McGilloway et al., 2014). The cost of brief PMT for each family

was valued at \$1,296. With only three families who attended, the savings would calculate to approximately **\$3,330.07** for PMT.

Benefits and Value

The impact of disruptive behavior disorders is far-reaching beyond monetary values. Siblings, parents, teachers, students, juvenile justice systems, child welfare agencies, special education services, and healthcare systems are challenged and exhausted. The evidence-based PMT program has been found to decrease the cost of care and services from a successful intervention by 60 percent after twelve months (McGilloway et al., 2014). The side benefits of parental well-being also are substantial and outweigh financial rewards by themselves. This intervention is both cost-saving and beneficial for parents as well as communities.

Results

On October 31, 2020, through December 5, 2020, the parenting group commenced via Zoom,[®] as previously noted. The project started with recruitment following the final approval of the IRB protocol (Appendix C). The timeline launched one month later than initially planned (see Appendix F). The total number of participants was three. One member did not attend any of the sessions as previously classified as the non-attendee participant. The two other participants (attendees) engaged in dialogue, practiced techniques, and discussed problems they experienced at home after the sessions. This practice helped to keep attention as in the SLT and the four videos shared during the groups, including Dr. Kazdin's review of his techniques and rationales with his permission (see Appendix C). The two attendee participants developed an individualized rewards chart for their child as homework and used this for the remainder of the program at

home. The practice of using the chart at home served as an implementation for retention, reproduction, and motivation regarding the SLT.

Ethical Considerations

The integrity of the intervention remained an essential dynamic. All participants were protected by upholding the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which guarantees and protects patients' health information privacy. The DNP student facilitating the intervention followed the standards of care in the community setting where healthcare is provided. All of the information collected was maintained as aggregate data and without any potentially identifying information. Any phone numbers or emails that gave their permission for supportive contact throughout the week were kept in a locked file with only the DNP student had access. The risk to patients in this project was comparable to those going to an office to treat behavioral conditions. They were notified that at any time, they might discontinue the treatment and leave the group without any detriment to them or any established care. During treatment, the participants were aware that if any harm towards their child were discovered, the DNP student would report to the Department of Child and Families as a mandated reporter. Along the same line, a participant who revealed any thoughts to harm oneself or others would prompt appropriate actions to be taken to notify any person at risk or authorities. Participants were informed that although the facilitator would take every precaution to maintain the data's confidentiality, the group's nature prevents the DNP student from guaranteeing confidentiality. The participants were instructed to respect the fellow group members' privacy and not repeat what is said to others. The safety of all group members, children, and family units was the ongoing priority. All of the information including pretests and posttests were destroyed following the final analysis of data.

Interpretation

The minimum number of screenings was five as per the objectives. Likewise, all the participants completed the tests before starting of the program and shortly following the last group meeting the third objective. Five of the six sessions were attended by 66% of the group. Only one-third of the participants attended all of the six sessions. Participants number one and two were the attendees, and the third was the non-attendee participant. Each participant received handouts before the session weekly making the 100% objective, although no one wanted a binder. The final objective for 80% of the group having a decreased score on each posttest was not met.

The intensity of the externalizing behaviors as perceived by the parents went up for one attendee. It went down for the other attendee who attended all sessions and the non-attendee participant. The perception that the externalizing behaviors were a problem in the home stayed the same for one attendee yet went down for the other attendee who attended all the sessions and the non-attendee participant. Parental distress levels went up across the board in 100% of the group members. However, two-thirds of the group (the attendee completing six sessions and the non-attendee) had parental distress that remained in what is considered a normal range during the program. The total stress remained in a clinically significant range for one attendee, and the other attendee (who attended six sessions) went from a high range to clinically significant. The non-attendee participant remained in a normal range for in the pretest and posttest, respectively.

Both attendees also had a clinically significant level in the parental child dysfunction and difficult child areas during the pre and posttests, and the non-attendee participant did not (see

Table 2). The same attendees had received prior treatment for these issues before the intervention, and the non-attendee participant did not.

Table 2

Parenting Group Pretest and Posttest Results

Participant	ECBI Pretest		ECBI Posttest		PSI-4-SF Pretest				PSI-4-SF Posttest			
	Int	Prob	Int	Prob	TS	PD	P-CDI	DC	TS	PD	P-CDI	DC
1	135	16	143	16	118	38	39	41	130	41	41	48
					94 % ^{ile}	85	95	93	99 % ^{ile}	92	97	>99
2	141	17	140	11	112	26	41	45	126	33	45	48
					87 % ^{ile}	55	97	98	98 % ^{ile}	75	>99	>99
3	104	15	78	11	88	27	29	32	92	29	29	34
					69 % ^{ile}	59	76	70	73 % ^{ile}	64	76	76

Key: Int= intensity of behaviors; Prob=perception that behavior is a problem; TS= total stress; PD=parental distress; P-CDI= parent-child dysfunctional interactions; DC=difficult child

%^{ile} = percentile; 16th-84th= normal range; 85th-89th= high range; 90th or > = clinically significant

The mean pretest and posttest scores could not be subjected to the t-test for paired samples for statistical analysis based on the sample size. Correspondingly, an effect size could not be determined to communicate any practical significance of the results.

Discussion

Overall, the recruitment rate was low and did not allow for statistical analysis. The following observations can be made. Of the participants, the only one did not attend groups. Only one session was missed by one of the attendees. This pattern of results was consistent with previous work in the review of literature suggesting an online format with group-based intervention diminishes the attrition rate (Wilkerson et al., 2019). However, parenting programs offered face to face have a dismal recruitment of about 10-30% in non-pandemic times (Gadsden et al., 2016). Even less responded to recruitment during COVID-19.

The perception that the externalizing behaviors decreased was reflected by two of the three participants, about 66% of the members, which would be expected in an evidence-based intervention. These results represented the first findings consistent with positive effects from the project. However, parental stress rates up across the group suggests this intervention was not beneficial in this area at this given point during the pandemic.

The goals of this intervention were partially met. The opportunity for PMT was brought into the community despite the pandemic. Also, some improvement in the intensity of behavior was noted in the attendee who joined all six sessions. The objective of having 80% showing a decrease in scores was a tall order but may have appeared differently with a larger group.

During this period before the holidays during a pandemic, stress that required social isolation within the home and fears of impending illness or death in the family must be considered a factor in this intervention. Recruiting participants was difficult as people were not going into health care offices, schools, or community centers. Many places used online platforms

such as Zoom[®] for health appointments and teaching, which developed a sense of fatigue and exhaustion for yet another meeting online requirement for families. According to Lee (2020), the millisecond delays in virtual platforms, even when working well are taxing and the rewards of human interaction in the neuropathways are lost. This factor and the increased cost of cognitive effort needed in this form of communication have adverse effects (Lee, 2020). Overall, the SLT likely is detrimentally impacted by the platform. Successful integration of the SLT may require actual physical proximity.

The literature also mentions a “sleepier effect,” which may have transpired with repeated exposure to material resulting in decreased immediate effectiveness (Maaskant et al., 2017; Martinez & Eddy, 2005). The intervention’s effectiveness may be delayed but be noted over the next two and a half years in some populations (Martinez & Eddy, 2005).

A significant barrier for this intervention is parental stress, lack of social support, and financial strains, which have been prevalent during the pandemic (Colalillo & Johnston, 2016; Holtrop et al., 2013; Kjøbli & Ogden, 2012; Nock & Kazdin, 2005; Martinez & Eddy, 2005; Wilkerson et al., 2019). The non-attendee participant possibly had more supports in place with more family homes during quarantine or helping with childcare during her illness. Additionally, she was not burdened with the virtual communication used.

The literature agreed with the finding that the parents all preferred email check-ins each week over phone conversations (Wilkerson et al., 2019). Parents may have found social media chats or even in-person meetings more helpful than the emails provided. With the handouts given to even the non-attendee participant, these were possibly helpful and part of the SLT allowing a reference to replicate the behaviors at home (Nock & Kazdin, 2005).

Parent-child relationships are noted to be different in families other than those of biological families of origin (Maaskant et al., 2017). The attendees disclosed that their children with externalizing behaviors became part of the family through adoption. When researching adoption and externalizing childhood behavior, there is paucity in the literature about whether this is considered typical. In Connecticut, the Department of Children and Families offers PMT for foster care parents. The scoring of parental-child dysfunction interactions was clinically significant distress levels before and after the intervention and not present in the non-attendee, which is noteworthy.

Maternal depression may significantly impact this type of intervention's success and different parenting styles in the family where no fathers were participants (Maaskant et al., 2017). As noted in the preceding, depression was not screened for but may have played a role in the program's scoring and effectiveness. This intervention did not follow literature findings that parental stress was improved despite any improvement in the children's behaviors (Colalillo & Johnston, 2016). The pretest and posttest findings were consistent with some perceived improvement in externalizing behaviors except for increased parental stress across the board for participants.

Future Quality Improvement Interventions

In the future, the screening demographics needs to include foster, adopted, or biological parent status of those who participate. Although many studies look at foster parenting, paucity exists in the realm of examining temporary versus permanent commitment to children with externalizing behaviors. Much work needs to be done before a full appreciation of the challenges faced by parents of all sorts during the pandemic is appreciated.

Recruitment was a primary barrier in this program. Perspective PMT interventions ought to be advertised for considerably longer and include social media venues. A recruitment specialist suggests the strategic process of posting on social media, accessing professional networks by messages, and going in person to offices leaving fliers or setting up a display (Lena Team, 2018). Convenience samples using intention are most successful.

Conclusions

Interventions for externalizing youth behaviors are essential at the youngest age to minimize suffering in the patient and family. This DNP student believes that having been involved as a PMT recipient may be an advantage in detecting this condition promptly. Also, the experience facilitated understanding the parents' emotions and the ability to honor them for this intervention.

PMT has been an extensively studied treatment for challenging and disruptive behaviors. Providing interventions in a community setting with groups enhances the opportunity for SLT to be utilized. Online modalities have been tested and found beneficial. However, a virtual platform for PMT would not be recommended for future intervention. Groups have proven to be cost-effective and productive as a treatment modality but needing human closeness.

The possibility of stopping a coercive cycle in the parent-child dyad creates new wellness opportunities in both the child and the parents for optimal health. Future modalities may include mobile software applications for parents at home as support or augmentation to more traditional approaches. The current software applications for behavioral parent training are limited but might be helpful for a multimodal approach. The design of basic software applications can be

upward from \$25,000 (Kh & A., 2020). Mobile technology with tablets using PMT called “ezParent” was studied in 2017 and was well received and effective with low social-economic status and diverse racial groups (Brager et al., 2021).

As healthcare agents, DNP students notice gaps in the research and develop a strategy to implement change. This change serves the public good for improving health and providing financial strengthening. With future efforts, recruitment is crucial for any group’s success and for providing data for statistical analysis. Social media advertisement may be beneficial. Due to the pandemic, a paradigm shift may occur to in-person preference despite the increased cost for more opportunities for connection. The hope remains to improve children’s outcomes through a well-established evidence-based practice. The side benefits still may be a peripheral response in regaining control and self-efficacy in the parenting role when a project has more participants.

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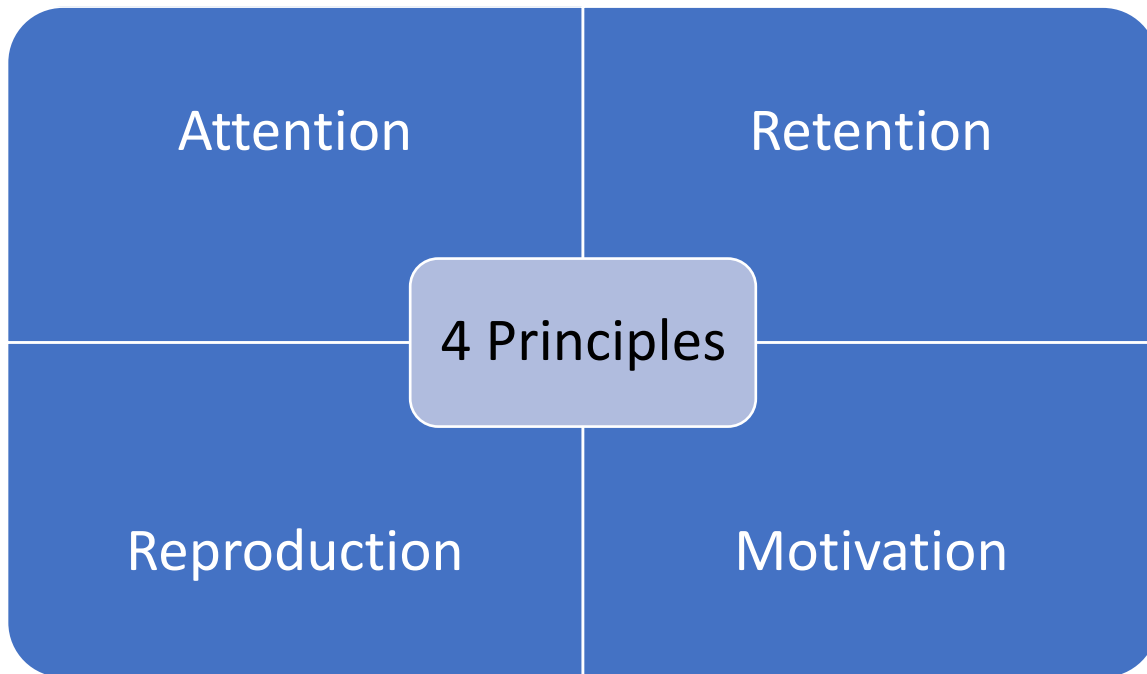
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Appendix A

Albert Bandura's Social Learning Theory



(Original image, adapted from Wheeler, 2020)

Appendix B

Parenting Group Educational Plan

Educational Plan	
Sessions	Tasks
One	1) Video: Overview of Dr. Kazdin’s PMT 2) Didactic lecture /practice/role playing A. Positive opposites, prompting 3) Homework A. Tally minding and not minding B. Agree on six rewards of differing value C. Write down list of problem behaviors and positive opposites 4) Questions and feedback
Two	1) Review from previous week and any positives or problems 2) Video: Dr. Kazdin on Praise Techniques and Rewards 3) Didactic lecture/practice/ role playing A. Prompting, praise, and giving points B. Four types of behavior reinforcers C. How changes in behaviors occur D. Filling in reward charts 4) Homework A. Use reward chart and tally daily; encourage cashing in at least twice weekly 5) Questions and feedback
Three	1) Review and any positives or problems

	<p>2) Video: Dr. Kazdin on Punishments</p> <p>3) Didactic lecture/practice/ role playing A. Deciding which behaviors to mildly punish B. Time-out rules and variations C. How to explain time-outs to child D. Review damaging effects of physical, harsh verbal, or prolonged punishment</p> <p>4) Homework A. Teach child about time-out/ loss of item B. Add using time-out sheet</p> <p>5) Questions and feedback</p>
<p>Four</p>	<p>1) Review and any positives or problems</p> <p>2) Video: Dr. Kazdin on Attending and Ignoring</p> <p>3) Didactic lecture/practice/ role playing A. Attending and ignoring rules and exercise B. Common problems to ignore</p> <p>4) Homework A. When my child ____ I attend (I ignore)</p> <p>5) Questions and feedback</p>
<p>Five</p>	<p>1) Review and any positives or problems</p> <p>2) Video: Dr. Kazdin on Shaping</p> <p>3) Didactic lecture/practice/ role playing A. How to shape a behavior B. Reinforcement and breaking down steps C. Add to behavior or increase time interval once consistently doing desired behavior 4-6 days/week. D. Praising progress, not seeking perfection</p> <p>4) Homework</p>

	A. Shaping worksheet 5) Questions and feedback
Six	1) Review from previous weeks and problem-solving worksheet 2) Termination of relationships and reviews of accomplishments 3) Questions and feedback
Based on manualized program from <i>Parent management training: treatment for oppositional, aggressive, and antisocial behavior in children and adolescents</i> (Kazdin, 2009).	

Appendix C

Recruitment Advertisement

PARENTING CHALLENGES

Want to help your children follow rules and control their behaviors?

FREE 6 WEEK ONLINE GROUP RESEARCH STUDY

Email:
Parenting_Help4U@yahoo.com



PARENTING GROUP

**FACILITATOR:
DIANE JOHNSON, MSN,
PMHNP DNP STUDENT**

Email for details of the research study, which is a 6 week group starting in October on Saturdays for one hour online (limit of 5-10 group members)

.....
Receive support and strategies to help with children age 4 to 12 who have behaviors such as arguing, screaming, tantrums, and aggressiveness.

Recruitment Letter

September 28, 2020
Diane Johnson MSN, APRN; PMHNP DNP candidate at
UMASS Amherst

Dear clinicians and educators:

I am going to be conducting a quality improvement program titled “**Parenting Group for Externalizing Youth with Side Benefits for Parents**” as my capstone project this fall. As you may know, mental health problems involving children with disruptive behaviors such as fighting, arguing, screaming, age-inappropriate tantrums, aggressiveness, and non-compliance puts them at risk for long-term effects. The adverse consequences include poor-esteem, relationship problems, educational failures, increased financial needs, involvement with the judicial system, and comorbid psychosocial problems including substance abuse. These problems are some of the most common reason for parents to seek help, but often evidenced-based treatment is difficult to access, especially during the COVID-19 pandemic.

I would invite you to share this project with **any parents or guardians of four to twelve-year-old children** who suffer from these externalizing behaviors. Children do not attend. I am enclosing a brochure to post or share with parents with my contact information (email address). The plan is to run a parent management training (PMT) group based on over thirty years of extensive empirical evidence. I am in my final year of my doctoral degree and have training in PMT as well as personal experience as research participant in the Yale Parenting Center Program, based on the Kazdin Method. The group would meet for an hour online via Zoom for six weeks. Informed consent for participation would be obtained prior to starting. Also, a brief pre-test and post-test with the Eyberg Child Behavior Index (ECBI) and Parental

Stress Index, fourth edition, short-form (PSI-4-SF) would be conducted to evaluate the outcome.

I am happy to answer any questions and would also provide a summary of the aggregate findings from my project if you are interested.

Sincerely,

Diane Johnson

MSN, ANP; PMHNP DNP candidate at UMASS Amherst

Recruitment Screening Dialogue

“Thank you for speaking with us today. Before you officially enroll in this research study, I will be asking you to complete a screening questionnaire. It should take you no more than 2 minutes to complete. If you are determined ineligible to participate, your completed questionnaire will be destroyed. If you are determined eligible to participate, the completed questionnaire will become part of the study materials, and we will protect your information as confidential and safeguard it from unauthorized disclosure. Only research personnel will have access to the information contained in your screening questionnaire. If the screening questionnaire indicates that you are eligible to participate, we will proceed to obtaining your written informed consent for participation in the study. Do you have any questions?”

Information screening by email or phone of potential participants

Date:

Name:

Child’s age and gender identified:

Any previous medical diagnoses or psychiatric diagnoses:

Previous treatment for challenging behaviors:

Appendix D

Permission for Training Session Worksheets and Video

From: Kazdin, Alan alan.kazdin@yale.edu 
Subject: RE: Permission to use parent management training sessions worksheets
Date: February 13, 2020 at 8:36 PM
To: Diane Johnson diane894@icloud.com

AK

Dear Diane,
 Great to hear from you! A few items might be helpful. First, I need to know what you wish to use before I can approve. If it only the worksheets, that will be completely fine. There are other facets of the program that I do not control (e.g., own copyrights) and cannot by myself grant approval. Worksheets not a problem.

Second, please take a look at the attached. This is a free online course and many parents and programs are now using this. This consists of me providing sessions on the techniques in a fairly how-to fashion for parents. Feel free to use that.

Third, I urge you to look around for standardized measures of stress and change (in parent behavior or child behavior, depending on your interest). Also, a problem will be is that pre post changes usually show improvement (this is a methodology issue) and that can and often does happen from merely taking the test twice. Long story here.

Good luck with your project!
 Best wishes,
 Alan

Alan E. Kazdin, PhD, ABPP
 Research Professor and Sterling Professor of Psychology
 & Professor of Child Psychiatry (Emeritus)
 Department of Psychology
 Yale University
 2 Hillhouse Avenue 208205
 New Haven, CT 06520-8205
 Tel: 203-432-7344

Faculty page: <http://psychology.yale.edu/people/alan-kazdin>
 Parenting Resources:
 Free on-line course for parents: <https://www.coursera.org/learn/everyday-parenting>
 Web page for parents and professionals: www.alankazdin.com

-----Original Message-----

From: Diane Johnson <diane894@icloud.com>
 Sent: Thursday, February 13, 2020 7:41 PM
 To: Kazdin, Alan <alan.kazdin@yale.edu>
 Subject: Permission to use parent management training sessions worksheets

Dear Dr. Kazdin,

My name is Diane Johnson and I am currently a PMHNP DNP student at UMASS Amherst. I have attended the program at YPC as part of your research study. This was one of the most helpful programs that we continue to use in our parenting. It significantly built our confidence and reduced our stress.

My first clinical rotation was at Natchaug Hospital child and adolescent unit. The numbers of children with aggressive and oppositional behaviors was striking, yet no parent management training was provided. I have also looked in my community and see no classes or programs provided. I feel this is a huge gap in the services for parents who likely struggle.

I am proposing a capstone project of a quality intervention to offer parents a 6 session group for parent management training. My goal is to improve confidence and decrease stress in parents who may be struggling. I would like to use a likert scale questionnaire both pre-intervention and post-intervention to measure my outcomes.

I am requesting your permission to use the materials provided in the training I received at YPC to structure the group sessions.

Thank you for taking the time to review this and consider my request. I look forward to hearing any thoughts, criticisms, and whether or not I may use the materials.

Best,

Diane Johnson
 PMHNP DNP student

diane894@sbcglobal.net
 Dianejohnson@umass.edu



Appendix E

Cost-Benefit Analysis

Estimated Cost

Facilities and Workforce:

- Professional Zoom[®] subscription @ \$14.99/month (\$159.53 for year) = \$159.53

Supplies:

- Paper/Handouts, none was utilized
- Fliers, were emailed, no cost associated
- #25 PSI-4-SF and Manual= \$181
- #25 ECBI and Manual= \$147.40
- ECBI & PSI-4-SF internet administration, secure storage, scoring, and reports =\$70
- #20 Binders= \$0 (donated by Geriatric and Adult Psychiatry)

Capital investments:

- Computers = \$0
- SPSS-25 software = \$99
- Dr. Kazdin Videos= \$0

Total Cost of implementation = **\$557.93 (paid by DNP student)**

Estimated Savings

- Brief PMT cost paid for each family \$1,296
- **\$3, 888** if only three parents/ families attend
- **Estimated** 1.7 to 2.3 million per child over their lifetimes

