

**Examining Parent Dropout from Parent-Based Treatments for Elementary School-Aged
Children with Oppositional Defiant Disorder**

By

Marco Valacco

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Date

Principal supervisor: Dr. Michael Kariwo,

Clinical supervisor: Dr Amanda de Guerre

City University of Seattle

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Abstract

This research article is compiling and synthesizing the current research on reducing dropout from parent-based interventions for oppositional defiant disorder. Previous research has identified factors related to inducing dropout as well as explored potential actions for addressing dropout. Past research has lacked a unified theoretical framework to explain dropout and why interventions may be successful at reducing dropout in this population. The present study has conducted an analysis of the current literature and explored the potential for Deci and Ryan's self-determination theory as an appropriate framework for researchers and clinicians to use to understand dropout from parent-based treatments for oppositional defiant disorder.

Keywords: oppositional defiant disorder, parent-based treatments, dropout, and treatment attrition

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Examining Parent Dropout from Parent-Based Treatments for Elementary School Aged Children with Oppositional Defiant Disorder

This research paper will explore parent dropout from parent-based treatments for elementary school-aged children with oppositional defiant disorder.

The Diagnostic and Statistical Manual of Psychiatric Disorders Fifth Edition (DSM-5) describes Oppositional Defiant Disorder (ODD) as a long-term presentation of irritable, oppositional, or vindictive behaviors that are present when the child is interacting with individuals who are not siblings to the child (American Psychiatric Association, 2013). ODD is associated with high levels of argumentativeness, tantrums, property destruction, harm to others, and aggression (American Psychiatric Association, 2013). ODD is often found to be comorbid with other developmental disorders, including Attention Deficit Hyperactivity Disorder, intellectual disability, and conduct disorder (Helander et al., 2022).

Etiology of ODD

ODD is best understood through a biopsychosocial lens; symptoms of ODD are only present in interaction with others which further emphasizes a need to understand and address social contexts of the disorder (Helander et al., 2022; Liu et al., 2018). From a biological perspective, genetic factors or the presence of an intellectual disability may predispose a child to develop ODD (Christenson, 2021). ODD has a higher likelihood of being present in children who were born prematurely; low birth weight and brain abnormalities have been linked to the

development of ODD in the past (Ballentine, 2020). Biological predispositions may lead to psychological skill deficits which lead to the presence of ODD (Helander et al., 2022).

Psychological deficits related to emotional regulation and social skills development may lead to the pattern of behaviors that are the diagnostic criteria for ODD (Helander et al., 2022). Children who lack the psychological skill development to understand and control their emotional reactions, or that lack the social skills development to navigate demanding social situations in age appropriate ways, may express that deficit as externalizing behaviors (Helander et al., 2022).

Broad social factors may be associated with the presence of ODD symptoms in schools (Fadus et al., 2019). Racial discrimination may lead to inaccurate diagnosis of ODD in some populations based on assessor and teacher biases (Fadus et al., 2019).

Parent-Based Interventions

It may be important to consider the context of the family of origin when conceptualizing the etiology of ODD (Liu et al., 2018). Children's behaviors may lead to parental responses that inadvertently illicit the continuation of the child's externalizing behaviors; this may be described as a cycle of coercion (Liu et al., 2018). There are a number of parent-based interventions for ODD, including Parent Management Training and Parent-Child Interaction Therapy (Ufford et al., 2022). Parent-based interventions address the potential family origin of ODD by modifying parent responses to challenging behaviors, changing the children's behaviours in the process (Liu et al., 2018).

Parent-Based Treatments for ODD

Parent-based treatments for Oppositional Defiant Disorder (ODD) are highly effective when implemented (Dedousis-Wallace et al., 2022). This may be because they address some factors that may be related to the etiology of ODD; some scholars suggest that ODD originates from a cycle of coercion between parents and children, where a child's behaviors lead to parents' reactions, which inadvertently lead to consequences that continue to promote the child's externalizing behaviors (Liu et al., 2018; Rolon-Arroyo et al., 2018). Changing parent behaviors may end this cycle of coercion, reducing child externalizing behaviors that are no longer serving an adaptive function (Dedousis-Wallace et al., 2022).

While these treatments are effective, there is significant dropout during the course of treatment; in some cases, dropout is as significant as 50% over the course of treatment (Fleming et al., 2020). Causes of dropout may include difficulties in scheduling, increased challenges outside of treatment, lack of social supports during treatment, stigma relating to children with externalizing behaviors, therapist factors, and lack of cultural considerations in treatment modalities (Bell Scott et al., 2019; Garcia et al., 2018; Helander et al., 2022; Rubio, 2021; Spielfogel et al., 2011; Ufford et al., 2022). Addressing client dropout is important; dropout may lead to a lack of treatment for ODD, which may have long-term negative impacts for parent's mental health, as well as for the child's future social, educational, and personal functioning (Ballentine, 2019; Wolford & Holtrop, 2020).

Online implementations of parent-based treatments for ODD may address some of these deficits that may be promoting dropout; online sessions are easier to schedule, and more accessible (Bausback & Bunge, 2021; Helander et al., 2022). However, this is an emerging

field with a variety of practical and ethical considerations that may need to be addressed (Bausback & Bunge, 2021). To understand and address dropout in treatment it may be essential to explore the impact of online implementations of parent-based treatments for oppositional defiant disorder in school-aged children on treatment dropout. Evidence-based treatments with highly rated treatment outcomes have limited benefit to the public if the rates of dropout are high (Ghaderi et al., 2018). While online implementations of parent-based treatments for ODD may address some factors related to dropout, further research may be needed to examine other treatment implementations and modifications which may further increase treatment retention in parents of children with ODD (Ghaderi et al., 2018; Weisenmuller & Hilton, 2021).

Causes of Dropout

Parent Factors

Dropout may be directly caused by factors related to the parents of children with ODD (Jones et al., 2017). Readiness to change may be one of the greatest factors related to continuing, as well as dropping out of treatment; higher levels of parenting stress may promote readiness to change, as parents may be in a position where the stress of their child's externalizing behaviors is too great to ignore or to go unaddressed (Jones et al., 2017; Rubio, 2021). Children who have lower levels of symptomology may lead to dropout as the parents may be less stressed and feel like intervention may not be as necessary at that time (Jones et al., 2017; Ufford et al., 2022).

However, very high levels of parenting stress may promote dropout from treatment (Dedousis-Wallace et al., 2022). When stress is too great, parents may not be able to adequately absorb the skills taught in parent-based treatments; parents may also be at risk for mental health challenges or marital dysfunction which may distract the focus of parents away from addressing child externalizing behaviors (Ding et al., 2022; Liu et al., 2018).

Child-Based Factors

Child behaviors or traits may influence parents to dropout from treatment (Fleming et al., 2020). Callous-unemotional traits, when found in children, may be associated with poor treatment outcomes from PMT leading to dropout (Fleming et al., 2020). Operant conditioning, the mechanism of change taught to parents in PMT, may be less impactful in the learning process of children with callous-unemotional traits (Fleming et al., 2020). This may influence dropout in parents if positive behavior results are not occurring from treatment (Fleming et al., 2020). Callous-unemotional traits may indicate the presence of conduct disorder, rather than ODD, which may impact the benefits from treatment (Helander et al., 2022).

Learning disorders are often comorbid with ODD (Helander et al., 2022). Operant conditioning is the main mechanism of change in parent-based treatments for ODD; children with learning disorders may have impairments in learning through operant conditioning (Helander et al., 2022) This may lead to the treatment being less effective, leading to parental frustration and ultimately dropout (Fleming et al., 2020).

Treatment Setting Factors

Factors related to treatment settings may promote attrition from treatment by parents (Rubio, 2021). Parents may drop out from treatment before it has begun due to frustration around being waitlisted; this may be especially true for families of lower socioeconomic status (Komanchukuk et al, 2023; Rubio, 2021). Dropout may be influenced by the speed and quantity of techniques taught during treatment (Garcia et al., 2018). Absence of social supports during parent-based treatments may be associated with drop out (Helander et al., 2022). Barriers to treatment related to access and scheduling may impact all families, but especially those of lower socioeconomic status (Komanchukuk et al., 2023). Cultural sensitivity may be another factor influencing dropout; therapists may lack cultural sensitivity which may lead to therapeutic ruptures (McCabe et al., 2020). The parenting skills taught in parent-based treatments may not be culturally or religiously relevant to some groups leading to a reluctance to participate (McCabe et al., 2020; Weisenmuller & Hilton, 2021).

Research Problem

While parent-based interventions for ODD are highly effective, high dropout rates limit their utility in treatment of ODD (Dedousis-Wallace et al., 2022). There have been limited attempts to synthesize the various causes of attrition, as well as potential modifications to treatment plans to address them (Dedousis-Wallace et al., 2022; Rubio, 2021). Researching and addressing the causes of attrition, from a treatment setting, is important, as the implication of treatment attrition is that the presenting problem for therapy is going unaddressed (Ufford et al.,

2022). The research question explored will be: “How can clinicians address the potential causes of dropout from parent-based interventions for elementary school-aged children with ODD?”.

Justification

Lack of treatment for ODD is associated with negative outcomes for parents, children, and society (Dedousis-Wallace et al., 2020; Helander et al., 2019). Dropping out from treatment prevents clients from reaping the benefits of therapy which may have impacts on the children with the diagnosis of ODD, the parents of those children, and society in general (Dedousis-Wallace et al., 2020).

Impact on Children

Children with ODD may be directly impacted by treatment dropout (Helander et al., 2019). Behaviors, when left untreated, may have significant impacts on their future peer and educational relationships (Helander et al., 2019). Relationships within the family may be strained by untreated child behaviors (Ballentine, 2019). Further, these behaviors may eventually lead to youth criminal offences which may have a long-term impact on the child’s life trajectory; externalizing behaviors, when untreated, may have a stable trajectory throughout the lifespan promoting violence and substance abuse behaviors (Ballentine, 2019; McCabe et al., 2020). Consequences of untreated ODD may include further mental and physical health challenges (Fossum et al., 2018). Treatment dropout is associated with increased resistance to future treatments which may decrease the likelihood of the effectiveness of future interventions (de Soet et al., 2023). These negative outcomes may impact the course of the child’s life (Helander et al., 2019).

Impact on Parents

A lack of treatment may increase the prevalence of children's externalizing behaviors; this may impact the parent's quality of life (Liu et al., 2018). Parental stress may be amplified by these behaviors which may then lead to mental health challenges in the parents (Liu et al., 2018). Parental stress from untreated ODD may develop further into marital challenges, reduced marital satisfaction, and eventually higher the risk of clinical depression in parents (Ding et al., 2022). Considering the lens of behavioral-based parent treatments for ODD, lack of skill training for parents may lead to an environment that further promotes the dysfunctional externalizing behaviors that the children are presenting with; this, when combined with parental mental health challenges due to stress, may further decrease the parent's capacity to manage the externalizing behaviors associated with ODD leading to the continuation of those behaviors (Liu et al., 2018).

In some cases, dropout may indicate that clients have resolved their challenging behaviors before the recommended number of sessions; in these cases, dropout may not be a negative, but rather indicate that treatment had progressed faster than expected (Ufford et al., 2022). With this in mind, there is potential that there is not enough continual assessment during treatment; treatment plans in parent-based interventions for ODD may have longer timeframes than needed, which may impact dropout or which may have parents participating in treatment for a longer period than necessary, which may be associated with unnecessary costs (Ufford et al., 2022).

Impact on Society

Considering the possibility that dropout may be influenced by lack of cultural competence or cultural relevance in some parent-based treatments, we can infer that dropout may disproportionately impact families of some cultural groups (McCabe et al., 2020; Weisenmuller & Hilton, 2021). A lack of treatment for ODD in these groups may reflect social and racial inequities and may increase dysfunction in homes of some racialized populations (Ballentine, 2019). Appropriate culturally sensitive treatments are essential to meeting the needs of diverse populations (Ballentine, 2019).

Families with lower socioeconomic status may have the greatest levels of dropout from parent-based treatments for ODD (Anton & Jones, 2019). The lack of measures to adapt treatments to the needs of families that drop out from treatment may increase an already stressful experience and may further promote social inequities (Anton & Jones, 2019; Ballentine, 2019).

Lack of treatment for ODD may lead to increased costs for society in regards to criminal justice related expenditures, special programming in schools, and broader economic consequences (McCabe et al., 2020). Families of low socioeconomic status or cultural minorities may feel an increased burden from these consequences given that they have higher rates of dropout from treatment (Anton & Jones, 2019; McCabe et al., 2020).

Link to Counselling

Understanding attrition from manualized treatment protocols is essential for developing programs that can better meet the needs of families in the community (Fleming et al., 2020).

Dropout is best addressed pre-emptively: once clients have dropped out and are no longer

attending treatment there may be no way to contact them; they may be less likely to attend mental health services in the future (Fleming et al., 2020). Understanding and modifying practices to reduce the possibility of dropout in a counselling setting may lead to improved treatment outcomes (Fleming et al., 2020). This research may be especially useful to clinicians who are conducting parent-based interventions for ODD and are observing the high rates of dropout reported in the literature (Fleming et al., 2020).

Theoretical Framework

Research will be guided through the theoretical framework of Deci & Ryan's Self-Determination Theory; Self-Determination Theory explores how variables related to motivation and basic psychological needs may impact participation in a change process, making it appropriate in understanding what may lead to an individual or family dropping out of treatment early (Keleher et al., 2019). Self-Determination Theory explores the impact of external events on internal states and motivations (Di Domenico & Fournier, 2014).

Self-Determination Theory identifies three basic needs that should be addressed to increase treatment adherence in psychotherapy: autonomy, competence, and relatedness (Ryan & Deci, 2020). Autonomy refers to the intrinsic motivation that is necessary for a person to continue to participate in the process of behavioral change (Ryan & Deci, 2020). Competence refers to the sense that a client can achieve the goals related to behavioral change (Ryan & Deci, 2020). Relatedness encompasses the sense of social support that is promoting the internalized goals of behavioral change (Ryan & Deci, 2020).

The Transactional Model of Stress and Coping may also be useful in understanding how to increase treatment retention in parent-based interventions for ODD (Andrews Adlam et al., 2023). The preliminary research on the causes of dropout, as well as the possible etiology for ODD and other disruptive behaviors in children, identify parental stress as playing a role (Liu et al., 2018). Addressing parental stress may increase treatment adherence and retention based on some present literature (Jones et al., 2021).

Definitions

Parent-based interventions

Parent-based interventions refers to psychotherapy treatments that aim to change behaviours by providing parents with psychoeducation and techniques to modify child behaviors (Rubio, 2021). Parent Management Training refers to many programs that are based in a behaviorist lens (Rubio, 2021). Parent-Child Interaction Therapy (PCIT) and Behavioral Parent Training are other similar programs that focus on treating the children's symptoms through interaction with parents (Quetsch et al., 2020; Yeh et al., 2022). All parent-based treatments experience high rates of treatment dropout (Rubio, 2021).

Externalizing Disorders

Externalizing disorders are described in the DSM-V as disorders that include externalizing behaviours that lead to impairments in functioning (American Psychological Association, 2013). This includes ODD, conduct disorder, and Attention Deficient Hyperactivity disorder (American Psychological Association, 2013). Externalizing disorders in children are often targeted by parent based interventions (Helander et al., 2022). Children may not be

diagnosed or may have subclinical levels of symptoms; studies included may not have formal diagnoses but will have some measure of disruptive behaviours as inclusion criteria.

Disruptive Behaviours

Disruptive behaviors will be used to refer to behaviors including, but not limited to, hitting, spitting, throwing, yelling, and violent disobedience (Liu et al., 2018).

Children

For the purpose of this literature review, children will refer to children between the ages of 4 and 11 to include all children that may be in elementary school (Wilkerson et al., 2019).

Parents

Parents, when used in the context of this literature review, will have an extended inclusive meaning to encompass all adult caregivers of children. Parent will be used instead of caregiver as it is used in the literature, but the term will extend to caregivers to be inclusive of the diverse families that may require parent-based treatments (Komanchuk et al., 2023).

Dropout

Dropout refers to clients who attend treatment, but do not complete it (Rubio, 2021). Other terms for dropout include treatment attrition and incomplete treatment (Rubio, 2021).

Reflexivity of the Researcher

My personal, academic, and professional bias may impact my relation to the research problem being explored. My motivation for researching parent-based interventions for ODD stems from my years of work experience in school-based interventions for ODD; I do see the change process for children as fundamentally requiring participation and change in the whole

family system and I do believe that behavioral-based interventions are best suited for this task. This may be a limited perspective based on my education and work experience in behavior modification; I will need to keep in mind the diverse cultural lived experiences and concepts of parenting that families may face that may lead to behavioral-based interventions not being a good fit (McCabe et al., 2020). I will need to remain open to the possibility that dropout may not always be negative and that even effective treatment methods may not meet diverse needs.

As I am not a parent, my limited understanding of the context and lived experiences of parents may limit my understanding of the causes of dropout from parent-based treatments and how to address them. I will need to rely heavily on the literature when generating solutions to the challenges or circumstances that influence dropout.

My interest in dropout and reducing dropout has come from reading the relevant literature on parent-based interventions for ODD and seeing the high dropout rates; if dropout can be reduced, the potential for families to benefit will be increased. I can manage biases I may have towards this topic by continuing to search for more literature and through consultation and reflection.

Chapter 2: Research Methodology

The intention of the literature search process was to find recent and relevant literature to assist in answering the research question. Electronic databases were preliminarily searched based on terms from the research question. Terms were then expanded based on relevant information. Articles found were reviewed based on relevance and inclusion criteria with the list of core articles being revised. Ten core articles were selected following the literature research that met the exclusion criteria of this study. The search process was initiated in January 2024 and completed in May 2024.

Databases

Databases searched included Google Scholar, PsychINFO, PubMed, and the City University Library Database. All searches were narrowed to articles from the past five years to ensure relevance. Google scholar was used for initial searches which is beneficial as it may return multidisciplinary research results; however, this was enhanced with other databases as google scholar may return grey area literature which is not appropriate for a comprehensive literature review process (Gusenbauer & Haddaway, 2019). PsychINFO and PubMed were used to find more narrow relevant results in the areas of psychology and health studies as they are subject-based databases (Gusenbauer & Haddaway, 2019).

Search Terms

Initial searches were restricted to terms including “oppositional defiant disorder”, “dropout”, “parent-management training” and “parent-based interventions”. Boolean terms were used to include multiple search terms. Upon reviewing the current literature available, the

research question was expanded to all disruptive behavior disorders and all parent-based behavioral interventions. New search terms included “parent-child interaction therapy”, “behavioral parent training”, “disruptive behavior disorders”, and “disruptive behaviors”. Further review of relevant literature expanded search terms to include “drop out”, “attrition”, “treatment attrition”, “treatment adherence”, and “treatment completion” as these terms may often be synonymous with treatment dropout. “Qualitative research” was also included with other search terms in an attempt to find more relevant qualitative research.

Selection Criteria

Ten core articles were identified during the literature search. Only peer-reviewed, published, primary, original research was considered. Selection criteria for articles restricted articles used to only articles that were written in English, articles that used populations with children who had disruptive or externalizing behaviors as subjects, and articles that discussed dropout rates from treatment that included discussion of what impacted the dropout rates.

Two quantitative studies were excluded from the core articles later into the literature review process. These articles met all selection criteria excluding the final selection criteria; the articles did not discuss what influenced the low dropout rates from their treatment plans or what the implications of the low dropout rates were. These were excluded as it made it difficult to relate the research findings to the research question based on the data available in the articles.

Two more relevant quantitative studies were identified and included in the final literature review.

Challenges

A major challenge that arose from the treatment process was that the term “dropout” may refer to dropout from treatment as well as dropout from research studies. This led to many irrelevant articles arising from the literature search that needed to be narrowed down. Attempts were made to include the Boolean NOT along with the term “research dropout”. This was not successful as dropout and attrition are often used as terms in research without any prefacing descriptors. Articles that were irrelevant were excluded during the review process.

A systemic challenge that arose during the literature review process was obtaining access to articles that were not available through the City University Library. Access was obtained for these articles by the interlibrary loan process or requesting articles from the researchers. All articles found through the literature search process were able to be obtained, read, and reviewed in order to find the most relevant articles for the literature review.

It was challenging to find high quality, published, peer reviewed qualitative research. One other recent qualitative study was found during the literature search; however, it was a PhD thesis that was not published. While the article was relevant in subject matter, it was excluded as the thesis was not published.

Chapter 3 Literature Review

Current literature has explored methods or adaptations that may reduce dropout in parent-based interventions for reducing behaviors in school-aged children diagnosed with Oppositional Defiant Disorder (ODD). Seven quantitative, one qualitative, and two mixed-methods studies have been identified as core studies for the literature review. My core studies are in appendix A. The ten core studies identified will be examined based on their methodological properties and research findings, followed by an exploration of the ethical considerations in research. The evaluation of current literature demonstrates several trends that may be essential to understanding how to address dropout from parent-based treatments for ODD.

Methodological analysis

Quantitative

Seven quantitative studies were identified as core articles for the literature review. Diaz-Stransky et al., (2020) conducted a feasibility study of an online parent management training intervention called “Tantrum Tool” explored the potential for integrating weekly therapist check-ins during an online treatment to decrease treatment dropout (Diaz-Stransky et al., 2020). He et al., (2018) conducted a pilot double randomized preference trial investigating parental preferences for child conduct interventions on treatment outcomes. Komanchuk et al., (2023) conducted a study of 100 low socio-economic status families to assess strategies that may reduce dropout from parenting training programs. Yeh et al., (2022) conducted a pilot project exploring the feasibility of a culturally adaptive framework, the PersIn Framework, on improving Parent Child Interaction Therapy (PCIT) for parents of different cultural groups. Quetsch et al., (2020)

conducted a randomized control trial to explore the impact of external incentives on increasing treatment adherence in low-income families with children with externalizing behaviors. Jones et al., (2020) examined how technology enhance Behavioral Parent Training (BPT) may impact treatment attrition. Messer et al., (2024) explored the effectiveness of PCIT on attrition in populations with disruptive behavior disorders that have experienced trauma.

Paradigms

Most of the quantitative studies identified used the positivist research paradigm (Creswell & Creswell, 2018). Researchers utilized hypothesis, deductive reasoning, and objectivity to attempt to create a better understanding of the research problems (Creswell & Creswell, 2018). Komanchuk et al., (2023) utilized a transformative research paradigm; while their study was quantitative, it also had the goal of meeting the participant's needs and improving their lives through social justice activities (Creswell & Creswell, 2018).

Participant Recruitment

Quantitative researchers used different methods for participant recruitment. Komanchuk et al., (2023), Quetsch et al., (2020), He et al., (2018), and Diaz-Stransky et al., (2020) all recruited from community mental health clinics through contacting the respective organizations staff. Community mental health clinics are a fitting location to access families with children with clinical levels of disruptive behaviours (Quetsch et al., 2023).

Schools were used as recruitment sites by two authors (Diaz-Stransky et al., 2020; Jones et al., 2021). This increases the generalizability of their findings as schools may be more accessible and provide a broader range of the population than mental health clinics (Quetsch et

al., 2020). However, other research suggests that some populations, such as immigrants, may be less likely to attend parent training programs at schools which may limit members from that population from engaging in studies (McCabe et al., 2020).

Advertisements were utilized by some researchers to find participants (Diaz-Stransky et al., 2020). In person flyers were used by some researchers to recruit from the general population (Diaz-Stransky et al., 2020; He et al., 2018). This increased the validity of their sample as a broader range of the population was reached (Creswell & Creswell, 2018).

Most researchers recruited from more than one location. This increases validity of the sample and extendibility of the results by accessing a wider range of the population (Creswell & Creswell, 2018). Quetsch et al., (2020) and Messer et al., (2024) only recruited from one location each which may limit the generalizability of their findings (Creswell & Creswell, 2020).

Several studies were limited by using older data for their studies. He et al., (2019) utilized data from clients who had been recruited for a pilot study between 2011 and 2014 while Quetsch et al., (2020) utilized data collected from participants between 2016 and 2018. Messer et al., (2024) conducted a retrospective chart review of clients who participated in treatment between 2012 and 2019. This may limit the relevance of their research samples due to the temporal difference between the time the data was collected and the time the research was published (Doolan et al., 2009).

Sampling Methods

All quantitative studies identified utilized convenience sampling when identifying participants for their research studies. Convenience sampling may have some limitations

(Emerson, 2021). Without random sampling, there is the risk of selection bias when using convenience sampling; this may limit generalization of findings (Emerson, 2021). However, the strength of convenience sampling is that it allows researchers access to larger groups of individuals who may have a disability or other trait that occurs at a lower level in the general population (Emerson, 2021). Some researchers recruited from different recruitment locations which may reduce the risk of selection bias in their studies (Komanchuk et al., 2023)

Only Komanchuk et al., (2023) included snowball sampling in addition to convenience sampling. Snowball sampling was cited as a recommendation for increasing research participation in lower income clients; however, it was noted that in practice snowball sampling increased inquiries for the research study by participants from socioeconomic status who were not eligible (Komanchuk et al., 2023). Snowball sampling may not be appropriate for quantitative studies as it is non-random and increases selection bias (Parker et al., 2020).

Data Collection

The quantitative research studies found utilized different methods of data collection. Most studies gathered information on attendance in order to gather data related to attrition; this included more detailed examinations of participation in some studies (He et al., 2018; Jones et al., 2021; Messer et al., 2024).

Scales used to measure child behaviours and the impacts of the interventions varied. Some studies used various Likert scales based on parental report. Diaz-Stransky et al., (2020) used the Disruptive Behaviour Rating Scale, a 45-question assessment with each question measured on a 4-point scale of frequency of child disruptive behaviours as reported by the

parents. Yeh et al., (2022) and Messer et al., (2024) measured disruptive behaviours using the Eyberg Child Behaviour Inventory (EBCI) a 36-question assessment with each question measuring frequency of behaviours on a 7-point scale. He et al., (2018) assessed child behaviours using parent report on the Brief Symptom Inventory-18, an 18-question inventory measuring child psychopathology through frequency of symptoms on 5-point scales. All of these measures used are evidence-based validated measures (Diaz-Stransky et al., 2020; He et al., (2018); Yeh et al., (2022)). A limitation of these measures is that they are based on parental reports rather than clinician reports; parents of diverse cultures may assess the same behaviours differently introducing bias in the assessment of child symptoms (Fadus et al., 2019). Other studies did not assess the impact of interventions on child behaviours which may be a weakness of the studies as it is unclear if the adaptations to increase attrition continued to be effective interventions for reducing disruptive behaviours (Jones et al., 2020; Komanchuk et al., 2023; Quetsch et al., 2020).

Other studies measured factors related to parental involvement in treatment (Jones et al., 2023; Quetsch et al., 2020). Jones et al., (2023) used the helping the noncompliant child consumer satisfaction scale, a 5-point scale used to measure parental satisfaction with the treatment process. Quetsch et al., (2020) used the barriers to treatment participation scale and the therapy attitudes scales to measure obstacles to engaging in treatment. This is a strength of the study as other studies only hypothesized on causes of dropout or asked for a simple response to causes of dropout; these scales provide more information in a more objective way to assess attrition in research studies (Jones et al., 2020; Komanchuk et al., 2023; Quetsch et al., 2020).

Komanchuk et al., (2023) was the only study that only gathered information on demographics, parental depression, and adverse childhood experiences, and treatment retention; this is a limitation of the study as there was no data gathered to assess if their parenting intervention was effective at changing child behaviours or what aspect of their modified intervention led to increased treatment adherence.

Data Analysis

Quantitative studies may use descriptive statistics, inferential statistics, or both to analyse the data that has been collected (Mishra et al., 2019). All studies examined used descriptive statistics in their analysis of data. The studies examined used T-tests, Cohen's d, Correlational Analysis, linear effects modelling, Kaplan-Meier survival curve analysis and generalized estimating equation modelling as inferential statistics to analyse their data (Diaz-Stransky et al., 2020; He et al., (2018); Jones et al., 2020; Komanchuk et al., 2023; Messer et al., 2024; Quetsch et al., 2020; Yeh et al., 2022).

T-tests. Diaz-Stransky et al., (2020), Quetsch et al., (2020), and Jones et al., (2021) used t-tests during their data analysis. T-tests are used to compare the means of two samples (Marshall & Jonker, 2011). Diaz-Stransky et al., (2020) used a paired t-test to examine the change in the disruptive behaviour rating scale score from the baseline to endpoint of their study. No data was collected or analyse to demonstrate that the online implementation led to lower levels of dropout than reported from past studies (Diaz-Stransky et al., 2020).

Quetsch et al., (2020) used t-tests to assess if there were differences between the PCIT group and the PCIT with incentives group in terms of number of sessions to attain mastery and

homework completion. Due to attrition from the research study the power for some t-tests conducted was reduced potentially reducing the statistical significance of their findings.

Jones et al., (2021) used t-tests to compare technology enhanced helping the noncompliant child program with treatment as usual helping the noncompliant child program in the markers of engagement that they measured as well as in the cost of treatment.

T-tests were fitting statistical analysis tools for these studies to examine their hypotheses given that there were two related groups in the studies that could be compared (Marshall & Junker, 2011).

Cohen's d. Cohen's d is a statistical analysis tool that measures the effect size of the difference between two groups (Jones et al., 2021). Jones et al., (2021) used Cohen's d to measure the effect size from pre to post treatment in the measures of child disruptive behaviours and parental stress that they collected. The cut offs for measuring effect sizes were standard for psychological experiments (Jones et al., 2021). Treatment dropout and completion was only measured descriptively making it difficult to account for what aspect of their treatment modification increased treatment adherence (Jones et al., 2021).

Correlational Analysis. Correlational analysis is used to assess the relationship between two variables in a study; Komanchuk et al., (2023) used correlational analysis to examine the relationship between appointment rescheduling and demographic characteristics of the sample population. Data was not collected on the various retention strategies used which makes it impossible to differentiate the impacts of each individual retention strategy on client dropout (Komanchuk et al., 2023). However, a strength of using correlational analysis in this study was

that it enabled demographic characteristics to be identified that may be related to reduced treatment adherence (Komanchuk et al., 2023).

Linear Mixed-Effects Modelling. Linear mixed-effects modelling was used by He et al., (2018) to examine if parenting outcome changes were different based on the parent choice status and modality used. A linear mixed-effects modelling approach to data analysis was fitting for this study as it allowed the use of data from clients who had dropped out; ANOVA analysis is limited in uses when there is some missing data (Brown, 2021). Other than the descriptive statistics of dropout differences between groups, no data analysis was conducted to analyse why the parent choice group had significantly lower dropout than the no choice group (He et al., 2018).

Kaplan-Meier survival curve analysis. Only Quetsch et al., (2020) used a Kaplan-Meier survival curve analysis to examine if families in the incentive condition engaged in treatment for longer than the treatment as usual PCIT condition. This was a strength of the study as this analysis provides evidence for the probability that a group may complete treatment; this is especially relevant for demonstrating empirically that an intervention is reducing attrition (Quetsch et al., 2020).

Generalized Estimating Equation Modelling. Generalized estimating equation modelling is an appropriate data analysis tool for examining changes in outcome measures over time (Messer et al., 2024). Messer et al., (2024) used generalized estimating equation modelling to describe how the EBCI scores and parenting confidence scores changed with time. Models used included all demographic information collected (Messer et al., 2024). This analysis tool is

especially relevant to understanding attrition from PCIT as it demonstrated that there were improvements in EBCI scores and parenting confidence before some participants dropped out suggesting support for findings that dropout may be due to symptoms being alleviated already (Messer et al., 2024).

Qualitative

One current qualitative study was found exploring the causes of attrition in a parent-based treatment for children with externalizing disorders. Ufford et al., (2022) conducted a qualitative analysis of attrition in Parent-Child Interaction Therapy (PCIT). Participants were given a semi-structured interview with the data then being collected and coded into themes.

Paradigms

Ufford et al., (2020) used a constructivist paradigm to explore their research question. The grounded theory methodology was used to code the data collected through interviews and was then used to create themes and generate hypothesis on how to address dropout from PCIT (Ufford et al., 2020).

Participant Recruitment

Participants were recruited from a community clinic who had dropped out of treatment without meeting the graduation criteria (Ufford et al., 2022). Seven parents of children with externalizing behaviors who had attended PCIT treatment at a community clinic and had dropped out of treatment were recruited. Participants who dropped out from treatment were contacted by the research team (Ufford et al., 2022).

Sampling Methods

Potential participants were identified by the clinic upon dropout; this is a form of convenience sampling (Ufford et al., 2022). Parents were included if pre-treatment scores for disruptive behaviors were in the clinically significant range (Ufford et al., 2022). Diagnoses for children varied, but the exclusion criteria based on disruptive behaviors accounted for the area that PCIT targets (Ufford et al., 2022). Parents who indicated interest in the research study were included (Ufford et al., 2022). The sample may not have been indicative of the general population: 70% of the sample had a household income of over \$300,000 USD a year (Ufford et al., 2022). The sample was primarily white, upper middle-class two parent households which may be different from the diverse ethnic and socioeconomic status families that accesses parent-based treatments (Yeh et al., 2022; Ufford et al., 2022).

Data Collection

Data was collected through semi-structured interviews; only one parent from each couple that dropped out participated in the interview process (Ufford et al., 2022). Parents may have different experiences of stress related to child behaviours and treatments; the use of gathering data from only one parent may impact what information is shared and gathered (Booker et al., 2018). The reflexivity of the research and impacts of the identities of the interviewers were not explored in the research which may have had an impact on the validity of the interview process (Ufford et al., 2022).

Data Analysis

Following a constructivist paradigm, data was analysed by the grounded theory methodology (Ufford et al., 2022). Themes used by more than one participant to describe similar

experiences were identified by two coders and categorized into common themes (Ufford et al., 2022). Coding meetings with a group were conducted to evaluate inter-rater reliability (Ufford et al., 2022). Identities and reflexivity of the coders was not explored in the research study which may impact the validity of the results (Ufford et al., 2022).

Mixed Methods

Two mixed methods studies were identified as core articles for the literature review. Anton & Jones (2019) compared the impacts of an online Behavioral Parent Training Program, Technology-Enhanced Helping the Noncompliant Child (HNC), with in-person HNC to assess the effectiveness of remote programming. Wilkerson et al., (2019) conducted a mixed-methods research study with a pre-test post-test design; the intent was to assess the impacts of peer support on treatment outcomes and retention in an online based PMT program.

Paradigms

The mixed-methods research articles identified different in their research paradigms. Wilkerson et al., (2019) utilized a pragmatic research paradigm incorporating both quantitative and qualitative data to better address the research gap of how peer support may impact the outcomes of online parent-based interventions; the two data sources were chosen to provide a fuller exploration of the research question.

Participant recruitment

Anton & Jones (2019) used data from participants who were recruited for a previous study conducted in 2014; participants were recruited from advertisements in low-income areas, local schools, community agencies, and word of mouth in an impoverished area in North

Carolina (Anton & Jones, 2019; Jones et al., 2014). This may limit the relevance of their research as the data and context of the research is outdated (Anton & Jones, 2019). A strength of the recruitment process conducted by Anton & Jones (2019) is that the sample is from the community without exclusion criteria making it representative of the low-income communities that access parent-based treatments and face high levels of dropout. Rewards were provided for completing assessments during the research study; while providing an incentive may be beneficial to accomplish social justice goals by reimbursing low-income participants for their time, it may potentially introduce sample bias as participants may be more interested in continuing participation due to the incentives (Anton & Jones, 2019; Creswell & Creswell, 2018). Some experimental evidence suggests that low value incentives are not sufficient to continue participation in parent-based treatments; this may suggest that the incentives fulfil more of a social justice purpose than having an impact on treatment retention (Quetsch et al., 2020).

Wilkerson et al., (2019) conducted recruitment through a two-stage process: initially parents were recruited through a workplace employee assistance program while the second stage recruited parents through advertisements in health clinics following the closure of the workplace employee program. The advertisements used for recruitment may have introduced selection bias as only a subset of the population may be interested in reading posted advertisements (Creswell & Creswell, 2018). Inclusion criteria included being the parent of a child ages 10-16 who was presenting with behavioural challenges related to non-compliance; participants were surveyed with the ODD survey and were assessed as having clinically significant levels of ODD (Wilkerson et al., 2019).

Exclusion criteria included substance abuse, court ordered treatment, or parents engaging in other therapy programming for the presenting problem (Wilkerson et al., 2019). While this inclusion criteria may have been necessary to isolate the impact of the intervention on the target symptoms, it is worth noting that populations with externalizing behaviours are more at risk of engaging in substance abuse or having parents being ordered to engage in treatment through the courts or the child welfare system; this may impact the generalizability of the sample to clinical populations (Komanchuk et al., 2020; Wilkerson et al., 2019).

Sampling methods

Both Anton & Jones (2019) and Wilkerson et al., (2019) used convenience sampling. Anton & Jones (2019) randomized participants to one of two parent-based treatment groups helping the non-compliant child, or technology enhanced helping the non-compliant child.

Wilkerson et al., (2019) used convenience sampling; all participants were assigned to one of four groups upon meeting the inclusion criteria. There were no differences between groups. Each group followed a four-step treatment plan consisting of a pre-intervention testing phase, a six-week intervention consisting of three weeks of training modules alternated with three weeks of group discussion, followed by a post-intervention stage consisting of post-tests (Wilkerson et al., 2019).

Data collection

Anton & Jones (2019) used data that Jones et al., (2014) had collected through therapist report, administration of the caregiver assessment battery (an assessment for caregiver skills to respond to disruptive behaviours) to create the quantitative data demonstrating the change that

the intervention produced. Qualitative data was collected from the feedback that participants provided in weekly surveys (Anton & Jones, 2019). This data was then compiled into case studies to illustrate the variable impacts of smart-phone enhanced therapy on the therapeutic alliance (Anton & Jones, 2019).

Wilkerson et al., (2019) similarly used a variety of assessments to measure the impact of their intervention on child and parent behaviours; this provided the quantitative data. The qualitative data was collected from participant postings on discussion boards during the treatment process (Wilkerson et al., 2019).

Data analysis

Anton & Jones (2019) analysed past data by compiling the results of Jones et al., (2014) into case studies and examining three representative case studies. The qualitative and quantitative data collected was synthesized to identify trends in the impact of technology on the therapeutic alliance in parent-based therapies. Results were examined in the context of treatment attrition to identify at what stage technology-based enhancements reduced attrition (Anton & Jones, 2019).

The quantitative data collected from Wilkerson et al., (2019) was suggested to be limited due to the small sample size and the pre-experimental design of the quantitative portion. The sample size was too small for use of repeated ANOVA measures (Wilkerson et al., 2019). A pretest–post-test multivariate analysis of variance (MANOVA) analysis using a Bonferroni adjustment was used to analyze the data (Wilkerson et al., 2019).

Qualitative themes collected were organized into codes based on two predetermined main themes (Wilkerson et al., 2019). While the analysis of the quantitative data was limited by the research design and low sample size, the qualitative data provided information that related the treatment outcomes to aspects of the treatment that participants found helpful (Wilkerson et al., 2019). The low attrition rate from the study was a novel takeaway with 19 out of 23 participants completing all aspects of treatment (Wilkerson et al., 2019).

Reflexivity of the researchers was not explored in either study (Anton & Jones, 2019; Wilkerson et al., 2019). This may limit the validity of the coding process as we are not informed of how the background of the researchers has impacted the direction and interpretation of the research study (Creswell & Creswell, 2018).

Small sample sizes inhibited the use of many statistical tools to analyze data in both mixed method studies (Anton & Jones, 2019; Wilkerson et al., 2019). Concrete conclusions around the moderators for treatment outcomes were also impaired by the small sample sizes (Anton & Jones, 2019; Wilkerson et al., 2019). Both studies defended their findings as preliminary data to inform future research directions (Anton & Jones, 2019).

Findings

The quantitative, qualitative, and mixed-method studies reviewed had relevant findings for modifications for parent-based interventions that may reduce dropout.

Quantitative

The quantitative research studies reviewed explored several hypothesis related to treatment outcomes from adaptations to parent based treatments. The results of the quantitative

research studies reviewed also provide support for several modifications to reduce dropout from parent-based treatments for disruptive behaviors. These treatment modifications include allowing the clients choice in type of treatment, increasing motivation by including motivational interviewing, adapting treatment structure, validating parenting styles, increasing equality and equity in treatment, online programming, and reducing barriers to treatment (Diaz-Stransky et al., 2020; He et al., 2018. Jones et al., 2020 Komanchuk et al., 2023; Messer et al., 2024).

Hypothesis and Results

The quantitative studies reviewed explored several hypothesis and their impact on the implementation of their adaptations to parent-based treatments.

Diaz-Stransky et al., (2020) predicted that their treatment modification would produce a 35% or greater reduction in DBRS score which is suggested to be the clinically significant cut-off for a treatment to be considered to be effective in reducing symptoms of ODD. This hypothesis was confirmed as their intervention produced a 46% reduction in DBRS score (Diaz-Stransky et al., 2020). This was concluded through the use of a paired t-test comparing the change in DBRS scores from baseline to the conclusion of their study (Diaz-Stransky et al., 2020).

Komanchuk et al., (2023) predicted that their treatment modifications would increase treatment recruitment and retention for the First Pathways parenting program; their research supported their hypothesis with a 99% retention rate reported at the end of their 2-month study.

Incentives to increase treatment adherence were explored: Quetsch et al., (2020) hypothesized that providing small financial incentives to low income families to continue to participate in parent-based treatments would increase treatment adherence. Following completion of their study, the t-test analysis found that there was no significant improvement in treatment completion in the group that was provided financial incentives (Quetsch et al., 2020).

Jones et al., (2020) hypothesized that enhancing the parent-based helping the noncompliant child program with technology would increase treatment participation without significant increase in treatment costs compared to treatment as usual; the researchers suggested that their study confirmed these hypotheses with the technology enhanced treatment group reporting increased homework completion and greater speed of treatment completion. This is supported by their t-test results finding that the technology enhanced treatment group had significantly greater homework compliance and midweek check-in compliance than the treatment as usual group (Jones et al., 2020).

Messer et al., (2024) hypothesized that children with a history of trauma would benefit similarly from PCIT treatment as children without a history of trauma; further they predicted that families of children with a history of trauma would be less likely to complete treatment. The data gathered confirmed these hypotheses: children with trauma showed similar improvements with treatment but had greater levels of dropout. Based on the t-tests run, treatment completion was significantly greater for patients that were male, white, had commercial insurance, and were married to another caregiver, and did not have a history of trauma supporting the conclusion that

there may be increased barriers to treatment or other stressors that may be impacting treatment attrition (Messer et al., 2024).

One study had no hypothesis for results based on the mixed data available in the literature (He et al., 2018). While He et al., (2018) had no hypothesis, the study found that increased choice for parents in the decision making process in therapy promoted treatment adherence and participation in low-income families.

Type of Treatment

Autonomy in the choice of the type of treatment provided is theorized to increase treatment adherence; clients having the choice between treatment options is theorized to increase intrinsic motivation to participate in treatment by demonstrating a trust in the client's capacity to integrate information provided in therapy to achieve their desired outcomes (Ryan & Deci, 2008). Assisting clients in organizing and accessing information around therapy in a non-directive manner, rather than imposing a top-down therapeutic agenda on the clients are necessary aspects of autonomy support to build intrinsic motivation (Ryan & Deci, 2008). There is some evidence that providing parents with choice in their treatment options in the early stages of parent-based treatments has a positive impact on reducing levels of attrition (He et al., 2018).

He et al., (2018) found that parents in the no-choice PMTO conditions dropped out at a higher rate than those in the choice PMTO conditions. It was theorized that dropout may be accounted for by parents potentially having strong preferences for treatment; not having a choice in treatment option was also considered to potentially lead to early therapeutic alliance ruptures

with a lack of bond and collaboration over treatment goals (He et al., 2018). This is consistent with Self-Determination Theory's construct of autonomy and its importance in building the intrinsic motivation needed to attend and complete therapy (Ryan & Deci, 2008).

Treatment Structure

Other research provides quantitative support for autonomy in treatment structure reducing dropout (Messer et al., 2024). Messer et al., (2024) conducted a retrospective review of data collected from families of 212 children with disruptive behavior disorders who participated in PCIT at a child advocacy center between 2012 and 2019. Researchers found a dropout rate of 54% which is constant with other parent-based treatments (Messer et al., 2024). However, researchers found that families that attended at least four sessions appeared to have shown significant benefit from treatment already; over half of the families who had completed the fifth session of the PCIT treatment presented with subclinical levels of externalizing symptoms (Messer et al., 2024). Adaptations suggested to improve PCIT to reduce dropout based on these findings were to offer time-limited options that may increase feasibility for families who have already seen clinical improvement or have limited resources to attend long term treatments (Messer et al., 2024). Allowing clients the autonomy to engage in shorter term options and to tailor treatments to their goals and needs may build the intrinsic motivation needed to continue to attend therapy to an assessable and evidence-based termination point (Ryan & Deci, 2008; Messer et al., 2024).

Motivational Interviewing

Messer et al., (2024) suggest that past research demonstrated that motivational interviewing, when integrated with PCIT, demonstrated improved treatment retention. The results of their study suggested that this may be an area where more future research is needed to identify modifications that are both evidence-based and meet the needs of the diverse families who may engage in parent-based treatments (Messer et al., 2024).

External Rewards

Some research has explored the impact of low-cost incentives on treatment adherence and attrition in PCIT (Quetsch et al., 2020).

Quetsch et al., (2020) found that low-cost incentives did not have an impact on treatment attendance other than decreasing the amount of no-show clients by incentivizing clients to phone and cancel meetings first. Researchers recognized that using external incentives, while fitting with behavioral theory, may limit the intrinsic motivation for clients to change. Higher monetary value incentives or monetary incentives that were more flexible for families were theorized as alternative measures that may have elicited results; however, it was cautioned that these measures may not lead to sustainable behavioral change (Quetsch et al., 2020). This study supports Self-Determination Theories emphasis on the need for autonomy and intrinsic motivation in treatment for clients to attain motivation towards behavioral change (Ryan & Deci, 2020).

Barriers identified in the study were that there was pushback from family members, including extended family, against participation in PCIT as it did not reflect Latinx cultural values; low-

cost incentives may not have been sufficient to overcome the cultural values around treatment participation in parenting interventions (Quetsch et al., 2020).

Approaches that Validate Parenting Styles

Parent stigma is suggested to prevent treatment uptake and promote treatment dropout from parent-based treatments for ODD (Bausback & Bunge, 2021; Liu et al., 2020). Parent stigma may be driven by the perception that their children having disruptive behaviors reflects on them as “bad parents”; the promotion of skills in parent-based treatments that are presented as alternatives to the skills they have used in the past may also promote this perception (Baltrosky et al., 2022). Some research has demonstrated that promoting a client's sense of competence by validating parents' parenting styles and experiences has increased treatment retention (Komanchuk et al., 2023; Messer et al., 2024; Ufford et al., 2022).

Among other findings, Messer et al., (2024) found that psychoeducation with parents around alternative causes of child externalizing behaviors and disorders, such as providing psychoeducation around trauma as the source of externalizing behaviors may have increased parenting confidence as there was the sense that the parents were not to blame for the child's behaviours; however, in their study, they found that families with children with trauma had a higher attrition rate in spite of increased parenting confidence (Messer et al., 2024). Families who dropped out after four sessions were suggested to demonstrate similar trajectories of behavioral improvement which was purported by the researchers to account for the higher levels of dropout (Messer et al., 2024).

Other online studies have found the inclusion acknowledging parents' knowledge and incorporating past parenting skills into treatment as increasing retention (Komanchuk et al., 2023). Komanchuk et al., (2023) found that low-socioeconomic status families are at a greater risk of dropout; their study presents promising strategies on how seeking feedback and validating parenting styles may be used to increase treatment retention with this population (Anton & Jones, 2019; Komanchuk et al., 2023).

Helander et al., (2022) found that the PMT intervention was effective; even after two years the intervention continued to reduce externalizing behaviors, improve parenting practices, and increase emotional regulation in children. The results suggested that implementing Group-CBT with the child client along with PMT did not produce significant reduction of externalizing behaviors over implementing PMT alone. However, the study did find that the PMT with the combined group CBT condition had significantly lower attrition demonstrating 83% of continued participation in the program over the 56% reported for just the PMT group (Helander et al., 2022). While the differences in attrition rates between groups was not explained or explored by the researchers, it may demonstrate that providing additional treatments that address externalizing behaviors, beyond the parenting dynamic, may reduce treatment attrition (Helander et al., 2022). Validating parent-styles by providing alternative explanations for child externalizing behaviors may increase the parents sense of competence in treatment encouraging them to make the decision continue treatment (Ryan & Deci, 2020; Baltrosky et al., 2022; Helander et al., 2022; Komanchuk et al., 2023; Messer et al., 2024).

Adaptations to Increase Inclusivity and Equity

There has been limited research into increasing the sense of competence in parents through the use of adaptations to increase inclusivity and equity in treatment (Komanchuk et al., 2023). Parent-based interventions require teaching parents techniques to respond to child externalizing behaviors in ways that reduce these behaviors (Liu et al., 2018). Considering that techniques are learned, it may be worth considering the parents' abilities for learning or accessing information. The dropout from parent-based treatments are often families of lower socio-economic status, lower levels of education, younger parents, and parents with mental health challenges, thus adaptations to increase accessibility of materials may be beneficial in increasing treatment participation by this group (Komanchuk et al., 2023; Wilkerson et al., 2019). Integrating considerations of equity by having materials at a fifth grade reading level, utilizing inclusive language, and other considerations for individuals with lower literacy levels may reduce dropout from parent-based interventions, as indicated by the low dropout rate demonstrated by Komanchuk et al., 2023 (Komanchuk et al., 2023). Messer et al., (2024) supported the need for adaptations to address systemic inequalities finding that dropout in their study was higher among families that faced systemic barriers.

Personalized Rapport Building

Online treatment methodologies, while increasing the sense of competence in clients, may lack the relatedness that may be necessary to maintain treatment adherence in clients (Anton & Jones, 2019; Diaz-Stransky et al., 2020). Diaz-Stransky et al., (2020) found an 80% completion rate with dropout being suggested to be caused by scheduling difficulties (Diaz-

Stransky et al., 2020). While preliminary, these findings were theorized to be due to the increased therapeutic relationship in programs with check-ins which coincides with Self-Determination Theory's basic need of relatedness (Ryan & Deci, 2008; Diaz-Stransky et al., 2020).

Other online studies have found the inclusion of personalizing aspects and check-ins on the therapeutic relationship as promoting treatment retention (Komanchuk et al., 2023). Komanchuk et al., (2023) utilized techniques to increase relatedness such as appointment reminders were one evidence-based strategy that was utilized to increase treatment adherence. Appointment reminders were enhanced by rapport building attempts, including personalized contact including holiday and birthday greetings (Komanchuk et al., 2023). Demonstrating empathy and unconditional positive regard through personalization adaptations in parent-based treatments may increase treatment retention (Komanchuk et al. 2023).

Jones et al., (2021) utilized technology enhanced check-ins including homework reminders, daily surveys, and midweek calls in order to increase completion of treatment goals; these modifications may have influenced the low dropout rate from their research study but they recommended further research was needed to confirm this impact. Increased parental satisfaction based on these adaptations was however confirmed based on their data (Jones et al., 2021).

Online Group Therapy Options

Group Parent-Based interventions have been implemented online and explored in current literature (Baltrosky et al., 2022; Wilkerson et al., 2019).

Wilkerson et al., (2019)'s Data from peer group discussions were qualitatively gathered and grouped into themes, including a theme related to mutual aid; parents were found to support each other and validate shared challenging parenting experiences leading to the sense that it was safe to share these lived experiences. The researchers associated the impacts of peer support and relatedness in shared experiences with the high retention rate (Wilkerson et al., 2019). Peer discussions in the study were anonymous which was suggested to be responsible for the high levels of participation and sharing as stigma was not present; the combination of technology and relatedness was suggested to overcome barriers and build engagement in a safe and accessible modality (Wilkerson et al., 2019).

Baltrotsky et al., (2022) had similar findings through the addition of a regulated Facebook community group for therapy participants to have an online community to share learning experiences and provide peer support. Participants stated that feelings of validation and community may have built motivation to continue participation in treatment. A limitation of the Facebook group method was that some parents found it too informal to meet their needs for continued training in parent management techniques (Baltrotsky et al., 2022). Integrating the peer support and psychoeducation into formal online modules, rather than a Facebook group, may better meet the needs of parents who require structure to benefit from peer support, as well as provide the option for anonymity which may increase sharing and reduce stigma (Wilkerson et al., 2019).

Reducing Systemic Barriers to Treatment

Systemic socio-economic barriers are a pervasive cause driving dropout in parent-based treatments for ODD (Diaz-Stransky et al., 2020; Komanchuk et al., 2023). Challenges relating to scheduling, accessibility, waitlists, childcare, and expense of treatment are often cited as reasons for dropout from parent-based treatments (Diaz-Stransky et al., 2020; Komanchuk et al., 2023). Providing resources to address these stressors may change parents' secondary appraisals of stress, enabling them to better cope with the stressors of continuing therapy and potentially decreasing client dropout (Andrews Adlam et al., 2023; Diaz-Stransky et al., 2020). Remote implementations of parent-based treatments may address many of these secondary appraisals of stress in a positive manner removing some of the barriers to treatment (Komanchuk et al., 2023). When therapy is in person, providing childcare and transportation assistance are practical adaptations that may reduce stressors related to accessing and continuing treatment; while this may lead to lower attrition than offering parent-based treatment alone, Komanchuk et al., (2023) found that remote offerings of parent-based treatments continued to have lower dropout than in-person treatments with these adaptations (Komanchuk et al., 2023). Increasing access to therapy is essential with some studies finding that being placed on a waitlist for treatment was the greatest indicator of treatment dropout (Rubio, 2021). Research continues to be preliminary in removing barriers to accessing parent-based treatments as well as the impacts of remote treatments requiring continued research into the future (Komanchuk et al., 2023).

Remote Access Opportunities and Attrition

Many quantitative sources explored the impact of remote access opportunities on treatment dropout (Helander et al., 2022). Some sources suggest that, while remote service options for parent-based interventions have demonstrated reduced dropout for parents from treatment, dropout continues to be high for parents of children with more severe symptomatology (Baumel et al., 2016; Helander et al., 2022; Sourander et al, 2024). Online adaptations, while increasing autonomy and motivation for continued treatment participation by parents, are not sufficient adaptations to reduce dropout in families of children with higher disruptive behavior needs (Helander et al., 2022).

Qualitative

The one qualitative source, Ufford et al., (2022) revealed several themes around treatment dropout that may be important to consider when attempting to modify parent-based treatments to reduce attrition.

Collaboration in Type of Treatment

Research findings have also provided support for collaboration and autonomy in the structure of treatment leading to reduced dropout (Ufford et al., 2022). Ufford et al., (2022) identified that the rigidity of expert criteria in PCIT to advance to the next stages of treatment was a reason many families identified for their desire to dropout of treatment. The pace of treatment was seen as too slow and made parents feel frustrated; the goals of the different stages of treatment also did not align with the parents' goals increasing their frustration. Parents wanted to engage in the disciplinary portion of PCIT but could not advance to that stage due to a lack of

meeting the criteria for previous stages; the frustration of the lack of alignment between the client's treatment goals and the clinicians led to dropout (Ufford et al., 2022). This supports Self-Determination Theory's emphasis on autonomy being necessary for the development of intrinsic motivation in treatment; the treatment rigidity prevented the parents from having autonomy towards their treatment goals leading to a lack of motivation to continue that path of behavioral change (Ryan & Deci, 2008; Ufford et al., 2022). Addressing the risk of parent dropout throughout therapy and using that information to inform the treatment process has been suggested as an adaptation that may reduce dropout (Ufford et al., 2022).

Addressing Parent Motivations Directly

Adaptations to parent-based treatments that directly address parent motivations may increase treatment adherence (Messer et al., 2024; Ufford et al., 2022). Suggestions from research that involve directly addressing parent motivations include adaptations from Acceptance and Commitment Therapy (ACT) (Ufford et al., (2022).

Ufford et al., (2022) suggested that providing ACT to parents engaging in PCIT who are frustrated with the rigidity and pacing could increase treatment adherence. ACT provides techniques to manage frustration as well as involves an exploration of intrinsic values and how they may be connected to the treatment process. Parents may be more motivated to tolerate the frustration and pacing if they are provided with the tools to see how enduring the frustration will enable them to live more in line with their parenting values (Ufford et al., 2022). Dropout from parent-based treatments is suggested to be lower when parents recognize the value of treatment and have faith in the mental health provider (Johnston & Burke, 2019). Exploring parent values

in treatment may build the intrinsic motivation needed to overcome the frustration with slow pacing (Ufford et al., 2022).

Improved Feedback Mechanisms

Feedback may increase competence by promoting parental behaviors that will increase success in therapy; feelings of increased success and competence may continue parental participation in therapy (Ryan & Deci, 2008; Ufford et al., 2022). The manner in which feedback is provided to parents during the training process may influence feelings of parental competence and dropout (Ufford et al., 2022). Ufford et al., (2022) identified differences in attrition based on the therapist's use of responsive coaching over directive coaching. Directive coaching, which is seen as less validating and more skill-based and formal has been found to lead to slower skill acquisition in PCIT. Responsive coaching, described as using more praise and supportive statements during training while promoting short-term and long-term goals, was suggested to reduce dropout (Ufford et al., 2022). Responsive coaching may build a sense of competence in parents by validating their ability to use parenting skills which may in turn increase motivation to continue participation in treatment (Ryan & Deci, 2020; Ufford et al., 2022). More formal training for clinicians to encourage them to provide responsive coaching may be needed to reduce dropout in parent-based treatments (Ufford et al., 2022).

Data from meta-analysis has found that therapist interactions that were viewed as too directive, controlling, or confronting were associated with higher levels of dropout from parent-based interventions (Leitão et al., 2021). Further, a greater emphasis on enhancing the parent-therapist alliance was demonstrated in a number of studies explored in Leitão et al., (2021)'s

meta-analysis to promote lower levels of dropout; the way therapists give feedback to parents, while coaching them in parenting strategies, may influence dropout with a responsive coaching style being an effective method of retaining parents by building on their internal sense of competence (Leitão et al., 2021; Ufford et al., 2022).

Parental Therapy and Stress

Research into directly addressing parents' primary appraisals of stress and the impacts of these interventions on parental dropout from parent-based treatments has been conducted (Ufford et al., 2022). Ufford et al., (2022)'s suggesting of incorporating aspects of ACT into parent-based treatments may, in theory, allow parents to engage more mindfully with their primary appraisals of stress when starting treatment. ACT has been previously used to address parental psychological wellbeing to enable parents to better meet the mental health needs of their children with diverse needs. Techniques such as mindfulness meditation, psychological flexibility, and to change behaviors to be in line with underlying values may help parents to better respond to the primary stressors associated with participating in parent-based treatments (Ufford et al., 2022).

Mixed Methods

The ten-core quantitative, qualitative, and mixed-methods articles have findings that have implications for reducing attrition from parent-based interventions for children with externalizing behaviors.

Smartphone Enhancements and Attrition

Anton & Jones (2019) found evidence that smartphone enhancements may impact the client's desire to participate and continue to engage with treatment. Smartphone enhancements that allow

feedback processes and continuing education between sessions may also help overcome parent's initial resistances and build an understanding of the utility of treatment, increasing intrinsic motivation (Anton & Jones, 2019). Providing the tools for parents to overcome barriers to treatment fosters a sense of personal ability to overcome the challenges that are inhibiting behavioral change (Brownlow, 2022). This is supported by Anton & Jones (2019) findings related to remote access options for parent-based treatments. Remote access options or enhancements to parent-based treatments have been designed with the goal of allowing the clients access to therapy skills and information outside sessions in order to increase a sense of autonomy and competence in parents (Anton & Jones, 2019). Logistical challenges and barriers to treatment are often identified as causes of dropout from parent-based treatments (Dedouis-Wallace et al., 2022). Providing remote-access opportunities for parents to participate in treatment has been suggested as an adaptation that may reduce dropout and increase treatment compliance by allowing parents to overcome treatment barriers (Anton & Jones, 2019).

Smartphone Enhanced Therapy and Challenges

Low-income and vulnerable families are suggested to have higher rates of disruptive behavior disorders in children as well as being more likely to drop out of treatment (Anton & Jones, 2019; Komanchuk et al., 2023; Messer et al., 2024). Remote programming has been attempted as a solution to some of the barriers of treatment that low-income families may face, such as difficulties with scheduling and childcare (Komanchuk et al., 2023). Anton & Jones (2019) found that qualitative data collected from participants supported the theory that these smartphone enhancements would build a sense of competence and maintain motivation to use

skills from therapy outside of the therapy context (Anton & Jones, 2019). Further, online adaptations may impact the development of the therapeutic alliance and may limit the development of relatedness between the clients and the therapist (Anton & Jones, 2019).

PersIn Framework for Cultural Adaptations

In their pilot study of the PersIn framework for culturally adapting parent-based treatments, Yeh et al., (2022) hypothesized that culturally adapted PCIT would be as effective as treatment as usual while having the additional benefit of increase client treatment engagement. This hypothesis was confirmed as their data and statistical analysis demonstrated that their adaptation of PCIT demonstrated clinical and statistical changes in ECBI and CBCL externalizing behavior scores similar to treatment as usual while also demonstrating treatment dropout rates that were significantly lower than treatment as usual (Yeh et al., 2022).

Adaptations that were included in treatment using screening interviews to identify clinically significant areas of cultural variability; this information is used in conjunction with a list of treatment modifications to create a culturally responsive treatment plan that also maintains the intended impacts of the original PCIT treatment plan (Yeh et al., 2022). Relating to treatment attrition, researchers found a 50% treatment completion rate from the PersIn enhanced programming; this was significantly larger than the findings from other studies that suggested a 17.7% completion rate of PCIT (Yeh et al., 2022). This may support the finding that increasing cultural sensitivity and including cultural knowledge in parent-based treatments may increase parents' sense of autonomy in treatment increasing intrinsic motivation to complete programming (Ryan & Deci, 2020; Yeh et al., 2022). Meta-analysis data strongly supports the

need for individualizing programming to increase treatment adherence in diverse populations; this extends beyond cultural diversity to include socio-economic, diversity in child behavior severity, and diversity in parental mental health (Michael, 2018). Further, education and cultural awareness training may be necessary for clinicians providing parenting interventions; parenting is essentially a cultural process and parents are unlikely to follow treatment plans when the treatment does not align with fundamental aspects of their cultural worldview (Weisenmuller & Hilton, 2021). Treatments that do not take into account the client's culture may not be effective for behavioral change (Weisenmuller & Hilton, 2021). While data from their pilot study is preliminary, the PersIn framework provides a promising first step in address culture in parent-based interventions (Yeh et al., 2022).

Ethical considerations

It is essential to consider how the research evaluated meets ethical research standards. The ten core articles selected will be examined for their adherence to the Tri-Council Policy Statement, the Canadian Psychological Association Code of Ethics (CPA Code), and the College of Alberta Psychologists Standards of Practice (CAP Standards).

Informed Consent

The principle of respect for persons is emphasized in the Tri-Council Policy Statement (CIHR et al., 2022). This principle encompasses the informed consent process. All studies examined stated that consent was received from participants. The informed consent process is similarly emphasized in the CPA Code (Principle I.20) as well as the CAP Standards (12.18) (CAP, 2022; CPA, 2017). All studies also cited approval from Ethical Review Boards that would

include informed consent. Only Diaz-Stransky et al., (2020) and He et al., (2018) stated that assent was also received from underage participants; this is an ethical strength as it explicitly emphasizes the voluntary participation of underage research participants in these studies (CIHR et al., 2022). Only Komanchuk et al., (2020) discussed how consent was an ongoing process with regular check-ins which best meets the principles of the Tri-Council Policy Statement (CIHR et al., 2022).

Risks and Benefits

Concern for welfare is one of the guiding principles of the Tri-Council Policy Statement (CIHR et al., 2022). The main area that concern for welfare covers is the risks and benefits of participation in the research studies. This is similar to the CPA Code Principle II, Responsible Caring (CPA, 2017). Confidentiality is one aspect of the risks of engaging in research (CPA, 2017). Only Komanchuk et al., (2020) discussed how confidentiality was ensured and communicated with research participants which was a strength of the study. All studies had ethical review board approval which suggests that there were aspects of the studies that protected confidentiality despite not being discussed (CIHR et al., 2022). Considering the CPA Code of Ethics the use of ethical review board approval may suggest that the research studies were examined for risks and benefits in an objective way meet the CPA Principle II.16 (CPA, 2017).

Justice and Integrity

The Principle of Justice in the Tri-Council Policy Statement discusses the principle of Justice; this includes protections for those with diminished decision making capacity as well as avoiding conflicts of interest (CIHR et al., 2022).

He et al., (2018), Yeh et al., (2022), and Wilkerson et al., (2019) discussed how the exclusion criteria for their studies included parents that were in some vulnerable categories including developmental disabilities, addictions, or court mandated treatments; while this may limit the extendibility of their research findings to the general population this is an important ethical consideration as, considering the CPA Code of Ethics Principle I.32, vulnerable people should not be included in research if the same research can be conducted without them (CPA, 2017). This is also covered in the CAP Standard 2.3.3 (CAP, 2022).

Financial conflicts of interest are also important to consider. Ufford et al., (2022) declared no external funding or conflicts of interest. Diaz-Stransky et al., (2020), Jones et al., (2020), Anton & Jones, (2019) and He et al., (2018) all declared the National Institute of Mental Health as providing funding. Komanchuk et al., (2020) declared the International Society for Psychiatric Mental Health Nurses as providing funding. Yeh et al., (2022), Quetsch et al., (2020), Messer et al., (2024), did not discuss funding but declared no conflicts of interest (financial or otherwise) in their studies. Only Wilkerson et al., (2019) did not describe funding or conflicts of interest which was a weakness of their study. Funding of studies may introduce bias as researchers may be reluctant to publish research that goes against the values of their funders (Boutron et al., 2019).

Other Ethical Limitations

Research studies that are using older data sets, such as Anton & Jones, (2018) and Messer et al., (2024) may have difficulty meeting ethical considerations as the policies of ethical committees and review boards may have changed in the time since the data was collected

(Doolan et al., 2009). The researchers did not address or discuss if the data used met current ethical standards (Doolan et al., 2009).

Chapter 4: Clinical Implications

Implications for Clinical Practice

The findings from current literature have implications for clinical practice. The rigidity, lack of cultural competence, and style of feedback provided in parent-based interventions is not sufficient to create the intrinsic motivation needed to attend treatment in the diverse families of children with externalizing disorders (He & Gerwitz, 2018; McCabe et al., 2020; Messer et al., 2024; Quetsch et al., 2020; Ufford et al., 2022). Different treatment formats, such as remote, in-person, or group therapy may better meet the needs for relatedness or easy access to treatment for different families (Komanchuk et al., 2023; Sourander et al., 2024; Wilkerson et al., 2020). While research is limited on increasing the effectiveness with higher needs population, among parents of children with lower severity, extensive and long term treatment when results have already been achieved may lead to dropout (Helander et al., 2022; Messer et al., 2024). While research has been preliminary, screening families for their cultural needs and using this to inform treatment has demonstrated some efficacy in reducing treatment dropout (McCabe et al., 2020). Considering the diverse needs and intersectionality of families who seek parent-based treatments, the clinical literature on dropout provides support for the need for more screening of clients and subsequent personalization of treatments; the one-size fits all manualized approaches in many parent-based treatments are not meeting the basic needs of autonomy, competence, and relatedness that are necessary for diverse individuals to be intrinsically motivated to continue treatment (Komanchuk et al., 2023; McCabe et al., 2020; Messer et al., 2020; Ryan & Deci, 2020; Ufford et al., 2022).

Self-Determination Theory

A unified framework may be necessary to describe why modifications to parent-based treatments may be successful in reducing treatment dropout. Self-determination theory has been utilized in the past to explain and address dropout from other psychotherapy interventions (Clewell, 2021). Findings from current research on dropout from parent-based treatments can be categorized into the three main categories in self-determination theory that are necessary for intrinsic motivation: autonomy, competence, and relatedness (Deci & Ryan, 2008).

Adaptations that Promote Autonomy

Self-determination Theory suggests that increased adherence and participation in psychotherapy may be promoted by increasing the clients' sense of autonomy in therapy; the sense of autonomy involves intrinsic motivation in client's goals and desire to change (Ryan & Deci, 2020). The findings from current research on reducing dropout in parent-based interventions for children with ODD have suggested several adaptations that may be reducing dropout due to increasing client autonomy in treatment (He & Gerwitz, 2018). Flexibility in treatment goals and deadlines may be factors that promote autonomy and intrinsic motivation in psychotherapy clients (Ryan & Deci, 2008). This can include increasing autonomy in treatment type, length of treatment, and treatment goals (Ryan & Deci, 2008). Clinicians can increase client autonomy and intrinsic motivation to continue treatment through seeking feedback on client's goals, giving clients the flexibility to decide when treatment has been enough so that closing steps can be made instead of clients dropping out without support, or by providing online

tools that may allow clients to access psychoeducation resources from therapy at other times when they are ready (Anton & Jones, 2019; Messer et al., 2024).

Adaptations that Promote Competence

Theoretically, clients who have a sense of competence may have the internalized motivation to work towards goals of behavioral change (Ryan & Deci, 2020). In psychotherapy, clinicians can provide supports that enable clients to build an internal sense of competence through providing validating feedback and structure that enable the client to feel a sense of accomplishment and success in the treatment process (Ryan & Deci, 2008). Research findings found that providing a structure in therapy that clients can access and attend successfully, as well as feedback mechanisms that promote a sense of accomplishment in treatment, have been explored as methods to reduce dropout in parent-based treatments (Anton & Jones, 2019; Ufford et al., 2022). Clinicians can increase client's feelings of competence during parent-based treatments by providing different ways of accessing treatment (tele-therapy, online, group, in-person), discussing etiology of ODD and externalizing behaviors in ways that are not limited to parenting (the biopsychosocial model), and integrating considerations of equity by using accessible language and educational techniques when providing psychoeducation to families (Anton & Jones, 2019; Baltrosky et al., 2022; Komanchuk et al., 2023).

Adaptations that Promote Relatedness

Ryan & Deci (2008) theorized that relatedness promoted treatment adherence and participation by creating a sense of support through relationships that reflect unconditional positive regard. Internalizing the goals of the change process and valuing the commitment and

interaction necessary to conduct therapy are suggested as the factors in relatedness that increase treatment adherence (Ryan & Deci, 2008). Challenges to the therapeutic alliance, such as feelings of dismissiveness or invalidating responses, have been identified as factors that may promote dropout (Ufford et al., 2022). Developing strategies that improve the therapeutic alliance and fulfill the basic for relatedness need in parent-based treatments has been demonstrated by some recent evidence to decrease treatment dropout (Diaz-Stransky et al., 2020; Komanchuk et al., 2023). Clinicians can increase client's feelings of relatedness during treatment by working to personalize treatment and the therapeutic relationship, gain training or insight through supervision to manage responses to be not invalidating to clients, or by starting and managing groups around parent-based interventions where parents can engage with other parents with similar lived experiences to build a shared sense of support (Baltrotsky et al., 2022; Diaz-Stransky et al., 2020; Wilkerson et al., 2019).

Applying Self-Determination Theory as a Framework in Clinical Practice to reduce Dropout

Understanding the dimensions of self-determination theory and how it related to treatment modifications that reduce client dropout may be beneficial to clinicians who offer parent-based treatments during the first session, before clients have had the chance to dropout. To have an intrinsic desire to continue treatment, clients may need adaptations that build their autonomy, give them a sense of competence, and provide a sense of relatedness during treatment (Deci & Ryan, 2008). Current research on dropout from parent-based treatments has lacked a framework to explain dropout and lack of compliance with treatment planning (Cooper et al.,

2018). Based on the research findings, self-determination theory may be fitting to explain why treatment modifications were effective at increasing treatment adherence (Deci & Ryan, 2008). Lack of unifying frameworks used in research for treatment dropout have led to disjointed research efforts and blind spots in the understanding of reason behind dropout, as well as in how to remedy this core issue in psychotherapy (Cooper et al., 2018). This literature reviews findings support self-determination theory as a framework that may be utilized in explaining the causes and remedies for dropout from parent-based treatments; self-determination theory has the potential to be utilized in future research studies as a unifying framework that may potentially increase the collective utility of research on treatment dropout (Cooper et al., 2018; Deci & Ryan, 2008).

Necessity for Pre-Treatment Assessment

The findings from current research on dropout from parent-based treatment suggests that there is diversity in the needs and experiences of families that dropout from parent-based treatments (Messer et al., 2024; Komanchuk et al., 2023). Depending on severity of symptoms, some families may need longer treatments while others may need shorter treatments (Helander et al., 2022). Depending on preferences, some may find online or remote implementations more accessible while others may struggle with technology and fail to continue with online treatments (Anton & Jones, 2019; Wilkerson et al., 2019). Diverse cultural factors and understandings of parenting and externalizing behaviors requires individualized treatment planning (Yeh et al., 2022). It is essential to identify a client's needs and preferences for therapy and for that to be in agreement with the therapist's goals to increase client participation in treatment (Chui et al.,

2020). Some evidence suggests that therapists may often have different goals from clients and different perspectives on what aspects of therapy may be helpful for the client; this may be remedied with frequent check-ins on the client's expectations for therapy (Chui et al., 2020). Clinicians can also obtain this information through the clinical interview process or potentially through the use of screening tools. Yeh et al., (2022) utilized assessment tools within the PersIn framework to identify cultural components that were used to modify PCIT to meet parent's needs. Future research may lead to the development of assessment tools that assess, not just cultural beliefs and needs, but preferences and needs related to socioeconomic factors, technology preferences, and child behavioural needs. Understanding which modifications may reduce dropout from parent-based treatment is useful; assessments that lead to personalization to implement these modifications appropriately may be a necessary next step to increase engagement and real world changes that parent-based treatments can provide.

Clinically, this literature review endorses the therapists taking a "not-knowing stance" during treatment planning for parent-based interventions; a "not-knowing stance" endorses therapists to seek information from clients rather than rely on professional and personal biases during treatment planning (de Shazer et al., 2021). The causes of dropout from parent-based treatments are diverse and the solutions applied are not necessarily the best fit for every client (Anton & Jones, 2019). Clinicians need to spend time gaining an understanding of client's needs and identities when creating treatment planning that parents may have the intrinsic motivation to access and continue participation in (Yeh et al., 2022).

Cultural Adaptations

This literature review supports future directions in parent-based treatments for ODD that utilize a broader definition of cultural adaptations during assessment and treatment (Komanchuk et al., 2023; Yeh et al., 2022). While aspects of ethnic culture are important to consider, these cultural aspects are best addressed in combination with other elements of intersectional identity including socioeconomic, gender, and sexual diversity (Komanchuk et al., 2023; Yeh et al., 2022). Broader consideration of diversity during treatment and research, especially in regards to dropout from parent-based treatments for ODD, are recommended to create solutions that meet the needs of heterogeneous populations in-vivo (Yeh et al., 2022).

Parental Stress, Coping, and Modifications

Parental stress as a leading factor in dropout, either from external factors or child behaviors, has been suggested to be a leading cause of dropout for parents from parent-based treatments (Liu et al., 2018). Current research suggested that adaptations that addressed systemic barriers or directly addressed parent stress through therapeutic techniques may have reduced dropout from parent-based treatments (Komanchuk et al., 2023; Ufford et al., 2022). Clinicians have a role to advocate for change in society to reduce unjust discrimination; advocating for social or political change to increase accessibility of treatment, access to childcare, reduce waitlists, and increase insurance coverage for treatment may be an ethical requirement for clinicians and may reduce parent stress and treatment dropout, especially with clients of lower socioeconomic status (Canadian Psychological Association, 2017; Komanchuk et al., 2023). Clinicians may also address parental stress directly through referrals for outside therapeutic

treatments, such as ACT, or through the integration of skills and techniques from treatment protocols that address parental stress in order to provide parents with the regulation tools necessary to be able to be engaged and successful in parent-based treatments (Ufford et al., 2022).

Chapter 5: Conclusion

Recommendations for Future Research

Future research will be necessary to provide more evidence and context for adaptations to parent-based treatments. Limitations of literature reviewed included lack of research with children with severe symptomology and formal diagnosis as well as low sample sizes (Anton & Jones, 2019; Helander et al., 2022; McCabe et al., 2020; Messer et al., 2024).

Qualitative Research

A lack of qualitative research on treatment dropout is suggested to be a broad limitation of literature on research dropout; this literature review supports this suggestion as extending to research on dropout from parent-based treatments as only one relevant peer-reviewed qualitative article was found during the literature search process (Cooper et al., 2018; Ufford et al., 2022). Qualitative research may be especially appropriate for this topic as qualitative methods, such as interviews or phenomenological analysis, are necessary for gaining firsthand accounts of reasons for dropout or for what adaptations may have been successful in retaining clients (Cooper et al., 2018). Future research directions using qualitative methods, whether along or combined with quantitative methods in mixed method studies, will be necessary in the future to advance the knowledge based on how to address dropout in parent-based treatment protocols (Cooper et al., 2018; Ufford et al., 2022).

Family Systems Adaptations

Research conducted on reducing dropout from parent-based interventions did not consider the impact of integrating a family system's lens on reducing dropout. A family system's

lens may be valuable considering the impact of the child's symptomology on the family dynamic, as well as providing a more holistic approach addressing some of the dynamics that may be promoting symptomology from a lens other than behavioral (Liu et al., 2018; Ladis et al., 2018). Meta-Analysis data for family systems-based interventions for families with children who are experiencing youth problem behaviors and substance use found lower than average levels of treatment attrition that the 51% often reported for behavioral-based parent interventions, such as PCIT (Ladis et al., 2018;). A family system's theoretical framework does not solely target parenting interventions, but other wider systemic relationships such as sibling dynamics, peer dynamics, and school dynamics (Ladis et al., 2018). Considering that dropout in parent-based interventions may be partly due to the focus on parenting behaviors as driving child externalizing behaviors leading to a feeling of parenting styles being invalidated, a more holistic approach may theoretically increase parental feelings of competency, increasing their desire to participate in treatment (Baltrosky et al., 2022; Ryan & Deci, 2020). Integrating theoretical or technical approaches from family systems theory and exploring their impact on treatment attrition may be a valuable area of future research.

Future Research Questions

The research question explored in this literature review was "How can clinicians address the potential causes of dropout from parent-based interventions for elementary school-aged children with ODD?". This literature review found that current literature, while preliminary and limited, supports the use of remote parent-based training implementations, flexible number of sessions based on client needs, allowing client choice in direction and type of therapy, increasing

use of accessible language and education techniques, alternative explanations of etiology, cultural modifications, support groups, and personal therapy for parents as adaptations that reduce dropout from parent-based treatments (Ryan & Deci, 2020; Baltrosky et al., 2022; He et al., 2018; Helander et al., 2022; Komanchuk et al., 2023; Messer et al., 2024; Ufford et al., 2022; Yeh et al., 2022). Addressing the gaps in research or building on the findings from research, future research questions which may expand knowledge of the subject include:

1. What populations of parents engage in treatment longer when parent-based interventions for externalizing disorders are provided online?
2. What is the impact of cultural adaptations on attrition from parent-based treatments for externalizing disorders?
3. What methods are most effective at assessing intrinsic motivation and treatment needs in parents of children with externalizing disorders before commencing treatment?
4. What techniques from family systems theory can be integrated into parent-based treatments for externalizing behaviors to reduce dropout?
5. What is the lived experience of parents who have dropped out from parent-based treatments?

Reflection

Learning about clinical and research perspectives is important in professional practice. Insights and knowledge gained from the literature review process will extend to areas of future practice outside of addressing dropout in parent-based interventions for ODD. Understanding the diverse dynamics that induce attrition from parent-based treatments will influence my future

practice; considering and understanding measures that prevent treatment dropout can be useful when conducting treatment planning with diverse populations.

The experience of critically evaluating research methods, techniques, and findings will influence the way I evaluate information in future trainings and continuing education during my professional career. Conducting a literature review of this scale and quality will be a beneficial experience that will influence my critical thinking skills and evaluation of information increasing my efficacy as a practitioner and increasing my adherence with ethical practice (Canadian Psychological Association, 2017).

Conclusion

Parent-based interventions for ODD and externalizing disorders are demonstrated by research to be highly effective improving child behaviours; however, high rates of client dropout make it difficult for the general public to gain the benefits from these treatments (Fleming et al., 2020). Research into causes of dropout and methods to address these causes, while preliminary, have provided a beneficial overview into adaptations that may address this core problem of parent-based treatments (He et al., 2018; Ufford et al., 2022). A unifying framework to guide adaptations to decrease dropout from treatments, as well as to describe the success of adaptations that reduced dropout, has been absent from current literature (Cooper et al., 2018; Ufford et al., 2023). Findings from recent research reflect suggestions from Self-Determination Theory: adaptations that increased client's autonomy, competence, and relatedness appeared to be successful in decreasing client attrition from parent-based treatments for externalizing behaviors (Deci & Ryan, 2008). Self-determination theory may be useful in guiding researchers and

practitioners in the future when adapting parent-based treatment protocols to reduce dropout (Deci & Ryan, 2008; Cooper et al., 2023). Increasing the intrinsic motivation of clients to participate in parent-based treatments may be essential in addressing the low treatment adherence that has been preventing these highly efficacious treatments from benefiting the general population (Deci & Ryan, 2008; Fleming et al., 2020). Unified theoretical frameworks, such as Self-Determination Theory, may be especially beneficial to clinicians and researchers when guiding adaptations to parent-based treatments to meet client's needs and engage them in the treatment process (Deci & Ryan, 2008; Cooper et al., 2023). An open mind around population differences, along with screening tools, cultural competence, and seeking client feedback may assist future practitioners of parent-based treatments in retaining clients and creating lasting and meaningful change (Deci & Ryan, 2008; Cooper et al., 2023).

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Appendix A.

Authors	Title	Year of Publication	Name of Journal	Research Method
Andrea Diaz-Stransky, MD, Sonia Rowley, BA, Eitan Zecher, BA, David Grodberg, MD, and Denis G. Sukhodolsky, PhD	Tantrum Tool: Development and Open Pilot Study of Online Parent Training for Irritability and Disruptive Behavior	2020	Journal Of Child and Adolescent Psychopharmacology	Quantitative
Messer, E. P., Eismann, E. A., Folger, A. T., Grass, A., Bemerer, J., & Bensman, H	Comparative effectiveness of parent-child interaction therapy based on trauma exposure and attrition.	2024	<i>Psychological Trauma: Theory, Research, Practice, and Policy</i>	
May Yeh, Kristen M McCabe, Argero A Zerr	Personalizing PCIT for culturally diverse families: Outcomes from a pilot trial utilizing the Persin Framework	2022	Psychology Research and Behavior Management	Quantitative
Jelena Komanchuk ¹ , Nicole Letourneau ¹ , Linda Duffett-Leger ¹ and Judy L. Cameron ²	Recruitment and Retention Strategies for Parents Experiencing Vulnerability: Lessons from an Online Parenting Program	2023	Canadian Journal of Nursing Research	Quantitative
Lauren Borduin Quetsch, Emma I.	The impact of incentives on	2020	Children and Youth Services Review	Quantitative

Girardb, Cheryl B. McNeil	treatment adherence and attrition: A randomized controlled trial of Parent-Child Interaction Therapy with a primarily Latinx, low-income population			
Deborah J. Jones Raelyn Loiselle Chloe Zachary Alexis R. Georgeson April Highlander Patrick Turner Jennifer K. Youngstrom, Olga Khavjou, Margaret T. Anton, Michelle Gonzalez, Nicole Lafko Bresland	Optimizing Engagement in Behavioral Parent Training: Progress Toward a Technology-Enhanced Treatment Model	2021	Behaviour Therapy	Quantitative
Yailu He, Abigail H. Gewirtz, Susanne Lee and Gerald August	Do Parent Preferences For Child Conduct Problem Interventions Impact Parenting Outcomes? A Pilot Study In Community Children's Mental Health Settings	2018	Journal of Marital and Family Therapy	Quantitative
Ufford, A., Wigod, T., Shen, J., Miller, A., & McGinn, L	A qualitative analysis of attrition in parent-child	2022	<i>International Journal of Environmental</i>	Qualitative

	interaction therapy		<i>Research and Public Health</i>	
Wilkerson, D. A., Gregory Jr, V. L., & Kim, H. W	Online psychoeducation with parent management training: Examining the contribution of peer support.	2020	<i>Journal Child & Family Social Work</i>	Mixed Methods
Margaret T. Anton and Deborah J. Jones	Parent-Therapist Alliance and Technology Use in Behavioral Parent Training: A Brief Report	2019		Mixed Methods