

Supporting Shared Decision-making for Children's Complex Behavioral Problems: Development and User Testing of an Option Grid™ Decision Aid

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Abstract There is a lack of research to guide collaborative treatment decision-making for children who have complex behavioral problems, despite the extensive use of mental health services in this population. We developed and pilot-tested a one-page **Option Grid™** patient decision aid to facilitate shared decision-making for these situations. An editorial team of parents, child psychiatrists, researchers, and other stakeholders developed the scope and structure of the decision aid. Researchers included information about a carefully chosen number of psychosocial and pharmacological treatment options, using descriptions based on the best available evidence. Using semi-structured qualitative interviews ($n=18$), we conducted user testing with four parents and four clinical prescribers and field testing with four parents, four clinical prescribers, and two clinic administrators. The researchers coded and synthesized the interview responses using mixed inductive and deductive methods. Parents, clinicians, and administrators felt the Option Grid had significant value, although they reported that additional training and other support would be required in order to

successfully implement the Option Grid and achieve shared decision-making in clinical practice.

Keywords Behavioral disorders · Children · Child psychiatry · Shared decision making · Children's mental health · Decision aid

Introduction

Treating Children's Complex Behavioral Problems

Making treatment decisions for children's and youth's (hereby referred to as children) complex behavioral problems is complicated. The behaviors can be associated with various diagnoses, pharmacological and psychosocial treatments have similar effectiveness (Connor et al. 2006; Eyberg et al. 2008) or inadequate empirical support, and often there are limited or no regulatory (e.g. Food and Drug Administration) pharmacological indications that exist for many of the associated diagnoses or for certain ages of children. For example, no pharmacological indications exist for disruptive behavioral disorder, oppositional defiant disorder, or conduct disorder in the US. Despite these complications, disruptive behavioral disorders are the most common mental health disorders in children receiving services from high-risk sectors, including community mental health (Costello et al. 1996; Garland et al. 2001), and the most common concern of parents presenting to pediatricians (Arndorfer et al. 1999).

In practice, clinicians use a variety of pharmacological and psychosocial treatments to treat problem behaviors in children, including antipsychotics, for which the most common target diagnoses in children are disruptive behavioral disorders (Daviss et al. 2016). Each treatment and

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medication has its own benefits and drawbacks. In these circumstances, patient preferences (or usually in the case of children, parent preferences) can and should guide decisions (Elwyn et al. 2013). For example, does a parent prefer a medication for the child that involves monthly check-ups and intensive side-effect monitoring, or a medication with a different side effect profile, or a behavioral therapy that requires weekly sessions with a therapist and home practice?

Shared Decision-making in Children's Mental Health

Numerous practice parameters, including the Institute of Medicine, American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, Substance Abuse Mental Health Services Administration, National Health Service, and others, assert an ethical and policy imperative for clinicians to present information about various treatment options to patients, and subsequently, share in treatment decisions. Shared decision-making is a practice in which patients and clinicians make collaborative decisions based on patient preferences and scientific evidence (Charles et al. 1997; Elwyn et al. 2013). Few studies have examined shared decision-making in child psychiatrists or other pediatric prescribers, although one study suggests that pediatricians are poor at describing treatment options to parents of children with ADHD (Brinkman et al. 2011). Researchers have found that adult psychiatrists are not inclined to shared decision-making (Delman et al. 2015; Hamann et al. 2012; Mistler and Drake 2008; Quirk et al. 2012; Seale et al. 2006; Shepherd et al. 2014). Psychiatrists may also downplay the risks of side effects to patients (Seale et al. 2006), which is concerning because parents and children care most about side effects when making decisions about mental health treatment for children (Coyne 2006; O'Brien et al. 2013).

One shared decision-making model specific to ADHD medications for children has shown improved parent knowledge and engagement in decisions, compared to controls, following the use of educational materials and an engagement intervention (Brinkman et al. 2013). Several agencies have also published decision aids relevant to various children's mental health issues (e.g., AHRQ, NIMH, Children's Bureau). However, most decision aids are long and complicated, do not present information in ways that are easily understood (i.e. natural frequencies: 2 in 10 children experience this side effect), do not present information about treatments side by side for easy comparison, or have not been evaluated. Further, no decision aids have focused on complex behavioral problems, which are accompanied by high utilization of various pharmacological and psychosocial interventions (Garland et al. 2001), many with similar

effectiveness (Connor et al. 2006; Eyberg et al. 2008) and few regulatory pharmacological indications.

Option Grid Decision Aids

An Option Grid decision aid is a one page table that presents treatment options across columns, organized in rows by questions that patients frequently ask. Clinicians use Option Grids during clinical encounters to begin a patient-provider discussion about treatment choices. The Option Grids are purposely simple and reading levels purposely low. The one page format lends to easy presentation on mobile technology, and the Option Grids can be built into an existing web-based interactive platform. Clinicians and researchers develop Option Grids based on best standards for displaying health information to patients (Elwyn et al. 2013; Trevena et al. 2013). Patients and expert providers create the Option Grids in an iterative fashion through an editorial board, with the best available scientific evidence used to answer patient questions. Because the Grids are designed to be used during clinical encounters, they may be more easily adopted into routine care than decision aids not tailored for such use (Elwyn et al. 2013). In non-mental health settings, Option Grid decision aids have demonstrated clinician perceptions of value and usefulness, increased clinician respect for patients, facilitation of shared decision-making, increased patient knowledge, and no extra time burden (Elwyn et al. 2010, 2013, 2016; Fay et al. 2016; Tsulukidze et al. 2015).

The Current Study

We aimed to develop an Option Grid decision aid for children's complex behavioral problems with relevant community stakeholders, including parents. We then examined whether parents of children with disruptive behaviors and clinicians in the field perceived the Option Grid as valuable, credible, and useful (user testing) before field testing. During field testing, we examined factors that facilitated and hindered its feasibility in routine practice and how to best prepare parents, clinicians, and clinics to use the tool. Because Option Grids and shared decision-making are largely unexplored in children's mental health, we chose a qualitative design to deepen our understanding of the process and give voice to parents and clinicians.

Methods

Option Grid Decision Aid Development

The lead researcher (a child psychologist) convened a editorial team of community stakeholders, including a parent

currently caring for a child with complex disruptive behaviors, along with three child psychiatrists (two with experience in community mental health centers), a pediatric social worker, a school psychologist, and a public health evaluator. The team scheduled three in-person meetings over the course of 6 months to develop the scope, purpose, and frequently asked questions for the Grid based on the Option Grid Collaborative and International Patient Decision Aid Standards (Elwyn et al. 2006). The researchers conducted a thorough literature review to provide scientific answers to the frequently asked questions. The literature search focused on review papers for each class of medication and psychosocial treatment presented, in the context of treating problem behaviors associated with various diagnoses (e.g., disruptive behavioral disorders, including ADHD, autism disorders with aggression). When review papers were not available, the researchers searched for individual randomized controlled trials using academic search engines (PubMed, PsychInfo). The researchers also reviewed information and decision aids relevant to children's mental health from other web-based sources (e.g., Mayo Clinic, Agency for Healthcare Research and Quality). However, only information verifiable through scientific references was drawn from these sources. A reference document with 30 references accompanies the Grid and is available upon request.

Participants and Recruitment

User Testing

We enrolled four parents/guardians who, by their report, had sought mental health treatment for their child's disruptive behaviors in the past 5 years. We also enrolled four clinicians who were currently prescribing psychotropic medications to children with complex behavioral problems. We recruited participants through word-of-mouth and flyers posted at local children's mental health centers, and each participant provided consent to the study. Participants were asked to review the Grid and provide feedback to the researchers within a few days of their review.

Field Testing

The researchers initially recruited five parent/guardians paired with four clinicians during clinic visits (one clinician was paired with two parent/guardians), as well as two administrators. We recruited clinicians and administrators through contacts within a child psychiatry and pediatric clinic located within an academic medical center. Clinicians verbally consented to participate if interested and offered the opportunity to parents seeking mental health treatment for children with complex behavior problems

during regular clinic visits. Clinicians provided an information sheet to parents of children for whom they thought the Grid would be appropriate. If parents consented to the study, clinicians engaged the parent using the Option Grid. The researchers scheduled phone interviews with clinicians and parents following the clinic visit. The researchers contacted two administrators in the clinics to elicit interest to participate in interviews after field testing was complete, and interested administrators verbally consented to the study.

As an acknowledgement of their time, we offered electronic gift cards in amounts commensurate with the participant's relative earned living (\$20 USD parents, \$40 USD clinical prescribers/administrators) for user and field testing. See Table 1 for a description of participant characteristics.

Clinician Training for Field Testing

The lead author presented the study to an entire clinical and administrative team associated with a child psychiatry clinic located within an academic medical center, as well as a select number of pediatricians within the center. In about 20 min, she described the purpose and development of the Option Grid and the procedures for field testing. With administrator approval, interested clinicians received a follow-up email and a brief (2–5 min) in-person meeting to answer questions and receive study documents. Based on feedback during user testing (see below), the lead researcher trained clinicians to use their own discretion when choosing patients for whom the Option Grid would be a good fit, bearing in mind that it was designed for complex behavioral problems related to multiple diagnoses for which the treatment options detailed in the Option Grid would be reasonable. Also based on user testing feedback, the researcher emphasized that clinicians could take notes, cross off, and add information on the Option Grid as they choose.

Data Collection (User and Field Testing)

The researchers developed and administered separate semi-structured interview guides for user testing and field testing based on user-experience principles (19) and Option Grid Collaborative standards (4;5). User testing domains of inquiry focused on the perceived purpose and value of the Grid, as well as usability and credibility. Domains of inquiry following field testing focused on perceived purpose and value; usability and credibility; feasibility in routine practice; as well as recommendations for how to use the Grid in the future (e.g., web-based, given to parent prior to the clinic visit). The researchers transcribed all audio recordings.

Table 1 Participant characteristics

User testing (n = 8)		Age (mean)	Gender	Race
Practice setting				
Clinicians (n = 4)	1 full time in Community Mental Health Center; 2 in Academic Medical Center with rotations in Community Mental Health Centers, 1 in Community Pediatric Primary Care	55 years	3 Female 1 Male	4 Caucasian
Relationship to child				
		Age (mean)	Gender	Race
Parents (n = 4)	1 adoptive 1 grandparent/guardian 2 birth parents	51 years	4 Female	4 Caucasian
		Child age (Mean)*	Child gender	Child race
		7 years (at time) 12 years (current)	4 Male	3 Caucasian 1 African-American
Field testing (n = 10)				
		Age (mean)	Gender	Race
Clinicians (n = 4)**	All in Academic Medical Center with rotations in Community Mental Health Centers; 3 in psychiatry and 1 in pediatrics	35 years	3 Female 1 Male	2 Caucasian 1 Asian 1 African-American
		Child age (mean)	Child gender	Child race
		14 years	3 Male 1 Female	5 Caucasian***
Relationship to child				
		Age (M)	Gender	Race
Parents (n = 4)	4 birth parents	46 years	4 Female	4 Caucasian

Table 1 (continued)

Practice setting	
Administrators (n = 2)	59 years All in Academic Medical Center with affiliated Community Mental Health Centers in Psychiatry
	1 Female 1 Male
	2 Caucasian

*During user-testing, clinician and parent participants reviewed the Option Grid on their own, and therefore, age/gender/race of child was only relevant to parents. **1 of the 4 clinicians during Field Testing was paired with 2 separate parent/child encounters. ***Only 4 of the 5 parents who originally consented to the study during clinical encounters with prescribing clinicians responded to interview requests

Analyses (User and Field Testing)

One researcher organized all transcripts by participant group and research question. For field testing, the researcher assigned linked codes to clinician-parent dyads to discern similarities between clinicians and parents during the same clinic visits. Two researchers coded and synthesized the interview responses, with review and consensus from the other, using Braun and Clarke’s (2006) recommendations for inductive thematic analysis. The use of multiple researchers throughout the analytic process strengthened the ‘trustworthiness’ (Shenton 2004) of findings by allowing for multiple perspectives. The researchers also noted when a participant made a specific recommendation to change content or formatting of the Grid.

All recruitment and protocol activities were approved by the Dartmouth Committee for the Protection of Human Subjects.

Results

The Option Grid Decision Aid

The researchers provided answers to the frequently asked questions in the Option Grid decision aid using natural frequencies (e.g., pounds gained per year, 80 in 100 children show clinically significant improvement) for each treatment option whenever possible. Ongoing feedback from the editorial team and the Option Grid Collaborative produced over 25 versions of the Option Grid before user testing, as well as subsequent revisions after receiving feedback during user testing and again after field testing.

User Testing

Value and Purpose

Three value themes emerged from both parent and clinician interviews: (1) Appreciation for having the information for treatment options in one place, side by side; (2) The potential to facilitate parent engagement and shared decision-making; and (3) Increased parent knowledge. Participants from both groups had difficulty understanding that the tool was meant for problem behaviors related to varied and multiple diagnoses, as opposed to one diagnosis. Two clinicians suggested a clearer title that conveyed the exact purpose of the Option Grid.

Usability and Credibility

Both groups expressed that the language and literacy levels were appropriate and clear, although some clinicians

noted that the amount of information on the Option Grid at first glance is overwhelming. Several parents and clinicians mentioned that the Option Grid needs to be used with a clinician—because as a stand-alone tool, parents would feel overwhelmed by the amount of information. Two clinicians perceived the Option Grid as having a bias toward psychosocial interventions and requested more information about the problems associated with behavioral management therapy. Clinicians also suggested adding a space for notes.

Clinicians and parents confirmed that the content in the Option Grid addressed the questions and concerns parents would have in a clinical session. Both groups believed the Option Grid to be a reliable and effective tool to provide information, although two clinicians made specific suggestions for content and wording changes. For example, one clinician suggested adding the relative risk compared to placebo, in addition to the absolute risk, for one of the side effects.

After deliberation with the editorial team, the researchers incorporated nearly all of the suggestions made that remained in compliance with Option Grid Collaborative requirements, which are based on best practice presentation of health information (e.g., no shading, one page length, use full sentences, use consistent denominator when presenting benefits/risks; present risks in one format: absolute or relative).

Field Testing

All clinic visits involved children for whom psychotropic medications had already been prescribed. Therefore, clinicians and parents were reviewing treatment options or considering a change in medications during the clinic visits.

Value and Purpose

Four value themes emerged from *both* parent and clinician interviews after using the Option Grid in real practice: (1) Providing treatment information in an organized format that allows for comparison between treatments; (2) Enhancing the parent-clinician interaction and parent engagement, (3) Increasing both parent and clinician knowledge, specifically, the actual percentages of children experiencing benefits and side effects; and (4) Ability for parents to take the Option Grid home.

All parents stated that the purpose was clear: to help them learn about treatment options and make treatment decisions. One clinician expressed concern that the Option Grid was not developed for specific diagnoses. This clinician suggested providing example diagnoses in the Option Grid description, as well as more thorough clinician training regarding for which children the Grid is most appropriate.

Usability and Credibility

No parents or clinicians perceived the language to be unclear or overly complex for their own understanding. No parents described feeling overwhelmed or confused by the amount of information provided on the Option Grid, although one clinician believed the information to be overwhelming to the parent during their clinical encounter. Another clinician believed that only certain parents would be able to comprehend the information.

Nearly all parents and clinicians commented on the importance of using the Option Grid with a clinician in session to increase parent comprehension and to discuss nuances of treatments. Parents wanted to take the Option Grid home and return the next visit with questions. This allowed parents to absorb and process information they might otherwise forget and to share the Option Grid with other parents, caregivers, and providers on the child's care team. No parents made suggestions to use more colors, icons, graphics, bullets, or white space for notes; however, two clinicians made these recommendations. All of the clinicians preferred to present the Grid to parents during the clinic visit. Clinicians welcomed the opportunity for parents to take the Option Grid home, and/or to access a web-based version after the visit, and return with questions. Similar to clinicians, three parents preferred seeing the Option Grid for the first time during the visit, although one preferred to have it sent to them ahead of time. All parents wanted to take the paper version home to re-read and share with others, and three wanted to be able to access the web-based version from home.

All parents found the information presented in the Option Grid to be credible and reliable, especially since they could ask the clinician clarifying questions during the visit. One clinician believed there was too much emphasis on side effects. One parent suggested placing the side effect row at the bottom, rather than the top where it was originally (although she did not express perceiving bias, rather, she preferred the information in that order). Three clinicians affirmed trusting the information and perceived the percentages associated with risks of side effects to be in line with their knowledge. One clinician was not sure if s/he agreed with the information provided in the Grid, but did not provide specific alternative information. Two clinicians mentioned the need for regular updates to the Option Grid based on ongoing research findings.

Feasibility

Clinicians acknowledged that use of the Option Grid caused burden in having to structure the session around its use. However, clinicians stated that using the Option Grid was worth the burden because it improved the parent's

experience. Clinicians did not report an additional time burden associated with use of the Option Grid during the sessions and were grateful to be able to cross out treatment columns that were not appropriate for individual cases, thereby allowing them to save time. Two clinicians found the Option Grid helpful in structuring the session, and two found it helpful to reduce burden related to handouts because they could write down additional trusted webpages or resources on the paper. All parents perceived the Grid as fitting smoothly into the clinic visit, although one parent wanted to receive it earlier in the visit.

Clinicians perceived a need for clinicians using the Option Grid to have expertise in child psychopharmacology, acknowledging that the use of psychotropic medications in children is complicated and at times needs nuanced explanation and consideration. Two clinicians believed that the training provided in the study (20 min) would suffice in real practice; two believed they needed more preparation and training.

After deliberation with the editorial team, the researchers incorporated nearly all of the suggestions provided

during field testing that remained in compliance with Option Grid Collaborative requirements into a final version of the Grid. Figure 1 displays the final Option Grid decision aid, which can be found and accessed for free at optiongrid.org.

Administrator Considerations for Implementation

The administrators were part of the initial clinic training and helped oversee field testing in their clinics. Administrators were positive about the potential to easily implement the Option Grid or one like it into routine practice, provided clinicians and parents found it beneficial. Administrators suggested that clinicians use the Option Grid, in paper or electronic form, during intake or early treatment planning sessions and allow parents to take/access the Option Grid at home. Administrators believed that their clinicians already strive to provide all of the information on the Option Grid as part of full informed consent in child psychiatry, but use of the Option Grid standardizes the process and could improve clinician fidelity to the informed

U.S. English



Complex behavior problems in children and youth: treatment options

Use this decision aid to help you and your healthcare professional talk about how to treat complex behavior problems in youth ages 5 to 18. These problems include being unable to control anger, aggression, or hyperactivity, and may be related to the following diagnoses: oppositional defiant disorder, disruptive behavioral disorder, disruptive mood dysregulation disorder, post-traumatic stress disorder (PTSD), attention-deficit hyperactivity disorder (ADHD), or depression.

It is best to use other treatments like behavioral therapy before trying medication. Not all medications listed have Food and Drug Administration (FDA) approval, so please check with your healthcare professional.

Frequently Asked Questions ↓	Behavioral therapy	Stimulant medication	Non-stimulant ADHD medication	Antidepressant medication	Atypical antipsychotic medication
What does this treatment involve?	Weekly, 1-hour visits for up to 6 months. Parents learn positive ways to manage child's behaviors.	30 to 90 minute evaluation and monthly visits. Child usually takes medication for 1 year.	30 to 90 minute evaluation and monthly visits. Child usually takes medication for 1 year.	30 to 90 minute evaluation and monthly visits. Child usually takes medication for 1 year.	30 to 90 minute evaluation and monthly visits. Child usually takes medication for 1 year. This medication is only used for extreme aggression.
What options might be offered?	Parent Child Interaction Therapy, Positive Parenting Program, Incredible Years, and others	Methylphenidate (Concerta, Ritalin) and amphetamines (Adderall)	Alpha-agonists, such as clonidine (Catapres) and guanfacine (Intuniv), and non-stimulant atomoxetine (Strattera)	Fluoxetine (Prozac), sertraline (Zoloft), escitalopram (Lexapro), and venlafaxine (Effexor)	Risperidone (Risperdal), quetiapine (Seroquel), and aripiprazole (Abilify)
How well does this treatment work?	About 60 out of every 100 children (60%) have fewer behavior problems in a few months.	Up to 90 out of every 100 children (90%) are less hyperactive and impulsive in a week or less.	Up to 80 out of every 100 children (80%) are less hyperactive, impulsive, and aggressive in a few weeks.	About 60 out of every 100 children (60%) are less moody and sad in a few weeks.	About 80 out of every 100 children (80%) are less moody and have fewer behavior problems in a few weeks.
What are some problems with this treatment?	Behavior change may take a few months. Behavioral therapies may not be available in all areas.	- 25 out of every 100 children (25%) are less hungry and have sleep problems. - 6 out of every 100 children (6%) have a higher heart rate. - 3 out of every 100 children (3%) have higher blood pressure. - Very rarely, children have heart problems that can cause death (3 out of every 100,000 children, 0.003%). Children should be screened for heart problems before being given medication. Long-term effects and side effects are not known.	- Alpha-agonists: 30 out of every 100 children (30%) feel sleepy. 40 out of every 100 children (40%) feel dizzy. - Atomoxetine (Strattera): 15 out of every 100 children (15%) have problems falling asleep. 10 out of every 100 children (10%) have higher blood pressure. 10 out of every 100 children (10%) feel sleepy. Rarely, children think about self-harm or suicide (about 4 out of every 1,000 children, 0.4%). Very rarely, serious liver problems occur. Long-term effects and side effects are not known.	- 10 out of every 100 children (10%) have sleep problems, feel drowsy, or have trouble waking. - 4 out of every 100 children (4%) gain weight. - 4 out of every 100 children (4%) think about self-harm or suicide. Long-term effects and side effects are not known.	- Most children gain weight, usually between 8 and 32 pounds per year. - 60 out of every 100 children (60%) feel sleepy. - 30 out of every 100 children (30%) have abnormal movements. - 20 out of every 100 children (20%) have higher cholesterol. - 3 out of every 100 children (3%) have higher blood sugar levels. - Risperidone (Risperdal): 40 out of every 100 children (40%) have higher levels of the hormone prolactin. Long-term effects and side effects are not known.

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This Option Grid™ decision aid does not constitute medical advice, diagnosis, or treatment. See [Terms of Use](#) and [Privacy Policy](#) at www.optiongrid.org.

Fig. 1 Option Grid treatment decision aid for complex behavior problems in youth

consent process. They believed that the preparation training could be enhanced by including a demonstration video or structured role-plays. Administrators also highlighted other considerations, such as using the Grid to document informed consent, entering it into the medical record, and the potential need for approval by the risk management team.

Discussion

An editorial board created over 25 iterative versions of the Option Grid decision aid over a 6-month period before user testing, with additional revisions after user and field testing. User and field testing revealed perceptions of high value, usability, credibility, and feasibility. Few parents made suggestions for changes, but several clinicians made specific recommendations, including clarifying the purpose and most appropriate children/diagnoses, reducing perceived bias towards behavioral treatment, and improving the visual appearance of the Option Grid, nearly all of which were incorporated into the final draft. Finally, administrators felt that the Option Grid could be implemented into routine practice with minimal effort.

Previous examinations of Option Grids in non-mental health settings have also demonstrated high value, including benefits to the standardization of care and patient involvement (Durand et al. 2016; Elwyn et al. 2013; Tsulukidze et al. 2015). However, some concerns have been raised regarding acceptability and feasibility of using the Option Grids with certain populations, including those that have heterogeneous presentations or who have received ongoing care due to chronic conditions (Tsulukidze et al. 2015). The current Option Grid was intended for heterogeneous samples, and, in the current study, the Option Grid was used with parents who were well underway in the psychiatric care for their child. Nevertheless, our study found high levels of acceptability and feasibility by both parents and clinicians. Feedback from administrators indicated that the Option Grid would potentially be more useful when introduced early in treatment.

Next steps are to examine the effectiveness of the Option Grid on parent knowledge, engagement in decisions, and satisfaction with decisions, as well as treatment choices and treatment outcomes. More rigorous studies of the Option Grid, including a larger, more diverse sample, observational and quantitative methods, and eventually, a controlled design, are needed. To enhance shared decision making, the Option Grid will likely need to be incorporated into a broader model of care based in shared decision-making. The broader shared decision-making literature suggests that mental health clinicians, in particular, need additional training in the principles and practices of

shared decision-making (Deegan and Drake 2006; Delman et al. 2015; Shepherd et al. 2014). Mental health care has a long tradition of paternalism, which may stem from intrinsic beliefs that those with mental health conditions are not capable of making treatment decisions (Grim et al. 2016; Hansson et al. 2013; Mistler and Drake 2008). Shared decision-making in mental health may require additional steps than traditional medical decisions due to so many life domains being affected by mental health (Deegan and Drake 2006; Grim et al. 2016). Indeed, Brinkman et al. (2013)'s successful model for parents of children with ADHD included one of these extra elements and demonstrated significant improvements in parent engagement and shared decision-making compared to controls. In Brinkman's model, parents receive educational materials ahead of time and are asked to complete a preference worksheet to bring to the clinician, and clinicians are trained in how to integrate parent preferences into the decision. Similarly, a successful shared decision-making model in adult psychiatry—Common Ground—involves patients completing preference and value worksheets ahead of their visits to increase the likelihood that their preferences are incorporated into the treatment decisions (Deegan 2010; Deegan et al. 2008).

Limitations

Several limitations warrant mention. The 18 participants in the current study may not be representative of the broader group of parents, clinicians, and administrators making treatment decisions about children with complex behavioral problems. Our findings are also limited to a rural, largely Caucasian population. Researchers have suggested additional barriers to collaborative decision-making around psychotropic medications for children (and parents) who are of ethnic and racial minority or low socioeconomic status (Brinkman et al. 2011; Cohen et al. 2013; Lambert et al. 2008). Further, acceptance and feasibility of the Option Grid may be higher in academic training medical centers where residents and fellows are used to incorporating research-based tools into their practice with direction from their administrators. Still, given the novelty of this line of research—testing interventions in mental health that promote shared decision-making—and the examination of clinical encounters occurring in routine practice, our study has many methodological strengths.

Conclusions

Our findings suggest that parents, clinicians, and administrators would value and accept an Option Grid for complex children's behavioral problems, although additional training

in the administration, as well as broader shared decision-making practices, is likely needed. Creating tools to facilitate shared decision-making is only one step towards clinicians and clinics embracing this type of care. Nevertheless, findings have the potential to more fully engage parents and clinicians to share in these complex care decisions, and, on a larger level, to impact how mental health and health care decisions are made with parents and children.

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