# The Importance of Parent Engagement in Outdoor Behavioral Health Programs for Youth

Laura Mills, Ph.D.<sup>1</sup>, John Hall, MMFT<sup>2</sup>, Aaron Ridenour, MS<sup>3</sup>, & Mackenzie Murphy, BA<sup>4</sup>

Pine River Institute<sup>1</sup>
Telos<sup>2</sup>
ScenicView Academy<sup>3</sup>
ScenicView Academy<sup>4</sup>

# **Abstract**

The benefits of parent engagement are well established for youth outpatient treatment, but little is understood about parent engagement in more intensive treatment settings. In this study, relationships between parent engagement, family functioning, and global health of youths attending outdoor behavioral therapy programs were examined. The findings indicated that improvements in family functioning mediated the relationship between youth outcomes and two types of parent engagement activities: homework assignments and number of parent visits.

*Keywords*: Youth treatment, wilderness therapy, parent engagement, youth treatment outcomes

# Acknowledgements

We sincerely thank those who contributed to this project. Clients are often asked to complete surveys in the midst of stress, change, and sometimes confusion. We recognize these young people for stepping up despite these challenges. We also thank the staff who find the time in their already overtaxed day to submit assessments. Finally, we recognize Maylin Worlton of Scenic View Academy (Provo, Utah), who helped with the introduction of this paper.

It is imperative to optimize the effectiveness of therapy for youths in treatment for mental health, behavior, and relationship issues. The involvement of parents is known to benefit youths in outpatient therapy (Filges et al., 2018; van der Stouwe et al., 2014) and thus the uptake of parent involvement should naturally extend to more intensive approaches, yet information in this area is lacking. The purpose of this study is to advance knowledge about parent engagement with their youth's outdoor behavioral (OBH) therapy experience.

# **Parent Treatment Engagement**

Treatment engagement may be defined attitudinally (i.e., belief that therapy will work) or behaviorally, involving treatment seeking and attendance, communication, and active and meaningful presence and effort (Staudt, 2007). Active and meaningful engagement is ideal; simple attendance and beliefs in treatment effectiveness may not optimize outcomes (Clarke et al., 2015; Mauro et al., 2017). Active and meaningful engagement of parents in therapy for their child is called Parent Participation Engagement (PPE; Haine-Schlagel & Walsh, 2015) and is the focus of this article.

Quality PPE is a dynamic and fluctuating treatment process (Kim et al., 2012) that includes contact with the care team, attendance at family sessions, participation in treatment planning, attending to therapist recommendations, homework compliance, and connection with other supports (Fawley-King et al., 2013). PPE also spans emotional involvement, integrating therapeutic learning into daily living (Staudt, 2007), and a healthy and open alliance between parents and therapists in terms of trust, agreement, and effort (Mauro et al., 2017). These parent-oriented efforts combined with intrinsic motivation are thought to foster a healthy foundation for sustained post-therapy problem-solving, family functioning, and skills to support youth's healthy development. Indeed, Haine-Schlagel and Walsh (2015) examined 24 studies and found that the intensity of PPE was associated with symptom reduction and improved functioning for youths who attended outpatient care. When parent

engagement is fundamental to the treatment protocol, then, optimal youth outcomes should be expected.

Family-oriented treatments typically take an ecological approach to therapy by working on issues central to individual clients as well as the family and community systems in which they live. This approach is known to benefit youths and their families who attend outpatient treatment. Indeed, simply contacting and engaging family members can increase youth engagement (Kim et al., 2012) and retention (Hendriks et al., 2011) in home-based and community treatment settings. Tanner-Smith et al. (2013) conducted a meta-analysis of 45 outpatient studies and found that family therapy was more effective at reducing youth substance use than other approaches.

Multidimensional Family Therapy and Multisystemic Therapy address youth health and behavior in the context of, and including, the family and community systems in which they are embedded. Several reviews have found these eco-systemic approaches more effective than interventions that focus solely on the youth across domains of client retention (Rigter et al., 2013), therapeutic alliance (Hogue et al., 2006), criminality (van der Pol et al., 2018), externalizing behavior (Schaub et al., 2014; van der Pol, 2017), internalizing symptoms (Schaub et al., 2014), substance use, psychiatric symptoms, family functioning (Henderson et al., 2010; Hendriks et al., 2011; Schaub et al., 2014), delinquency, substance use, psychopathology, and peer relationships (Baldwin et al., 2012). Given the success of these eco-systemic approaches for outpatient approaches, it is important to expand our understanding of system-based work in more intensive treatment settings.

There is insufficient research exploring the impact of parent engagement in out-of-home treatment. So far, there is some information indicating that clients and families *feel* that parent engagement is important: two studies found that youths, parents, and staff reported that parent engagement was a key benefit to residential treatment (Coates, 2016; Gogel et al., 2011). Parent engagement is also key to treatment process and retention; Sunseri (2001) found that frequency of home visits predicted

youth residential treatment completion. Another study at a Canadian combined wilderness and residential treatment center found that the degree of clinician-rated PPE predicted treatment progression and completion (Uliaszek et al., 2019). In terms of outcomes, one study found that frequency of family contact predicted improvements on mental health and behavior for youths who attended residential treatment in Florida (Robst et al., 2013). Hair (2005) reviewed studies on out-of-home care and found that family engagement with youth in residential care was associated with sustained treatment gains but the author noted methodological concerns and limited available research. Further, all literature relating PPE to youth outof-home treatment outcomes focus predominantly on residential approaches; no literature was found specific to wilderness or OBH treatment. Clearly, the literature on parent engagement in OBH treatment has yet to convert anecdote into evaluation-informed best-practice. This study will help to build a knowledge base about PPE in relation to OBH treatment.

# Family Functioning Impact on Therapy Process and Outcomes for Youth

Little is understood about the explanatory pathway that explains the relationship between parent engagement and youth outcomes. One possible pathway is that PPE impacts general family functioning, and that improved family functioning acts as a catalyst for youth improvement. Family functioning can be understood as the capacity to work together, resolve conflicts, communicate openly and honestly, and respect each member's roles and boundaries (Olsen, 2000). Several studies examine the direct relationship between family functioning and youth residential treatment processes and outcomes. For example, two large-scale studies found that baseline family functioning predicted program completion among youths in residential treatment (Sunseri, 2004; Sunseri, 2020). In a review of 98 studies of predictors and moderators of youth anxiety, baseline family functioning consistently predicted youth outpatient treatment outcomes (Compton et al., 2014). Youth continued care has also been related to baseline family functioning; youths with higher baseline family functioning experienced more profound health improvements and required less

intensive aftercare (Sunseri, 2001). Sunseri (2020) also found that improvements in family functioning predicted successful discharge, particularly among families who entered residential treatment with low functioning families.

Sunseri's (2020) findings of family functioning as a predictor for change in mental health and behavior is compelling. Sunseri notes that the reasons for family functioning improvements were unknown but presumed to be related to intervention during the child's course of therapy. To build on Sunseri's supposition and expand knowledge about parent engagement with youth OBH treatment, the research question addressed in this study was: 'does parent engagement predict youth OBH treatment outcomes, and is this relationship mediated by changes in family functioning?'.

# Method

# **Participants**

Eighteen OBH therapy programs were members of the National Association of Therapeutic Schools and Programs Practice Research Network. Members of this Network administered research and evaluation surveys to clients, caregivers, and staff before, during, and after treatment, and electronically submitted data to a central database managed by the University of New Hampshire (UNH). For this study, UNH provided data that were anonymized at client and program levels. With data anonymized at the program level, the spectrum and variety of treatment frameworks, therapeutic underpinnings, program-specific length of stay, location, and other program elements could not be defined. A general description of OBH therapy is an intervention where clients are immersed in nature for extended periods while mental health professionals facilitate travel and experiential adventure. Clients engage in individual and group work that focus on self-reflection, responsibility, coping mechanisms, interpersonal communication, physical and mental challenges, identity development, and hard skill development (Gass et al., 2019). Only clients who consented (if 16 or over), or who assented with an associated parent consent, to contribute to research were included.

The sample was drawn from a sample 3,660 youth participants whose programs collected and contributed data to the network between 2017 and 2021. Of these, 1,385 had complete data on all relevant variables. Schuirmann's Test of Equivalence (Schuirmann, 1987) was used to examine whether the participants were a biased subset of the total sample. Using a conservative (0.25-SD and  $\alpha$  =.05) criterion, the results indicated that at the time of admission the sample group and the non-sample group were equivalent on age, youth global health, and family functioning.

Youths in the sample were an average of 16 (SD = 1.3) at admission, 67% were male, and 17% were adopted. Youths were generally affluent, with 54% coming from homes with family income over \$200,000 per year and only 17% with income less than \$100,000. At intake, staff identified clients' two primary reasons for referral and indicated high prevalence of depression (42%), anxiety (39%), and substance use disorder (29%).

# Measures

Surveys were administered within seven days of admission and seven days of discharge.

# Clinician-Rated PPE

The three elements of behavioral PPE are Global (attendance), Specific Therapeutic Interactions (engagement and contribution), and Homework (Haine-Schlagel & Walsh, 2015; Staudt, 2007). Our indicators of PPE were clinician-rated Global PPE and Homework. Specifically, program staff (i.e., mental health professionals providing direct services to the client) reported on PPE and homework on Discharge Summary surveys at the time of client discharge. PPE and homework related questions from the Summary were:

1. How frequent were your therapeutic contacts with the parents? *less than once per month* (1), *monthly* (2), *twice per month* (3), *weekly* (4), *twice weekly* (5), and *three or more times per week* (6).

- 2. How much time on average did you spend on family therapy per contact? none (0), 30 minutes (1), 1 hour (2), 1.5 hours (3), 2 hours (4), and more than 2 hours (5).
- 3. How many assignments did you give to parents to complete outside of therapy? *none* (0), *1-2* (1), *3-5* (2), *6-9* (3), *10-14* (4), *15-20* (5), and *more than 20* (6).
- 4. How many times did the parents come to visit during treatment? (*numeric entry*).
- 5. On average, how long did the parents stay during each visit (hours)? (numeric entry).
- 6. While visiting, on average how many hours did the parents participate in therapy with their child? *none* (1) *1 hour* (2), *2 hours* (3), *3-4 hours* (4), *5-7 hours* (5), and *8 hours or more* (6).

This collection of questions did not form a 'factor' of PPE (unacceptable Cronbach's  $\alpha$ ; <.5) and so each was explored in independent mediation analyses.

**Youth Outcomes Questionnaire Change Scores** (Δ **YOQ**). The Youth Outcome Questionnaire Self-Report 2.0 (YOQ) is a 64-item Likert-type assessment of global client health, calculated from seven domains: depression and anxiety symptoms, somatic problems, interpersonal relations, social problems, behavioral dysfunction, and critical items such as paranoia and suicidal ideation. The YOQ is widely used and has well established reliability (0.96) and validity, along with benchmarks for clinically problematic functioning (scores 47 or higher) and for meaningful clinical change (change of 18 or more) (Ridge et al., 2009; Wells et al., 1999). Scores from admission were subtracted from discharge score for a change score: Δ YOQ.

**Family Functioning Change Scores (**Δ **Y-FAD).** The McMaster Family Assessment Device, General Functioning Scale, youth-report (Y-FAD) is a

12-item Likert-type assessment of family member's acceptance and agreeableness with each other. It is widely used and shows >0.70 reliability (Ryan et al., 2005) and good validity (Sperry, 2012). The North American 'healthy' family scores range from zero to two, with higher scores indicating higher dysfunction (Ryan et al., 2005). Individual Y-FAD mean scores at admission were subtracted from individual Y-FAD mean scores at discharge to determine an individual change score: Δ Y-FAD.

# **Analyses**

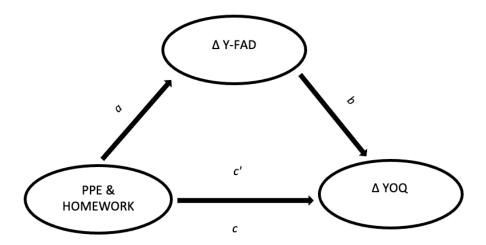
Frequency and univariate ANOVA procedures were used to examine the landscape of PPE and homework and changes on youth health and family functioning. Baron and Kenney's (1986) procedure with Sobel's (1982) test was used in mediation analyses. The Baron and Kenney (1986) procedure aims to discover if a (moderator) variable explains the relationship between two other variables (i.e., the independent on outcome variables). In this study, the mediating variable ( $\Delta$  Y-FAD) is expected to underlie the relationship between PPE / Homework and changes in youth health. The Baron and Kenny method is performed by first regressing the outcome variable on the independent variable (c). Then, the mediator is regressed on the independent variable (a). Finally, the outcome variable is regressed on the independent variable, controlling for the effect of the mediator (c'). The fundamental question in mediation is whether the strength of the initial direct relationship, c, is significantly reduced when the intervening variable is introduced. Sobel's (1982) test is used to determine whether any reduction between c and c' is statistically

significant, using 
$$\left(\frac{(a*b)}{\sqrt{b^2*s_a^2+a^2*s_b^2}}\right)$$
.

Figure 1 depicts the theoretical mediation model for this study. The research question suggests that the relationship, c, between parent participation and youth health outcomes will be reduced (c') when the mediator ( $\Delta$  Y-FAD) is introduced. In other words, changes in family functioning are proposed to underlie the relationship between PPE and youth health.

Figure 1.

Model of  $\Delta$  Y-FAD Mediating Relationship Between Independent Variables and  $\Delta$  YOQ



# Results

### PPE & Homework.

Most parents engaged in therapeutic contact with the clinician weekly for an hour. Parents typically visited the program once and stayed either the better part of a day or overnight and engaged in therapy with their child for two hours while visiting (Table 1). Parents were typically assigned between 3 and 14 assignments, with more assignments predictable by longer treatment duration ( $F_{(1382)} = 19.204$ , p < .001;  $R^2 = 0.014$ ).

# Changes on Youth Health & Family Functioning.

Youth global health improved from pre- to post-treatment. The mean pre-treatment YOQ score changed from 68.4 to 47.9, a significant improvement with large effect size ( $F_{(1384)} = 491.93$ , p < .001;  $\eta^2 = 0.26$ ). Youth family functioning scores also improved significantly (with large effect) from 2.3 to 2.0 ( $F_{(2.1384)} = 396.47$ , p < .001;  $\eta^2 = 0.22$ ).

Table 1.

Elements of OBH Parent Engagement (Clinician-Report)

	<b>Response Options</b>	Mean or Percent			
Number of days in		78.4 (25.3) Med =			
program		78			
Number of parent visits		1.1 (1.0) Med = 1			
Duration of visit		17.8 (14.3) Med =			
Buration of visit		16			
Time in Therapy with Child During Visit	None	7%			
	1 hour	20%			
	2 hours	26%			
	3-4 hours	18%			
	5-7 hours	12%			
	8 or more hours	15%			
Frequency of Contact with Clinician	Monthly	<1%			
	Twice per month	<1%			
	Weekly	85%			
	Twice weekly	14%			
	3+ Times Per Week	1%			
Time per Contact with Clinician	None	0%			
	30 min	2%			
	1 hour	81%			
	1.5 hours	14%			
	2 hours or more	3%			
Number of Assignments	No assignments	<1%			
	1-2 assignments	4%			
	3-5 assignments	30%			
	6-9 assignments	14%			
	10-14 assignments	28%			
	15-20 assignments	19%			
	20+ assignments	4%			

# **Mediation Analysis.**

The relationship between  $\Delta$  Y-FAD and  $\Delta$  YOQ, path b, was significant ( $F_{(1383)} = 312.93$ , p < .001,  $\beta_{(unst)} = 24.7$ ,  $SE_{(unst)} = 1.4$ ,  $R^2 = .18$ ); the more FAD changed, the more YOQ changed. Specifically, for every unit improvement on FAD, estimate a 24.6 unit improvement on YOQ. These b path coefficients were the same across all mediation analyses.

Each of the PPE and Homework variables was examined in a separate mediation analysis. The unstandardized  $\beta$  and SE for each pathway is shown in Table 2, with the Sobel test statistic and its standard error.

# Parent Visits.

Typical mediation analyses seek significant paths a, b, c, and Sobel statistic. The model with Number of Parent Visits as the independent variable met these criteria, with a significant reduction in the  $\beta$  coefficient from c to c. This finding indicates that the more parents visit the program, the more impact it will have on family functioning and changes in family functioning underlie the relationship between parent visits and youth outcomes.

# Parent Assignments.

A significant direct path c is not a requirement to support a mediation model (see for example Hayes, 2009). As such, another finding of interest is the model including Number of Assignments as the independent variable. Here, path c was marginally significant (p = .08) and path a, b, and the Sobel statistic were strong. Thus, the relationship between the number of parent homework assignments and youth outcomes was mediated by  $\Delta$  Y-FAD. In other words, the more homework assigned to parents, the more health improvement youths experienced, and this relationship is explained by improvements in family functioning.

**Table 2.** *Individual*  $\beta$  *and* SE *for* Paths *and* Sobel Test *in* Mediation Analyses.

	Path a		Path c		Path c'		Sobel Test	
	β	SE	$\beta$	SE	$\beta$	SE	s	SE
CONTACT FREQ.	02	.04	-5.26*	2.36	-4.73*	2.13	0.54	1.01
TIME PER CONTACT	01	.03	-3.41	1.77	-3.07	1.61	0.45	0.76
NUMBER OF VISITS	04**	.02	-2.71**	.87	-1.63*	.79	2.96**	0.38
VISIT DURATION	00	.001	04	.08	03	.07	1.00	0.02
HOURS WITH CHILD	03*	.01	93	.70	14	.63	2.56*	0.30
NUM. ASSIGNMENTS	04***	.01	-1.21	.69	13	.62	3.59***	0.30

*Notes:* \*\*\*p < .001; \*\*p < .01; \*p < .05

# Discussion

The objectives of this project were to advance knowledge about parent engagement in youth OBH treatment and to determine whether improved family functioning was the mechanism by which parent engagement impacted youth health outcomes. The findings show that parent engagement, well known to benefit youth outpatient outcomes, also benefits the outcomes of youths in OBH settings. Specifically, the number of parent visits and the amount of homework assigned predicted youth health improvements, and these relationships were mediated by improvements in family functioning.

Mediation models were not significant for the other criterion variables: contact frequency, amount of time per contact, hours with child, and duration of visit. In terms of contact frequency, 85% of clinicians reported weekly contact and more frequent contact was related to better youth outcomes, but not to improved family functioning. The number of hours spent with the child during a parent visit had an impact on family

functioning, but not on youth health changes. Neither the amount of time per contact nor the duration of parent visits were significantly related to the youth health or family functioning. These findings highlight the importance of myriad elements of parent engagement, via direct relationships, but are not criterion variables in the specified mediation model. Parent visits and assigned homework, however, were criterion variables that help to understand that changes in family functioning are the process by which improvements in youth health are related to parent engagement.

Sunseri (2001), Sunseri (2004), and Sunseri (2020) pioneered work that showcases the importance of family functioning for youth outcomes and our work helps to affirm his supposition that intentional parent-oriented intervention is a catalyst for improved family functioning and related youth health improvements. Our findings should encourage treatment providers to incorporate parent engagement activities as key elements of the treatment process.

# Limitations

The concept of PPE as rated by clinicians in terms of assigned homework or parent visits has limitations. Notably, these activities are prescribed by the program and not a function of parent initiative or intrinsic motivation. Also, the amount of PPE reported by clinicians seems to indicate a 'high' parent engagement, especially given that the parents and child are not physically together during the bulk of therapy. With no established benchmarks for PPE, however, it is difficult to define or assume levels of engagement. More needs to be understood about how to measure PPE, who should assess PPE, and when it should be assessed. Openness to change is in the realm of Specific Therapeutic Interactions domains of parent engagement (Haine-Schlagel & Walsh, 2015) and warrants the development of valid and reliable tools to measure Interactive Engagement. Some work is being done in this area, specific to parent participation in community child mental health services (Haine-Schlagel et al., 2016) and in the education field, but these advances have yet to reach OBH settings.

Another limitation is that there are several characteristics of youths that would help understand the homogeneity or heterogeneity of the clients and may have contributed even more in-depth knowledge about the findings. For example, understanding whether the mediation model was moderated by client race would more profoundly advance knowledge. Many such demographic variables were not included in the data. Likewise, the differences from program to program would help deepen our understanding and foster targeted recommendations; however, the data deidentification process eliminated this line of inquiry.

Finally, the data analyzed included information from pre- to post-treatment and did not extend to post-discharge, which would assess sustained treatment gains and the relevant impact of parent engagement and family functioning. This should be an important consideration in future studies.

# Conclusion

Our results suggest that engaging parents in their youth's OBH therapy by hosting parent visits and assigning homework fosters improvements on family functioning, which is a catalyst for youth mental health and behavioral improvement. Treatment providers are encouraged to strategically incorporate behavioral parent participatory engagement into their youth work and to continue to measure parent engagement and youth outcomes.

# References

- Baldwin, S., Christian, S., Berkelijon, A., Shadish, W., Bean, R. (2012). The Effects of Family Therapists for Adolescent Delinquency and Substance Abuse: A Meta-Analysis. *Journal of Marital & Family Therapy*, 38(1), 281-304. <a href="https://doi.org/10.1111/j.1752-0606.2011.00248.x">https://doi.org/10.1111/j.1752-0606.2011.00248.x</a>
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 117-1182. <a href="https://doi.org/10.1037//0022-3514.51.6.1173">https://doi.org/10.1037//0022-3514.51.6.1173</a>
- Clarke, A. T., Marshall, S. A., Mautone, J. A., Soffer, S. L, Jones, H. A., Costigan, T. E., Patterson, A., Jawad, A. F., & Power, T. J. (2015). Parent attendance and homework adherence predict response to a family-school intervention for children with ADHD. *Journal of Clinical Child and Adolescent Psychology*, 44(1), 58-67. <a href="https://doi.org/10.1080/15374416.2013.794697">https://doi.org/10.1080/15374416.2013.794697</a>
- Coates, D. (2016). Client and parent feedback on a Youth Mental Health Service: The importance of family inclusive practice and working with client preferences. *International Journal of Mental Health Nursing*, 25, 526-535. https://doi.org/10.1111/inm.12240
- Compton, S. N., Peris, T. S., Almirall, D., Birmaher, B., Sherrill, J., Kendall, P. C., March, J. S., Gosch, E. A., Ginsburg, G. S., Rynn, M. A., Piacentini, J. C., McCracken, J. T., Keeton, C. P., Suveg, C. M., Aschenbrand, S. G., Sakolsky, D., Iyengar, S., Walkup, J. T., & Albano, A. M. (2014). Predictors and moderators of treatment response in childhood anxiety disorders: results from the CAMS trial. *Journal of consulting and clinical psychology*, 82(2), 212–224. <a href="https://doi.org/10.1037/a0035458">https://doi.org/10.1037/a0035458</a>
- Fawley-King, K., Haine-Schlagel, R., Trask, E. V., Zhang, J., & Garland, A. F. (2013). Caregiver participation in community-based mental

- health services for children receiving outpatient care. *Journal of Behavioral Health Services & Research*, 40(2), 180-190. https://doi.org/10.1007/s11414-012-9311-1
- Filges, T., Adersen, D. & Jorgensen, A-M. K. (2018). Effects of Multidimensional Family Therapy (MDFT) on nonopioid drug abuse: A systematic review and meta-analysis. *Research on Social Work Practice*, 28, 68-83. https://doi.org/10.1177/1049731515608241
- Gass, M., Wilson, T., Talbot, B., Tucker, A., Ugianskis, M., & Brennan, N. (2019). The value of outdoor behavioral healthcare for adolescent substance users with comorbid conditions. *Substance Abuse:* Research & Treatment, 13, 1-8. <a href="https://doi.org/10.1177/1178221819870768">https://doi.org/10.1177/1178221819870768</a>
- Gogel, L. P., Cavaleri, M. A. Gardin, J. G., & Wisdom, J. P. (2011). Retention and ongoing participation in residential substance abuse treatment: Perspectives from adolescents, parents, and staff on the treatment process. *The Journal of Behavioral Health Services & Research*, 38 (4), 488-496. <a href="https://doi.org/10.1007/s11414-010-9226-7">https://doi.org/10.1007/s11414-010-9226-7</a>
- Haine-Schlagel, R., & Walsh, N. E. (2015). A review of parent participation engagement in child and family mental health treatment. *Clinical Child and Family Psychology Review, 18* (2), 133-150. https://doi.org/10.1007/s10567-015-0182-x
- Haine-Schlagel, R., Roesch, S. C., Trask, E. V., Fawley-King, K., Ganger, W. C., & Aarons, G. A. (2016). The parent participation engagement measure (PPEM): Reliability and validity in child and adolescent community mental health services. *Administration and Policy in Mental Health*, 43(5), 813-823. https://doi.org/10.1007/s10488-015-0698-x

- Hair, H. J. (2005). Outcomes for children and adolescents after residential treatment: A review of research from 1993 to 2003. *Journal of Child & Family Studies*, 14, 551-575. <a href="https://doi.org/10.1007/s10826-005-7188-9">https://doi.org/10.1007/s10826-005-7188-9</a>
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420. <a href="https://doi.org/10.1080/03637750903310360">https://doi.org/10.1080/03637750903310360</a>
- Henderson, C., Greenbaum, P., Dakof, G., Liddle, H. (2010). Effectiveness of Multidimensional Family Therapy with higher severity substance-abusing adolescents: Report from two randomized controlled trials. *Journal of Consulting and Clinical Psychology*, 78(6), 885-897. <a href="https://doi.org/10.1037/a0020620">https://doi.org/10.1037/a0020620</a>
- Hendriks, V., van der Schee, E., Blanken, P. (2011). Treatment of adolescents with a cannabis use disorder: Main findings of a randomized controlled trial comparing multidimensional family therapy and cognitive behavioral therapy in the Netherlands. *Drug and Alcohol Dependence*, 119(1-2), 64-71. <a href="https://doi.org/10.1016/j.drugalcdep.2011.05.021">https://doi.org/10.1016/j.drugalcdep.2011.05.021</a>
- Hogue, A., Dauber, S., Stambaugh, L., Cecero, J. (2006). Early Therapeutic Alliance and Treatment Outcome in Individual and Family Therapy for Adolescent Behavior Problems. *Journal of Consulting and Clinical Psychology*, 74(1), 121-129. https://doi.org/10.1037/0022-006X.74.1.121
- Kim, H., Munson, M. R., & McKay, M. M. (2012). Engagement in mental health treatment among adolescents and young adults: A systematic review. *Child and Adolescent Social Work Journal*, *29*(3), 241-266. <a href="https://doi.org/10.1007/s10560-012-0256-2">https://doi.org/10.1007/s10560-012-0256-2</a>
- Mauro, P. M., McCart, M. R., Sheidow, A. J., Naeger, S. E., & Letourneau, E. J. (2017). Parent and youth engagement in court-mandated substance use disorder treatment. *Journal of Child & Adolescent*

- *Substance Abuse, 26*(4), 324-331. https://doi.org/10.1080/1067828X.2017.1305935
- Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy*, 22, 144-167. https://doi.org/10.1111/1467-6427.00144
- Ridge, N., Warren, J., Burlingame, G., Wells, M. (2009). Reliability and Validity of the Youth Outcome Questionnaire Self Report. *Journal of Clinical Psychology*, 65(10), 1115-1126. https://doi.org/10.1002/jclp.20620
- Rigter, H., Henderson, C., Pelc, I., Tossmann, P., Phan, O., Hendriks, V., Schaub, M., Rowe, C. (2013). Multidimensional family therapy lowers the rate of cannabis dependence in adolescents: A randomized controlled trial in western European outpatient settings. *Drug and Alcohol Dependence*, *130*, (1-3) 85-93. <a href="https://doi.org/10.1016/j.drugalcdep.2012.10.013">https://doi.org/10.1016/j.drugalcdep.2012.10.013</a>
- Robst, J., Rohrer, L., Armstrong, M., Dollard, N., Sharrock, P., Batsche, C., & Reader, S. (2013). Family involvement and changes in child behavior during residential mental health treatment. *Child & Youth Care Forum*, 42(3), 225–238. <a href="https://doi.org/10.1007/s10566-013-9201-6">https://doi.org/10.1007/s10566-013-9201-6</a>
- Ryan, C. E.; Epstein, N.; Keitner, G.; Miller, I.; & Bishop, D. (2005) Evaluating and treating families: The McMaster approach. NY: Routledge Press.
- Schaub, M., Henderson, C., Pelc, I., Tossman, P., Phan, O., Hendriks, V., Rowe, C., Rigter, H. (2014). Multidimensional Family Therapy Decreases the Rate of Externalizing Behavioural Disorder Symptoms in Cannabis Abusing Adolescents: Outcomes of the INCANT Trial. *BMC Psychiatry*, 14(26), 1-8. <a href="http://www.biomedcentral.com/1471-244X/14/26">http://www.biomedcentral.com/1471-244X/14/26</a>

- Schuirmann, D. J. (1987). A comparison of the two one-sided tests procedure and the power approach for assessing equivalence of average bioavailability. *Journal of Pharmacokinetics and Biopharmaceutics*, *15*(6), 657-680. <a href="https://doi.org/10.1007/BF01068419">https://doi.org/10.1007/BF01068419</a>
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological Methodology* 1982 (pp 290-312). Dan Francisco: Jossey-Bass.
- Sperry, L. (Ed.). (2012). Family assessment: Contemporary and cutting-edge strategies. Taylor and Francis.
- Sunseri, P. A. (2001). The prediction of unplanned discharge from residential treatment. *Child & Youth Care Forum*, *30*, 283-303. <a href="https://doi.org/10.1023/A:1014477327436">https://doi.org/10.1023/A:1014477327436</a>
- Sunseri, P. A. (2004). Family functioning and residential treatment outcomes. *Residential Treatment for Children and Youth, 22*(1), 33-53. <a href="https://doi.org/10.1300/J007v22n01\_03">https://doi.org/10.1300/J007v22n01\_03</a>
- Sunseri, P. A. (2020). Hidden figures: Is improving family functioning a key to better treatment outcomes for seriously mentally ill children? *Residential Treatment for Children and Youth, 37*(1), 46-64. <a href="https://doi.org/10.1080/0886571X.2019.1589405">https://doi.org/10.1080/0886571X.2019.1589405</a>
- Staudt, M. (2007). Treatment engagement with caregivers of at-risk children: Gaps in research and conceptualization. *Journal of Child and Family Studies*, 16(2), 183-196. <a href="https://doi.org/10.1007/s10826-006-9077-2">https://doi.org/10.1007/s10826-006-9077-2</a>
- Tanner-Smith, E. E., Wilson, S. J., & Lipsey (2013). The comparative effectiveness of outpatient treatment for adolescent substance abuse: A meta-analysis. *Journal of Substance Abuse Treatment*, 44(2), 145-158. https://doi.org/10.1016/j.jsat.2012.05.006

- Uliaszek, A., Al-Dajani, N., & Mills, L. (2019). Predictors of attrition from residential treatment for youths with addictive behaviours. *Journal of Child & Adolescent Substance Abuse*, 28(1), 1-7. <a href="https://doi.org/10.1080/1067828X.2018.1561574">https://doi.org/10.1080/1067828X.2018.1561574</a>
- Van der Pol, T., Henderson, C., Hendriks, V., Schaub, M., Rigter, H. (2018). Multidimensional family therapy reduces self-reported criminality among adolescents with a cannabis use disorder. *International Journal of Offender Therapy and Comparative Criminology*, 62(6), 1573-1588. https://doi.org/10.1177/0306624X16687536
- Van der Pol, T., Hoeve, M., Noom, M., Stams, G., Doreleijers, T., van Domburgh, L., Vermeiren, R. (2017). Research review: The effectiveness of multidimensional family therapy in treating adolescents with multiple behavior problems-- A meta-analysis. *Journal of Child Psychology and Psychiatry*, 58(5), 532-545. https://doi.org/10.1111/jcpp.12685
- Van der Stouwe, T., Asscher, J., Stams, G., Dekovic, M. Van der Laan, P. (2014). The effectiveness of multisystemic therapy (MST): A meta-analysis. *Clinical Psychology Review*, *34*(6), 468-481. <a href="https://doi.org/10.1016/j.cpr.2014.06.006">https://doi.org/10.1016/j.cpr.2014.06.006</a>
- Wells, M. G., Burlingame, G. M., & Rose, P. M. (1999). Administration and Scoring Manual for the Y-OQ-SR 2.0 Youth Outcome Questionnaire-Self Report. American Professional Credentialing Services LLC.