

UC San Diego

UC San Diego Previously Published Works

Title

Psychometric evaluation of a caregiver-report adaptation of the Overall Anxiety Severity and Impairment Scale (OASIS) for use with youth populations

Permalink

<https://escholarship.org/uc/item/6wp4s9pr>

Authors

Comer, Jonathan S
Conroy, Kristina
Cornacchio, Danielle
et al.

Publication Date

2022-03-01

DOI

10.1016/j.jad.2021.12.113

Peer reviewed



HHS Public Access

Author manuscript

J Affect Disord. Author manuscript; available in PMC 2023 March 01.

Published in final edited form as:

J Affect Disord. 2022 March 01; 300: 341–348. doi:10.1016/j.jad.2021.12.113.

Psychometric evaluation of a caregiver-report adaptation of the Overall Anxiety Severity and Impairment Scale (OASIS) for use with youth populations

Jonathan S. Comer,

Center for Children and Families, Department of Psychology, Florida International University

Kristina Conroy,

Center for Children and Families, Department of Psychology, Florida International University

Danielle Cornacchio,

University of California, Los Angeles

Jami M. Furr,

Center for Children and Families, Department of Psychology, Florida International University

Sonya B. Norman,

Department of Psychiatry, University of California, San Diego

Murray B. Stein

Department of Psychiatry, University of California, San Diego

Abstract

Background.—Despite progress in youth anxiety assessment, there is need for a measure that is simultaneously (a) free, (b) brief, (c) focused broadly on anxiety and avoidance severity, frequency, and interference, and (d) concerned with the past week. The adult Overall Anxiety Severity and Impairment Scale (OASIS) was adapted to yield a caregiver-report of past week youth anxiety and interference (OASIS-Y).

Methods.—In a sample of diverse youth seeking anxiety services ($N= 132$; 67% racial/ethnic minority) and their caregivers, analyses examined the OASIS-Y factor structure, internal

Correspondence: Jonathan S. Comer, Ph.D., Professor of Psychology and Psychiatry, Mental Health Interventions and Technology (MINT) Program, Center for Children and Families, Department of Psychology, Florida International University, 11200 S.W. 8th Street, Miami, FL 33199 (telephone: 305-348-7580; jocomer@fiu.edu).

Contributors: Dr. Comer directed the program from which participants were recruited, conceptualized the study, collaborated on analyses and interpretation of findings, wrote an initial draft of the manuscript, and prepared a final draft after incorporating feedback from coauthors. Ms. Conroy prepared the database, collaborated on data analyses and interpretation of findings, participated in preparing an initial draft of the manuscript, and provided feedback and edits that were incorporated into the final version of the manuscript. Dr. Cornacchio and Dr. Furr oversaw data collection and assessment procedures for the study and provided feedback and edits that were incorporated into the final version of the manuscript. Dr. Norman and Dr. Stein provided conceptual input and provided feedback and edits that were incorporated into the final version of the manuscript. All authors have approved the final version of the manuscript.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

consistency, and convergent and divergent validity. Hierarchical linear modeling in a participant subset examined OASIS-Y sensitivity to treatment-related change.

Results.—OASIS-Y internal consistency was high and confirmatory factor analysis supported a single-factor structure similar to that found in adults. OASIS-Y convergent validity was supported by a medium-sized association with an established, commercially available measure of youth anxiety, and divergent validity was supported by the absence of unique associations with measures of youth attention and externalizing problems. In a sample subset, session-by-session OASIS-Y scores significantly declined across treatment, and declined at a steeper rate among treatment “responders” versus “non-responders,” providing evidence of OASIS-Y sensitivity to treatment-related change.

Limitations.—This study focused on a clinical sample and cannot speak to OASIS-Y performance in community settings. Shared method-variance may have also influenced findings.

Conclusions.—This study offers the first psychometric evaluation of the OASIS-Y, and underscores the promising clinical utility of the measure for assessing past week youth anxiety and impairment and for supporting routine outcome monitoring.

Keywords

Anxiety; Assessment; Child/adolescent; Measurement; Psychometric evaluation

Introduction

Anxiety disorders are among the most common child and adolescent mental health problems (Essau et al., 2018; Franz et al., 2013; Kessler et al., 2012; Merikangas et al., 2010). These disorders are associated with considerable interference, impairment, and comorbidities (Essau et al., 2018; Chiu et al., 2021; Green et al., 2017; Mohammadi et al., 2020; Swan & Kendall, 2016; Thompson-Hollands et al., 2014; Weiner et al., 2015), and when left untreated they are associated with the onset of adult depression, substance use, reduced job attainment and work performance, physical comorbidities, suicidality, and poorer health-related quality of life (Comer et al., 2011; Lever-van Milligen et al., 2017; Penninx et al., 2021; Wiebenga et al., 2021). Accurate assessment of anxiety in youth is critical.

There has been great progress in the development and evaluation of youth anxiety scales and questionnaires showing strong psychometric properties. Youth anxiety measures—such as the Multidimensional Anxiety Scale for Children-2nd Edition (MASC-2; March, 2012), Revised Children’s Anxiety and Depression Scale (RCADS; Chorpita et al., 2005; Ebesutani et al., 2012; Piqueras et al., 2017), Revised Preschool Anxiety Scale (PAS-R; Edwards et al., 2010), Screen for Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999; Runyon et al., 2018; Sequeira et al., 2020), Spence Children’s Anxiety Scale (SCAS; Spence et al., 2003) and Child Behavior Checklist (CBCL) Anxiety Problems scale (Nakamura et al., 2009)—have improved identification and screening practices and the evaluation of pre-versus-post-treatment changes (e.g., Albano et al., 2018; Caporino et al., 2017; Comer et al., 2021; McGuire et al., 2019; Van Meter et al., 2018). Moreover, research suggests that collecting reports from caregivers is especially important, as caregivers are typically the ones who identify anxiety and bring children to treatment, their reports show

higher correspondence than youth-reports with the perspectives of clinician-reports, and their reports show greater sensitivity to treatment-related changes than youth self-reports (Albano et al., 2018; Hawley & Weisz, 2003; Toscano et al., 2020). Caregiver-reports are particularly necessary when assessing younger children, given cognitive limitations that compromise early childhood self-reports (Comer & Kendall, 2004; Edwards et al., 2010; Morgan et al., 2019).

For optimal reach and utility, there is increasing recognition that measures must be free, brief, and afford opportunity for routine outcome monitoring (Becker-Haimes et al., 2019; Beidas et al., 2015; Bickman et al., 2011; Ebesutani et al., 2012; Jensen-Doss & Hawley, 2010). Given constraints on clinician time, reimbursement ceilings, and patient burden, commercially distributed questionnaires and longer measures are not poised for large-scale implementation (Beidas et al., 2015; Ebesutani et al., 2012; Jensen-Doss & Hawley, 2010). Well-supported anxiety measures such as the MASC-2 and CBCL Anxiety Problems Scale that are commercially sold present challenges for use in the under-resourced public sector which, in turn, can perpetuate disparities in evidence-based assessment across racial/ethnic and socioeconomic groups. Among youth anxiety measures that are both well-supported and available at no cost (i.e., PAS-R, RCADS, SCARED, SCAS), scale length ranges from 25-41 items, presenting obstacles to use in constrained settings. Moreover, research finds that briefly assessing patient problems on a session-by-session basis and monitoring interim changes as they unfold during treatment results in improved treatment outcomes (Bickman et al., 2011; Jensen-Doss et al., 2018). Although some anxiety measures do not include time frames (e.g., RCADS, SCAS), anxiety measures that have informants report on extended time frames (e.g., “in the last three months” in the SCARED) cannot be used for routine outcome monitoring in clinical practice.

Anxiety assessment should broadly measure symptom severity and frequency, associated avoidance, and degree of interference and impairment across multiple life domains. The majority of well-supported youth anxiety questionnaires focus exclusively on symptom counts or severity, which are important, but rarely what bring youth to treatment (Swan & Kendall, 2016). For example, although there is a brief 5-item version of the SCARED (Birmaher et al., 1999), its items focus exclusively on the presence of symptoms. Similarly, broad, brief, ideographic assessment strategies that lend themselves to routine outcome monitoring (e.g., Youth Top Problems; Weisz et al., 2011) also focus exclusively on symptom severity. In contrast, existing child measures that do assess anxiety-related impairment across life domains (Langley et al., 2004; Lyneham et al., 2013; Whiteside, 2009) restrict their focus exclusively to interference. Thus, clinicians interested in simultaneously assessing anxiety and avoidance frequency, severity, and impairment would need to complement these interference measures with additional anxiety measures, adding further burdens.

In the adult literature, the Overall Anxiety Severity and Impairment Scale (OASIS) fills the need for an anxiety measure that is simultaneously free, brief, focused broadly on anxiety and avoidance severity, frequency, and interference, and worded to support session-by-session/weekly outcome monitoring (Norman et al., 2006). The adult OASIS is a 5-item anxiety measure designed for use in community and clinical settings to assess past-week

severity and impairment across the anxiety disorders, with multiple anxiety disorders, and with subthreshold anxiety symptoms. Items ask, over the past week, how frequently the individual experienced anxiety, how intense/severe anxiety has been, how often the individual engaged in anxiety-related avoidance, how much anxiety interfered with work and home life, and how much anxiety interfered with social relationships. The adult OASIS has exhibited strong psychometric properties (Bragdon et al., 2016; Campbell-Sills et al., 2009; Ito et al., 2015; Moore et al., 2015; Norman et al., 2006, 2011; Osma et al., 2019).

To address the need for a similar anxiety measure for use with children and adolescents, the present study adapted the 5-item adult OASIS to yield a brief caregiver-report of past week youth anxiety and interference (i.e., the caregiver-report OASIS-Y). In a sample of anxious youth and their caregivers, we evaluated the psychometric properties of this caregiver-report OASIS-Y, including overall factor structure, internal consistency, and convergent and divergent validity. Further, to assess the utility of the caregiver-report OASIS-Y for assessing treatment outcome and supporting routine monitoring throughout treatment, in a subsample we examined the OASIS-Y sensitivity to treatment-related changes.

Methods

Participants

Participants (N=132) were primary caregivers of children and adolescents between the ages of 3-17 years ($M=7.8$) presenting for youth anxiety treatment at a university-affiliated children's mental health center in a Southeastern US metropolitan region. Table 1 presents sociodemographic and clinical characteristics of the sample. Two-thirds of the children were from ethnic and/or racial minority backgrounds, roughly 80% of whom identified as Hispanic/Latinx. Families came from a range of economic backgrounds, and most children (72.6%) met criteria for >1 anxiety disorder (Mean # anxiety diagnoses=2.13 (see Table 1 for full details). Data from a participant subset (n=21) who also participated in a randomized trial (Comer et al., 2021) and thus had treatment outcome data available were further analyzed to examine OASIS-Y sensitivity to treatment-related change. Children in this subset all met criteria for social anxiety disorder as part of eligibility for the clinical trial, and comorbidity was common (mean # of diagnoses=2.9). These children were somewhat younger ($M=5.6$ years) than the full sample of children in the present psychometric sample, and roughly half (52.4%) were from racial/ethnic minority backgrounds.

Procedure

Procedures were approved by the Florida International University IRB. Families presenting for youth anxiety treatment first completed informed consent/assent procedures. As part of standard intake procedures, for each family a diagnostician conducted a semi-structured diagnostic interview and generated a diagnostic profile, and caregivers also completed a set of questionnaires, either online (REDCap) or via paper-and-pencil. All participating families went onto receive youth anxiety treatment after intake.

As part of a controlled trial evaluating telehealth treatment for early SocAD (see Comer et al., 2021), a subset of 21 families in the present psychometric analysis went on to complete

a 12-week, therapist-led, family-based behavioral parenting intervention centering around exposures (i.e., the iCALM Telehealth Program). Caregivers in this subsample completed the OASIS-Y at sessions 2-8 and 10-12. As detailed in Comer et al. (2021), caregivers in this trial then completed a second posttreatment parent-report diagnostic interview with an independent evaluator (IE) who then assigned a rating on the Clinical Global Impressions-Improvement (CGI-I) scale.

Measures

Child diagnoses.—The *Anxiety Disorders Interview Schedule for DSM-IV—Child and Parent Versions (ADIS-IV-C/P)*, Silverman & Albano, 1996) is a semi-structured diagnostic interview assessing child disorders per DSM criteria. The ADIS-IV-C (Child Version) collects diagnostic information from the child’s perspective, whereas the ADIS-IV-P (Parent Version) collects diagnostic information from the caregiver’s perspective. The ADIS-IV-C/P has demonstrated strong psychometric properties (Lyneham et al., 2007; Silverman & Ollendick, 2005; Wood et al., 2002). Internal training and reliability criteria for clinic diagnosticians were developed in collaboration with one of the ADIS-IV-CP authors. Child- and caregiver-report diagnoses were integrated into a composite diagnostic profile using the “or” rule—i.e., diagnosis assigned if either the parent or child interview resulted in diagnostic criteria being met (Comer & Kendall, 2004). As is common (e.g., Comer et al., 2017, 2021; Rapee et al., 2010), for families with children 8, only the Parent Version was conducted. Clinic reliability checks on ADIS assessments have yielded high interrater reliability ($\kappa > .80$).

Child anxiety symptoms.—The *Overall Anxiety Severity and Impairment Scale (OASIS)*; Norman et al., 2006) was adapted as a caregiver-report for compatibility with youth. The adult self-report OASIS is a 5-item measure broadly assessing past-week anxiety and avoidance severity, frequency and impairment. Respondents rate each item along a 5-point descriptive rating scale, ranging from 0-4. Items are summed to yield an OASIS total score ranging from 0-20. Factor analyses support a single-factor structure for the measure, and psychometric evaluations have demonstrated strong convergent and divergent validity, internal consistency, test-retest reliability (Bragdon et al., 2016; Campbell-Sills et al., 2009; Moore et al., 2015; Norman et al., 2006, 2011), and sensitivity to treatment-related change (Barlow et al., 2017; Joesch et al., 2013; Roy-Byrne et al., 2010).

For the present adaptation, items were first reworded to assess a caregiver’s perspective (e.g., “*How often do you avoid...*” changed to “*How often does your child avoid...*”). For compatibility with younger developmental stages, a question assessing interference with work was removed and instead an item assessing interference with “schoolwork or school/camp attendance” was added. Given the extent to which youth anxiety is associated with interference with broader family functioning (e.g., Langley et al., 2004; Lebowitz et al., 2013; Lyneham et al., 2013; Peris et al., 2021; Thompson-Hollands et al., 2014), a 6th item was added assessing the extent to which the child’s anxiety has interfered with the “*family’s ability to function*” and the extent to which it has strained family relationships. In addition, given that child anxiety can interfere with caregivers’ own individual wellbeing (e.g., Towe-Goodman et al., 2014), a 7th item was added assessing the extent to which the

child's anxiety has interfered with the caregiver's "*personal functioning, work performance, or quality of life.*" As in the adult self-report OASIS, this adaptation has caregivers rate each item along 5-point descriptive rating scales ranging from 0-4. Response options are accompanied by elaborated, developmentally compatible written descriptions. Responses are summed to yield an OASIS-Y total score ranging from 0-28.

For validity analyses, the *CBCL Anxiety Problems Scale* was used to provide an independent assessment of youth anxiety severity on an established measure. The CBCL (Achenbach & Rescorla, 2001) is a commercially available parent-report assessing a range of child mental health problems. Items are rated by parents on 3-point scales ranging from 0-2. T-scores normed by age and sex are generated. For the present analysis, at intake parents completed the Anxiety Problems scale from the CBCL 1.5-5 (Achenbach & Rescorla, 2000; for children <6) or the CBCL 6-18 (Achenbach & Rescorla, 2001; for children ≥ 6), which have exhibited strong psychometric properties. For divergent validity purposes, caregivers also completed the CBCL Externalizing Problems and Attention Problems scales, which have also demonstrated strong psychometric properties.

Responder status.—Within the participant subsample who also participated in the iCALM Telehealth Program, the *Clinical Global Impression-Improvement Scale* (CGI-I; Guy & Bonato, 1970) was used to yield a dichotomous index of responder status. The CGI is a commonly assessment of treatment-related change. The CGI-I rates improvement on a 7-point scale ranging from 1 ("very much improved") to 7 ("very much worse"). Consistent with the literature (e.g., Comer et al., 2021; Walkup et al., 2008), IE's assigned CGI-I ratings after completing the posttreatment ADIS-IV-C/P. Children assigned a CGI-I score of 1 ("very much improved") or 2 ("much improved") are classified as "Responders," and children assigned a score of 3 ("minimally improved") or worse are classified as "Non-responders."

Data analysis

First, we computed basic descriptive statistics on OASIS-Y total scores, as well as on individual items. A correlation coefficient and t-test were computed to examine whether OASIS-Y scores were associated with child age or sex, respectively.

To examine the factor structure of the 7-item caregiver-report OASIS-Y, Mplus Seventh Edition (Muthén & Muthén, 2015) with robust maximum likelihood (MLR) estimation was used to conduct confirmatory factor analysis (CFA), testing the single-factor structure observed for the adult OASIS (Bragdon et al., 2016; Moore et al., 2015; Norman et al., 2006). Full information maximum likelihood (FIML) handled missing data. Two models were run: a one-factor model and a one-factor model with correlated residuals between frequency (item 1) and intensity/severity (item 2). Global fit was examined by interpreting fit indices according to cutoff guidelines (Hu & Bentler, 1999; Yu, 2002): Chi-squared test (χ^2 ; smaller values=better fit), Comparative Fit Index (CFI; values ≥ .95 considered good), Root Mean Square Error of Approximation (RMSEA; values ≤ .06 considered good), and standardized root mean square residual (SRMR; values ≤ .08 considered good). A model was considered "good" if all three fit indices fell in the good range, "mixed" if two fit

indices fell in the good range, and “poor” if only one or none of the fit indices fell in the good range. Inspection of standardized residuals and modification indices examined areas of local misfit.

Inter-item correlations and Cronbach’s alpha were computed to examine internal consistency. Alpha coefficients $.70$ reflect acceptable internal consistency, but coefficients $>.90$ reflect item redundancy and the need to shorten the scale (Tavakol & Dennick, 2011).

Multiple linear regression examined: (a) the extent to which OASIS-Y scores correlate with established measurement of youth anxiety, and (b) whether OASIS-Y scores are uniquely associated with anxiety and not just more broadly with child psychopathology. CBCL Anxiety Problems was entered as a predictor of the OASIS-Y (Step 1), and then CBCL Attention Problems and Externalizing Problems were added as additional predictors (Step 2). Evidence of OASIS-Y convergent validity was defined as a significant association between the OASIS-Y and CBCL Anxiety Problems in Step 1. Evidence of OASIS-Y specificity and divergent validity was defined as a retained significant association between the OASIS-Y and CBCL Anxiety Problems in Step 2, along with the absence of a significant relationship between the OASIS-Y and the CBCL Attention Problems and Externalizing Problems scales.

To examine sensitivity to treatment-related change, hierarchical linear modeling (HLM) was conducted in the subset of participants for whom outcome data were available. The SPSS 21 MIXED procedure modeled the non-independence of OASIS-Y data due to nesting of repeated observations across treatment within children, using maximum-likelihood estimation to account for missing data. A mixed-effects model entered Time (i.e., weeks since baseline) and Responder Status (i.e., CGI-I classification), and their interaction, as fixed effects to model linear OASIS-Y change across treatment, as well as whether this trajectory varied across responders versus non-responders. The intercept (scaled to baseline; i.e., Time=0) was entered as a random effect. In a second exploratory HLM, the interactions of Time \times Time and Time \times Time \times Responder Status were added to model a possible quadratic OASIS-Y trajectory across treatment, as well as whether such a trajectory varied across responders versus non-responders. Fitted models were used to calculate estimated mean scores at each time point.

Results

Caregiver-report OASIS-Y total scores ranged from 0-26 ($M=8.74$, $SD=5.66$). OASIS-Y total scores were not significantly associated with child age ($r=0.08$, $p=.38$) or sex, $t(130)=-.39$, $p=.70$.

Factor structure

Both the one-factor model and the one-factor model with correlated residuals were overidentified with $df=15$ and $df=14$, respectively. Consistent with the adult literature, the basic one-factor model (i.e., one factor predicting all items) revealed poor model fit: $\chi^2(15)=37.77$, $p<.001$, $RMSEA=.11$, $CFI=.94$, $SRMR=.05$, $AIC=2207.75$. As found by Bragdon and colleagues (2016) and by Ito and colleagues (2014), further inspection of

local fit identified a sizeable modification index associated with the correlation between the residuals on items 1 (frequency) and 2 (intensity/severity), suggesting the correlation between anxiety frequency and severity cannot be accounted for entirely by the common cause of the latent anxiety factor. As such, the model was refitted to account for correlation between item 1 and item 2 residuals, and reexamination of global fit indices indicated good model fit: $\chi^2(14)=14.18$, $p=.44$, RMSEA=.01, CFI=.99, SRMR=.04, AIC=2180.78. Further inspection of standardized residuals and modification indices revealed no significant local points of ill-fit (see Table 2).

Internal consistency

The 7 OASIS-Y items demonstrated acceptable internal consistency ($\alpha=.89$; mean inter-item $r=.55$), with no indication of redundancy across items or need to shorten the scale. Further, the alpha coefficient did not improve with removal of any individual item.

Convergent and divergent validity

Table 3 presents results from multiple linear regression analysis examining associations between the OASIS-Y and CBCL scales. Results of Step 1 in the model show that CBCL Anxiety Problems significantly predicted OASIS-Y scores [$F(1,108)=34.30$, $p<.001$], accounting for 23% of the variance. This relationship retained its significance in Step 2 after adding CBCL Attention Problems and Externalizing Problems as predictors [$F(3,106)=12.97$, $p<.001$]. Adding these two CBCL subscales did not significantly improve the predictive model [$R^2=.03$, $F_{\text{change}}(2,106)=1.99$, $p=.14$], and CBCL Attention Problems and Externalizing Problems were not significantly associated with OASIS-Y scores.

Sensitivity to treatment-related changes

The first HLM examining the linear effect of Time and its interaction with Responder Status found OASIS-Y scores significantly declined across treatment ($b=-.89$, $p<.001$), and that the slope of this change varied across responders versus non-responders ($b=.21$, $p<.001$). Specifically, although OASIS-Y scores declined across treatment for all participants, scores declined at a significantly steeper rate among children who ultimately responded to treatment relative to children who did not (see Figure 1). The second exploratory HLM did not support the presence of an overall quadratic OASIS-Y trajectory across treatment ($b=.05$, $p=.18$), nor did such a quadratic effect interact with Responder Status ($b=-.01$, $p=.65$).

Discussion

The caregiver-report OASIS-Y fills the need for a brief, free, and reliable caregiver-report of past week youth anxiety that broadly assesses severity, frequency, and interference and can support session-by-session outcome monitoring. Building on precedent in the developmentally tailored adaptation of adult measures to facilitate child anxiety assessment (e.g., Whiteside, 2009), the newly adapted OASIS-Y demonstrated strong psychometric properties in a diverse sample of anxious youth. Consistent with the adult OASIS (e.g., Bragdon et al., 2016; Moore et al., 2015; Norman et al., 2006), analyses robustly supported a single-factor structure for the caregiver-report OASIS-Y that accounts for correlation between symptom frequency and severity. Analyses supported the validity of the OASIS-Y,

and showed that the measure is sensitive to treatment-related change. Collectively, these findings underscore the promising utility of the caregiver-report OASIS-Y for assessing youth anxiety in clinical and resource-limited settings.

The adapted OASIS-Y adds a broad, but brief, patient/family-oriented measure to the existing collection of youth anxiety measures. Whereas most well-established youth anxiety measures, including the brief 5-item SCARED, focus exclusively on symptom counts or frequency (Birmaher et al., 1999; Chorpita et al., 2005; Edwards et al., 2010; March, 2012; Nakamura et al., 2009; Spence et al., 2003), the OASIS-Y additionally assesses avoidance and anxiety-related impairments across multiple life domains, including school, family, and peer functioning, as well as caregiver well-being. Given that impairment and life interference, rather than symptom counts, typically bring youth to treatment (Angold et al., 1999; Lyneham et al., 2013), it is possible that incorporating patient/family-oriented measures that broadly assess impairment and functioning in addition to symptom frequency and severity can improve treatment engagement, reduce dropout, and increase treatment satisfaction.

As expected, analyses showed that OASIS-Y scores significantly declined across treatment, and that this trajectory was steeper for children who ultimately responded to treatment. Consistent with increasing recognition of the benefits of measurement-based care for improving the quality of mental health services (Jensen-Doss et al., 2020), the ability of the OASIS-Y to distinguish the anxiety trajectories of treatment responders versus non-responders provides preliminary support for its use in assessing session-by-session change throughout youth anxiety treatment. Neighboring youth anxiety measures with extended time frames of assessment—such as the 5-item SCARED which assesses across a 3-month time frame—cannot facilitate such ongoing monitoring throughout treatment. Although most clinicians hold positive beliefs about the need for ongoing progress monitoring throughout treatment, in practice the majority of clinicians do not routinely collect standardized measures of treatment progress (Jensen-Doss et al., 2018). Perceived time and cost burdens are the top reasons clinicians give for not incorporating routine outcome monitoring in their practice (Hatfield & Ogles, 2004). Supported measures that are brief and free, such as the OASIS-Y, are essential for improving the uptake of routine outcome monitoring and improving quality of care, particularly in resource-limited settings (Becker-Haimes et al., 2019; Beidas et al., 2015).

It should be noted that although brief, supported, self-/parent-report measures are very useful for screening purposes and for routine outcome monitoring, they cannot provide the level of rich idiographic and clinically relevant information that semi-structured clinical interviews. Accordingly, the OASIS-Y is not intended as a diagnostic instrument, or to inform case conceptualization and treatment planning in the absence of clinician-led strategies.

Several study limitations warrant comment. First, despite recruiting a diverse, treatment-seeking sample, families were recruited from a university-based clinical setting. Accordingly, findings cannot speak to the performance of the OASIS-Y in normative populations or community settings. Second, although adequately powered, the current sample (N=132) is somewhat smaller than samples that have been used to evaluate several

other anxiety measures (e.g., Langley et al., 2004; Lyneham et al., 2013; Whiteside, 2009). Third, we did not follow any anxious youth across time in the absence of treatment, and thus could not evaluate OASIS-Y test-retest reliability. Fourth, as is typical in treatment-seeking samples, comorbidity was high, which precluded the opportunity to examine differential associations between OASIS-Y scores and specific anxiety disorders. That said, the OASIS-Y is intended as a transdiagnostic measure, rather than as a disorder-specific measure. Fifth, the present analysis did not examine the extent to which the OASIS-Y aligns with existing measures of anxiety-specific impairment.

A sixth limitation is the absence of youth self-reports in the present analysis. Despite the advantages of collecting caregiver-reports, there is also value in collecting youth self-reports and teacher reports (Comer & Kendall, 2014; De Los Reyes et al., 2015). For example, caregivers may have limited knowledge regarding youth anxiety and associated interference in school and peer settings. Work has begun on a youth self-report adaptation of the OASIS-Y, setting the stage for future work to examine issues of cross-informant agreement. Shared method variance may have inflated estimates of convergent validity. Future OASIS-Y psychometric work should include additional assessment modes, such as teacher reports and structured observations. In addition, although the mean score on the OASIS-Y in the present outpatient sample was roughly 9, some of the higher scores neared the upper end of the possible range of scores. It is possible that the OASIS-Y could encounter problems of ceiling effects when used with more severe anxious youth, such as inpatient populations. Finally, although two-thirds of participants were from racial and/or ethnic minority backgrounds, roughly 80% of these families were Hispanic and/or Latinx. Although the present sample was more diverse than the majority of youth anxiety research samples, improved efforts are needed to recruit Black and African American families, among other understudied populations, to participate in youth anxiety research.

Despite limitations, these findings speak to a promising role for the OASIS-Y in clinical practice. Expanding the portfolio of available assessment tools for youth anxiety to include a brief and free caregiver-report of past week anxiety severity, frequency, and impairment creates opportunities for patient/family-oriented outcome monitoring, which in turn may improve the overall quality of care.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements:

The authors have no additional acknowledgements to report.

Role of Funding Source:

This work was supported, in part, by a grant from the Andrew Kukes Foundation for Social Anxiety (PI: Comer) and by the NIH (F31 112296; PI: Cornacchio). These funding sources had no role in study design, data analysis and interpretation, or manuscript preparation.

Conflicts of Interest

In the past 3 years, Dr. Comer has received royalties from Macmillan Learning, has been paid by the Association for Behavioral and Cognitive Therapies for editorial work, and has received research support from NIH, PCORI, NSF, the Kukes Foundation for Social Anxiety, and the American Psychological Foundation. Dr. Norman has received royalties from Elsevier Press. In the past 3 years, Dr. Stein has received consulting income from Actelion, Acadia Pharmaceuticals, Aptinyx, Boehringer-Ingelheim, Bionomics, BioXcel Therapeutics, Clexio, EmpowerPharm, GW Pharmaceuticals, Janssen, Jazz Pharmaceuticals, and Roche/Genentech. Dr. Stein has stock options in Oxeia Biopharmaceuticals and Epivario. He is paid for his editorial work on *Depression and Anxiety* (Editor-in-Chief), *Biological Psychiatry* (Deputy Editor), and *UpToDate* (Co-Editor-in-Chief for Psychiatry). He has also received research support from NIH, Department of Veterans Affairs, and the Department of Defense. He is on the scientific advisory board for the Brain and Behavior Research Foundation and the Anxiety and Depression Association of America. No other authors have financial interests to declare.

References

- Achenbach TM, & Rescorla LA, 2000. Manual for the ASEBA preschool forms and profiles. University of Vermont, Research Center for Children, Youth, & Families, Vermont.
- Achenbach TM, & Rescorla LA, 2001. Manual for the ASEBA school-age forms & profiles. University of Vermont, Research Center for Children, Youth, & Families, Vermont.
- Albano AM, Comer JS, Compton SN, Piacentini J, Kendall PC, Birmaher B, Walkup JT, Ginsburg GS, Rynn MA, McCracken J, Keeton C, Sakolsky DJ, & Sherrill JT, 2018. Secondary outcomes from the Child/Adolescent Anxiety Multimodal Study (CAMS): Implications for clinical practice. *Evid. Based Pract. Child Adolesc. Ment. Health* 3, 30–41. 10.1080/23794925.2017.1399485 [PubMed: 30906874]
- Angold A, Costello EJ, Farmer EM, Burns BJ, & Erkanli A, 1999. Impaired, but undiagnosed. *J. Am. Acad. Child Adolesc. Psychiatry* 38, 129–137. 10.1097/00004583-199902000-00011 [PubMed: 9951211]
- Barlow DH, Farchione TJ, Bullis JR, Gallagher MW, Murray-Latin H, Sauer-Zavala S, Bentley KH, Thompson-Hollands J, Conklin LR, Boswell JF, Ametaj A, Carl JR, Boettcher HT, & Cassiello R,C, 2017. The unified protocol for transdiagnostic treatment of emotional disorders compared with diagnosis-specific protocols for anxiety disorders: A randomized clinical trial. *JAMA Psychiatry* 74, 875–884. 10.1001/jamapsychiatry.2017.2164 [PubMed: 28768327]
- Becker-Haimes EM, Tabachnick AR, Last BS, Stewary RE, Hasan-Graner A, & Beidas RS, 2019. Evidence base update for brief, free, and accessible youth mental health measures. *J. Clin. Child Adolesc. Psychol* 49, 1–17. 10.1080/15374416.2019.1689824 [PubMed: 31825683]
- Beidas RS, Stewart RE, Walsh L, Lucas S, Downey MM, Jackson K, Fernandez T, & Mandell DS, 2015. Free, brief, and validated: Standardized instruments for low-resource mental health settings. *Cogn. Behav. Pract* 22, 5–19. 10.1016/j.cbpra.2014.02.002 [PubMed: 25642130]
- Bickman L, Douglas Kelley S, Breda C, de Andrade AR, & Riemer M, 2011. Effects of routine feedback to clinicians on mental health outcomes of youths: Results of a randomized trial. *Psychiatr. Serv* 62, 1423–1429. 10.1176/appi.ps.002052011 [PubMed: 22193788]
- Birmaher B, Brent DA, Chiappetta L, Bridge J, Monga S, & Baugher M, 1999. Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. *J. Am. Acad. Child Adolesc. Psychiatry* 38, 1230–6. 10.1097/00004583-199910000-00011 [PubMed: 10517055]
- Bragdon LB, Diefenbach GJ, Hannan S, & Tolin DF, 2016. Psychometric properties of the Overall Anxiety Severity and Impairment Scale (OASIS) among psychiatric outpatients. *J. Affect. Disord* 201, 112–115. 10.1016/j.jad.2016.05.005 [PubMed: 27195516]
- Campbell-Sills L, Norman SB, Craske MG, Sullivan G, Lang AJ, Chavira DA, Bystritsky A, Sherbourne C, Roy-Byrne P, & Stein MB, 2009. Validation of a brief measure of anxiety-related severity and impairment: The Overall Anxiety Severity and Impairment Scale (OASIS). *J. Affect. Disord* 112, 92–101. 10.1016/j.jad.2008.03.014 [PubMed: 18486238]
- Caporino NE, Sakolsky D, Brodman DM, McGuire JF, Piacentini J, Peris TS, Ginsburg GS, Walkup JT, Iyengar S, Kendall PC, & Birmaher B, 2017. Establishing clinical cutoffs for response and remission on the Screen for Child Anxiety Related Emotional Disorders (SCARED). *J. Am. Acad. Child Adolesc. Psychiatry* 56, 696–702. 10.1016/j.jaac.2017.05.018 [PubMed: 28735699]

- Chiu K, Clark DM, & Leigh E, 2021. Prospective associations between peer functioning and social anxiety in adolescents: A systematic review and meta-analysis. *J. Affect. Disord* 279, 650–661. [PubMed: 33190116]
- Chorpita BF, Moffitt CE, & Gray J, 2005. Psychometric properties of the Revised Child Anxiety and Depression Scale in a clinical sample. *Behav. Res. Ther* 43, 309–322. 10.1016/j.brat.2004.02.004 [PubMed: 15680928]
- Comer JS, Blanco C, Hasin DS, Liu SM, Grant BF, Turner JB, & Olfson M, 2011. Health-related quality of life across the anxiety disorders: results from the national epidemiologic survey on alcohol and related conditions (NESARC). *J. Clin. Psychiatry* 72, 43–50. 10.4088/JCP.09m05094blu [PubMed: 20816036]
- Comer JS, Furr JM, del Busto C, Silva K, Hong N, Poznanski B, Sanchez AL, Cornacchio D, Herrera A, Coxe S, Miguel E, Georgiadis C, Conroy K, & Puliafico AC 2021. Therapist-led, internet-delivered treatment for early child social anxiety: A waitlist-controlled evaluation of the iCALM Telehealth Program. *Behav. Ther* 10.1016/j.beth.2021.01.004
- Comer JS, & Kendall PC, 2004. A symptom-level examination of parent-child agreement in the diagnosis of anxious youths. *J. Am. Acad. Child. Adolesc. Psychiatry* 43, 878–886. 10.1097/01.chi.0000125092.35109.c5 [PubMed: 15213589]
- De Los Reyes A, Augenstein TM, Wang M, Thomas SA, Drabick DAG, Burgers DE, & Rabinowitz J, 2015. The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychol. Bull* 141, 858–900. 10.1037/a0038498 [PubMed: 25915035]
- Ebesutani C, Bernstein A, Chorpita BF, & Weisz JR, 2012. A transportable assessment protocol for prescribing youth psychosocial treatments in real-world settings: Reducing assessment burden via self-report scales. *Psychol. Assess* 24, 141–155. 10.1037/a0025176 [PubMed: 21859220]
- Ebesutani C, Reise SP, Chorpita BF, Ale C, Regan J, Young J, Higa-McMillan C, & Weisz JR, 2012. The Revised Child Anxiety and Depression Scale-Short Version: Scale reduction via exploratory bifactor modeling of the broad anxiety factor. *Psychol. Assess* 24, 833–845. 10.1037/a0027283 [PubMed: 22329531]
- Edwards SL, Rapee RM, Kennedy SJ, & Spence SH, 2010. Preschool-aged children: The revised preschool anxiety scale. *J. Clin. Child Adolesc. Psychol* 39, 400–409. 10.1080/15374411003691701 [PubMed: 20419580]
- Essau CA, Lewinsohn PM, Lim JX, Ho MH, & Rohde P, 2018. Incidence, recurrence and comorbidity of anxiety disorders in four major developmental stages. *J. Affect. Disord* 228, 248–253. 10.1016/j.jad.2017.12.014 [PubMed: 29304469]
- Franz L, Angold A, Copeland W, Costello EJ, Towe-Godman N, & Egger H, 2013. Preschool anxiety disorders in pediatric primary care: Prevalence and comorbidity. *J. Am. Acad. Child Adolesc. Psychiatry* 52, 1294–1303.e1. 10.1016/j.jaac.2013.09.008 [PubMed: 24290462]
- Green JG, Comer JS, Donaldson AR, Elkins RA, Nadeau MS, Reid G, & Pincus DB, 2017. School functioning and use of school-based accommodations by treatment-seeking anxious children. *J. Emot. Behav. Disord* 25, 220–232. 10.1177/1063426616664328
- Hatfield DR, & Ogles BM, 2004. The current climate of outcome measures use in clinical practice. *Prof. Psychol. Res. Pr* 35, 485–491. 10.1037/0735-7028.35.5.485
- Hawley KM, & Weisz JR, 2003. Child, parent and therapist (dis)agreement on target problems in outpatient therapy: The therapist's dilemma and its implications. *J. Consult. Clin. Psychol* 71, 62–70. 10.1037/0022-006X.71.T62 [PubMed: 12602426]
- Ito M, Oe Y, Kato N, Nakajima S, Fujisato H, Miyamae M, Kanie A, Horikoshi M, & Norman SB 2015. Validity and clinical interpretability of Overall Anxiety Severity and Impairment Scale (OASIS). *J. Affect. Disord* 170, 217–224. [PubMed: 25259673]
- Jensen-Doss A, Douglas S, Phillips DA, Gencdur O, Zalman A, & Gomez NE, 2020. Measurement-based care as a practice improvement tool: Clinical and organizational applications in youth mental health. *Evid. Based Pract. Child Adolesc. Ment. Health* 5, 233–250. 10.1080/23794925.2020.1784062 [PubMed: 33732875]
- Jensen-Doss A, Haimes EMB, Smith AM, Lyon AR, Lewis CC, Stanick CF, Hawley KM, 2018. Monitoring treatment progress and providing feedback is viewed favorably but rarely used in practice. *Adm. Policy Ment. Health* 45, 48–61. 10.1007/s10488-016-0763-0 [PubMed: 27631610]

- Jensen-Doss A, & Hawley KH, 2010. Understanding barriers to evidence-based assessment: Clinician attitudes toward standardized assessment tools. *J. Clin. Child Adolesc. Psychol* 39, 885–896. 10.1080/15374416.2010.517169 [PubMed: 21058134]
- Joesch JM, Golinelli D, Sherburne CD, Sullivan G, Stein MB, Craske MG, & Roy-Byrne P, 2013. Trajectories of change in anxiety severity and impairment during and after treatment with evidence-based treatment for multiple anxiety disorders in primary care. *Depress. Anxiety* 30, 1099–1106. 10.1002/da.22149 [PubMed: 23801589]
- Kessler RC, Avenevoli S, Costello EJ, Georgiadis K, Green JG, Gruber MJ, He JP, Koretz D, McLaughlin KA, Petukhova M, Sampson NA, Zaslavsky AM, & Merikangas KR, 2012. Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Arch. Gen. Psychiatry* 69, 372–380. 10.1001/archgenpsychiatry.2011.160 [PubMed: 22147808]
- Langley AK, Bergman R, McCracken J, & Piacentini JC, 2004. Impairment in childhood anxiety disorders: Preliminary examination of the Child Anxiety Impact Scale-Parent Version. *J. Child Adolesc. Psychopharmacol* 14, 105–114. 10.1089/104454604773840544. [PubMed: 15142397]
- Lebowitz ER, Woolston J, Bar-Haim Y, Calvocoressi L, Dauser C, Warnick E, ... & Leckman JF, 2013. Family accommodation in pediatric anxiety disorders. *Depress. Anxiety* 30, 47–54. 10.1002/da.21998 [PubMed: 22965863]
- Lever-van Milligen BA, Lamers F, Smit JH, & Penninx BW, 2017. Six-year trajectory of objective physical function in persons with depressive and anxiety disorders. *Depress. Anxiety* 34, 188–197. 10.1002/da.22557 [PubMed: 27701790]
- Lyneham HJ, Abbott MJ, & Rapee R, 2007. Interrater reliability of the Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Version. *J. Am. Acad. Child Adolesc. Psychiatry* 46, 731–736. 10.1097/chi.0b013e3180465a09 [PubMed: 17513985]
- Lyneham HJ, Sbrurlati ES, Abbott MJ, Rapee RM, Hudson JL, Tolin DF, & Carlson SE, 2013. Psychometric properties of the Child Anxiety Life Interference Scale (CALIS). *J. Anxiety Disord* 27, 711–719. 10.1016/j.janxdis.2017.10.002 [PubMed: 24135256]
- March JS, 2012. *Multidimensional Anxiety Scale for Children-Second Edition (MASC 2)*. Pearson.
- McGuire JF, Caporino NE, Palitz SA, Kendall PC, Albano AM, Ginsburg GS, Birmaher B, Walkup JT, & Piacentini J, 2019. Integrating evidence-based assessment into clinical practice for pediatric anxiety disorders. *Depress. Anxiety* 36, 744–752. 10.1002/da.22900 [PubMed: 31231969]
- Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Cui L, Benjet C, Georgiadis K, & Swendsen J, 2010. Lifetime prevalence of mental disorders in U.S. adolescents. Results from the National Comorbidity Survey Replication-Adolescent Supplement. *J. Am. Acad. Child Adolesc. Psychiatry* 49, 980–989. 10.1016/j.jaac.2010.05.017 [PubMed: 20855043]
- Mohammadi MR, Salehi M, Khaleghi Al., Hooshyari Z, Mostafavi SA, Ahmadi N, Hojjat SK, Safavi P, & Amanat M, 2020. Social anxiety disorder among children and adolescents: A nationwide survey of prevalence, socio-demographic characteristics, risk factors and co-morbidities. *J. Affect. Disord* 263, 450–457. [PubMed: 31969277]
- Moore SA, Welch SS, Michonski J, Poquiz J, Osborne TL, Sayrs J, & Spanos A, 2015. Psychometric evaluation of the Overall Anxiety Severity and Impairment Scale (OASIS) in individuals seeking outpatient specialty treatment for anxiety-related disorders. *J. Affect. Disord* 175, 463–470. 10.1016/j.jad.2015.01.041 [PubMed: 25679201]
- Morgan AJ, Tamir E, Rapee RM, Lyneham HJ, McLellan LF, & Bayer JK, 2019. Online assessment of preschool anxiety: Description and initial validation of a new diagnostic tool. *Child Adolesc. Ment. Health* 24, 259–265. 10.1111/camh.12324 [PubMed: 32677211]
- Nakamura BJ, Ebesutani C, Bernstein A, & Chorpita BF, 2009. A psychometric analysis of the Child Behavior Checklist DSM-oriented scales. *J. Psychopathol. Behav. Assess* 31, 178–189. 10.1007/s10862-008-9119-8
- Norman SB, Campbell-Sills, Hitchcock CA, Sullivan S, Rochlin A, Wilkins KC, & Stein MB, 2011. Psychometrics of a brief measure of anxiety to detect severity and impairment: The overall anxiety severity and impairment scale (OASIS). *J. Psychiatr. Res* 45, 262–268. 10.1016/j.jpsychires.2010.06.011 [PubMed: 20609450]

- Norman SB, Cissell SH, Means-Christensen AJ, & Stein MB, 2006. Development and evaluation of an overall anxiety severity and impairment scale (OASIS). *Depress. Anxiety* 23, 245–249. 10.1002/da.20182 [PubMed: 16688739]
- Osma J, Quilez-Orden A, Suso-Ribera C, Peris-Baquero O, Norman SB, Bentley KH, & Sauer-Zavala S, 2019. Psychometric properties and validation of the Spanish versions of the overall anxiety and depression severity and impairment scales. *J. Affect. Disord* 252, 9–18. [PubMed: 30953927]
- Penninx BWJH, Eikelenboom M, Giltay EJ, van Hemert AM, Riese H, Schoevers RA, & Beekman ATF (2021). Cohort profile of the longitudinal Netherlands Study of Depression and Anxiety (NESDA) on etiology, course and consequences of depressive and anxiety disorders. *J. Affect. Disord* 287, 69–77. [PubMed: 33773360]
- Peris TS, Thamrin H, & Rozenman MS, 2021. Family intervention for child and adolescent anxiety: A meta-analytic review of therapy targets, techniques, and outcomes. *J. Affect. Disord* 286, 282–295. [PubMed: 33756306]
- Piqueras JA, Martín-Vivar M, Sandin B, et al. , 2017. The Revised Child Anxiety and Depression Scale: A systematic review and reliability generalization meta-analysis. *J. Affect. Disord* 218, 153–169. [PubMed: 28475961]
- Rapee RM, Kennedy SJ, Ingram M, Edwards SL, & Sweeney L, 2010. Altering the trajectory of anxiety in at-risk young children. *Am. J. Psychiatry* 167, 1518–1525. 10.1176/appi.ajp.2010.09111619 [PubMed: 20810472]
- Roy-Byrne P, Craske MG, Sullivan G, Rose RD, Edlund MJ, Lang AJ, Bystritsky A, Welch SS, Chavira DA, Golinelli D, Campbell-Sills L, Sherbourne CD, & Stein MB, 2010. Delivery of evidence-based treatment for multiple anxiety disorders in primary care: A randomized controlled trial. *JAMA*. 303, 1921–1928. 10.1001/jama.2010.608 [PubMed: 20483968]
- Runyon K, Chestnut SR, & Burley H, 2018. Screening for childhood anxiety: A meta-analysis of the Screen for Child Anxiety Related Emotional Disorders. *J. Affect. Disord* 240, 220–229. [PubMed: 30081293]
- Whiteside S, 2009. Adapting the Sheehan Disability Scale to assess child and parent impairment related to childhood anxiety disorders. *J. Clin. Child Adolesc. Psychol*, 38, 721–730 [PubMed: 20183656]
- Sequeira SL, Silk JS, Woods WC, Kolko DJ, & Lindhiem O, 2020. Psychometric properties of the SCARED in a nationally representative U.S. sample of 5-12-year-olds. *J. Clin. Child Adolesc. Psychol* 49, 761–772. 10.1080/15374416.2019.1614001 [PubMed: 31136197]
- Silverman WK, & Albano AM, 1996. The Anxiety Disorders Interview Schedule for Children for DSM-IV: Child and Parent Versions. Graywind.
- Silverman WK, & Ollendick TH, 2005. Evidence-based assessment of anxiety and its disorders in children and adolescents. *J. Clin. Child Adolesc. Psychol* 34, 380–411. 10.1207/s15374424jccp3403_2 [PubMed: 16026211]
- Spence SH, Barrett PM, & Turner CM, 2003. Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. *J. Anxiety Disord* 17, 605–625. 10.1016/s0887-6185(02)00236-0 [PubMed: 14624814]
- Swan AJ, & Kendall PC, 2016. Fear and missing out: Youth anxiety and functional outcomes. *Clin. Psychol* 23, 417–435. 10.1111/csp.12169
- Tavakol M, & Dennick R, 2011. Making sense of Cronbach's alpha. *Int. J. Med. Educ* 2, 53–55. 10.5116/ijme.4dfb.8dfd [PubMed: 28029643]
- Thompson-Hollands J, Kerns CE, Pincus DB, & Comer JS, 2014. Parental accommodation of child anxiety and related symptoms: range, impact, and correlates. *J. Anxiety Disord* 28, 765–773. 10.1016/j.janxdis.2014.09.007 [PubMed: 25261837]
- Toscano R, Hudson JL, Baillie AJ, Lyneham HJ, & McLellan LF, 2020. Development of the Macquarie Anxiety Behaviour Scale (MABS): A parent measure to assess anxiety in children and adolescents including young people with autism spectrum disorder. *J. Affect. Disord* 276, 678–685. [PubMed: 32871700]
- Towe-Goodman NR, Franz L, Copeland W, Angold A, & Egger H, 2014. Perceived family impact of preschool anxiety disorders. *J. Am. Acad. Child Adolesc. Psychiatry* 53, 437–446. 10.1016/j.jaac.2013.12.017 [PubMed: 24655653]

- Van Meter AR, You DS, Halverson T, Youngstrom EA, Birmaher B, Fristad MA, Kowatch RA, Storfer-Isser A, Horwitz SM, Frazier TW, Arnold LE, Findling RL, 2018. Diagnostic efficiency of caregiver report on the SCARED for identifying youth disorders in outpatient settings. *J. Clin. Child Adolesc. Psychol* 47, S161–S175. 10.1080/15374416.2016.1188698 [PubMed: 27485325]
- Walkup JT, Albano AM, Piacentini J, Birmaher B, Compton SN, Sherrill JT, ... Ivengar S, 2008. Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *N. Engl. J. Med* 359, 2753–66. 10.1056/NEJMoa0804633 [PubMed: 18974308]
- Weiner CL, Elkins RM, Pincus D, & Comer JS, 2015. Anxiety sensitivity and sleep-related problems in anxious youth. *J. Anxiety Disord* 32, 66–72. 10.1016/j.janxdis.2015.03.009 [PubMed: 25863826]
- Weisz JR, Chorpita BF, Frye A, Ng MY, Lau N, Bearman SK, Ugueto AM, Langer DA, Hoagwood KE, & Research Network on Youth Mental Health., 2011. Youth top problems: Using idiographic, consumer-guided assessment to identify intervention needs and track change during psychotherapy. *J. Consult. Clin. Psychol* 79, 369–380. [PubMed: 21500888]
- Wiebenga JXM, Dickhoff J, Mérelle SYM, Eikelenboom M, Heering HD, Gilissen R, van Oppen P, & Penninx BWJH, 2021. Prevalence, course, and determinants of suicide ideation and attempts in patients with a depressive and/or anxiety disorder: A review of NESDA findings. *J. Affect. Disord* 282, 267–277.
- Wood JJ, Piacentini JC, Bergman RL, McCracken J, & Barrios V, 2002. Concurrent validity of the anxiety disorders section of the Anxiety Disorders Interview Schedule for DSM-IV: Child and parent versions. *J. Clin. Child Adolesc. Psychol* 31, 335–342. 10.1207/S15374424JCCP3103_05 [PubMed: 12149971]

Highlights

- There is need for a brief caregiver-report of past week youth anxiety/avoidance
- The adult-OASIS was adapted to yield such a measure for youth populations (OASIS-Y)
- In a racially/ethnically diverse sample, the OASIS-Y demonstrated strong properties
- The OASIS-Y showed reliability, convergent/divergent validity and sensitivity-to-change
- The OASIS-Y showed clinical utility and can support routine outcome monitoring

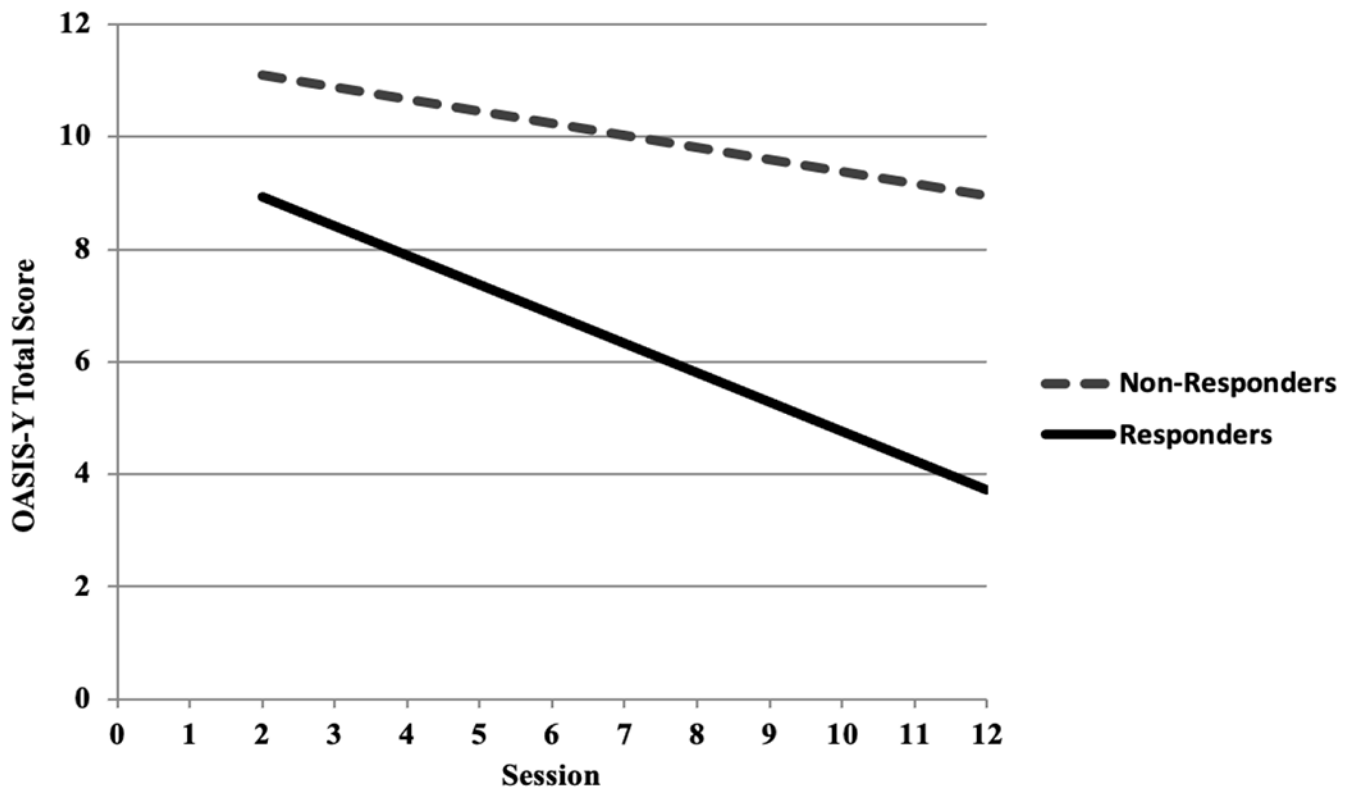


Figure 1. OASIS-Y score trajectories across responders versus non-responders

Note: “Responder” defined as posttreatment Clinical Global Impressions-Improvement (CGI-I) = 1 or 2; “Non-Responder” defined as posttreatment CGI-I = 3.

Table 1.

Sociodemographic and clinical characteristics of sample (N=132)

	M	SD
Child age, years	7.73	3.6
	N	%
Child Gender		
Female	85	66.4
Male	47	35.6
Race/Ethnicity		
White (Non-Hispanic/Non-Latinx)	44	33.3
Racial/Ethnic Minority [†]	88	66.7
Participating Caregiver		
Mother	127	96.2
Father	5	3.8
Annual Household Income ^{‡,§}		
<\$50,000/year	43	32.6
\$50,001-\$100,000/year	43	32.6
\$100,001-\$150,000/year	21	15.9
>\$150,000/year	25	18.9
Diagnoses		
Social anxiety disorder	98	74.2
Selective mutism	89	67.4
Generalized anxiety disorder	50	37.9
Obsessive-compulsive disorder	15	11.4
Specific phobia	3	2.3

[†] Among participants identifying as a member of a racial or ethnic minority group, 79.5% (N=70) identified as Hispanic or Latinx, 8% (N=7) identified as Black or African American, 4.5% (N=4) identified as Asian or Asian American, and 6.8% (N=6) identified as a member of another racial or ethnic minority group.

[‡] Data provided by N=131 families (99.2% of sample)

[§] Median annual household income = \$80,000/year

Table 2.

Details from OASIS-Y confirmatory factor analysis: Single-factor solution

Descriptive Statistics and Factor Loadings				
	<i>M</i>	<i>SD</i>	Range	
OASIS-Y total score	8.74	5.7	0-28	
Individual items [†]	<i>M</i>	<i>SD</i>	Range	Standardized Factor Loading
1. Frequency	1.42	0.95	0-4	.77**
2. Intensity/severity	1.28	0.91	0-4	.69**
3. Avoidance	1.40	1.12	0-4	.77**
4. Interference with schoolwork/school attendance	1.13	1.10	0-4	.67**
5. Interference with social life/peer relationships	1.39	1.19	0-4	.59**
6. Interference with family functioning	1.04	1.03	0-4	.77**
7. Interference with caregiver's own functioning	1.08	0.97	0-3	.87**

Model Fit			
Model Specification	Fit Index	Value	Interpretive Benchmark
One factor without correlated residuals	χ^2	37.77**	Smaller = better
	CFI	.94	.95
	RMSEA	.11	.06
	SRMR	.05	.08
	AIC	2207.75	Smaller = better
One factor with correlated residuals (items 1&2)	χ^2	14.18	Smaller = better
	CFI	.99	.95
	RMSEA	.01	.06
	SRMR	.04	.08
	AIC	2180.78	Smaller = better

Note: $N=132$.*
 $p < 0.05$ **
 $p < 0.01$.

OASIS-Y = Overall Anxiety Severity and Impairment Scale for Youth; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; AIC = Akaike's information criteria. Standardized covariance estimate between item 1 and item 2 = 0.49 ($SE = 0.09$), $p < 0.01$.

[†]Response options for individual items range from 0 to 4

Table 3.

Details of multiple regression analysis predicting OASIS-Y scores

Variable Entered	<i>B</i>	<i>SE(B)</i>	β	<i>t</i>
Step 1				
CBCL Anxiety Problems	.30	.05	.50	5.86***
Step 2				
CBCL Anxiety Problems	.24	.06	.40	4.25***
CBCL Attention Problems	.07	.07	.10	.95
CBCL Externalizing Problems	.06	.05	.12	1.11

Note: OASIS-Y = Overall Anxiety Severity and Impairment Scale for Youth; CBCL = Child Behavior Checklist

 $p < .001$

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript