

Examining the Psychometric Properties of the Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire in Two Samples of Youth with OCD

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Abstract Researchers have demonstrated that quality of life (QOL) is an important construct to measure in individuals with mental health disorders, yet only a small amount of research has been dedicated to examining QOL and its response to treatment in children and adolescents with obsessive–compulsive disorder (OCD). The current study explored the psychometric properties of a measure of QOL, the Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q), by examining the reliability, validity, and treatment sensitivity of this measure delivered in two separate RCTs for OCD (total $N = 251$ across both studies). Our results provide evidence for the reliability and validity of the PQ-LES-Q in adolescents with OCD (all Cronbach's alphas $>.89$, convergent validity correlations significant at the $p < .05$ level), but that an adaptation of the measure may be necessary for valid use in younger children with OCD.

Keywords Quality of life · Pediatric obsessive–compulsive disorder (OCD) · Psychometrics

Introduction

Approximately 13 % of children ages 8–12 in the United States are diagnosed with a mental health disorder [1]. Mental health professionals typically assess patients' diagnostic status using clinician-rated measures of symptoms, impairment, and psychosocial functioning. However, researchers and clinicians have increasingly found that subjective quality of life (QOL) is an important additional aspect to measure when assessing patient functioning and treatment outcomes. Measuring QOL, defined as the degree to which an individual experiences enjoyment and satisfaction [2], can capture information that is relatively unique compared to measures of symptoms and functioning [3]. Assessing a patient's subjective QOL takes into account how the individual views their symptoms within their social and cultural environment [4], providing critical information about the patient's experience not captured by symptom measures and adding important information to the overall assessment. Thus, while two individuals may look similar based on a measure of symptom severity or functioning, they may view their illness quite differently, impacting their experience of life satisfaction and enjoyment. This information is important to gather from the patients as a self-report because it is dependent on their subjective experience. Further, self-report measures have the advantage of being economical because they involve minimal clinician time.

Studies have shown that self-reported QOL is compromised in both adults and children with mental illness, and is associated with increased symptoms and decreased functioning [2, 5–10]. For example, an epidemiological study surveying over 5000 adult participants found that individuals with anxiety and depression had average QOL scores that were more than one standard deviation below

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the expected mean [10]. Not only is QOL compromised in these individuals, but research indicates that CBT and psychopharmacological treatments can lead to improvements in self-reported QOL in individuals with a range of psychiatric disorders [11–19]. Our primary interest in the present study is the assessment of QOL in children and adolescents with OCD; however, the majority of research on QOL both across disorders and specific to OCD has been conducted with adult samples [7, 20, 21]. In child and adolescent populations, only a few controlled treatment trials with children and adolescents have used QOL as an outcome measure, with results indicating that CBT for depression and anxiety was associated with increases in participants' self-rated QOL [5, 22, 23]. Specific to children and adolescents with OCD, one study demonstrated that children with OCD had lower QOL compared to controls [24] and another study demonstrated an increase in QOL to more normative levels with a CBT intervention [25]. These studies provide evidence for the utility of measuring QOL in youth with OCD. These studies assessed QOL using health related quality of life (HRQOL) measures, which are less focused on quality of life symptoms that are not physical. For example, HRQOL measures ask questions such as, "How much of a problem has your child had with walking more than a block?" [26]. Rosenbaum et al. [27] describe QOL as a more holistic assessment of well-being, whereas HRQOL is more narrowly focused on the physical health related components (often in context of identifying QOL in physically ill patients or assessing physical health treatments) HRQOL measures for children and adolescents are well established in the field of pediatric psychology and demonstrate good reliability and validity in child populations with mental illness [28], but there may be reason to assess QOL more broadly and with less focus on physical functioning.

One reason for the relative lack of research on QOL with children and adolescents with OCD may be because few measures of QOL have been reliably translated or tested for use with a younger population with mental health disorders [5]. Such translation requires assessing the developmental stage and insight of the target population, which can be challenging to do in younger populations [29, 30]. Further, studies using symptom measurements in assessing CBT for OCD are lacking in a comprehensive assessment of all aspects of these children's lives. One measure that has been adapted for children to assess holistic QOL in mental health disorders is the Pediatric Quality of Life Satisfaction and Enjoyment Scale (PQ-LES-Q) Endicott et al. [5] found that the PQ-LES-Q was reliable and valid in children ages 6–17 with depression, and that it was not so correlated with other measures as to be redundant. This scale was developed based on the Quality of Life Satisfaction and Enjoyment Scale (Q-LES-Q) [31], a 93-item questionnaire

that has been used to assess quality of life in various adult populations, including patients with schizophrenia and depression [32, 33], among others.

To date, the reliability and validity of the PQ-LES-Q has been measured only in children with depression. There is no published research on its reliability or validity in other youth populations with other psychological disorders, or in children as young as 5 years old. Further, no studies have looked at the efficacy of using the PQ-LES-Q as a parent-reported measure. Previous studies used the PQ-LES-Q as a self-report measure; however, Freeman et al. [34] suggest that because of developmental concerns, children ages 5–8 may not be able to reliably answer self-report questions. Therefore, although Endicott's sample of youth included children as young as age six, the reported reliability may not adequately extend to children as young as five. For young children, parent-reported QOL measures may be valuable because it is parents who often determine the type and course of treatment in this young population [35].

The current study aimed to evaluate the reliability, validity, and treatment sensitivity of the PQ-LES-Q by examining results from its use in two separate randomized clinical trials for children and adolescents with OCD. The Pediatric OCD Treatment Study II (POTS II) [36] compared CBT to medication use in a 12 week program for children ages 7–17, and assessments included a self-reported PQ-LES-Q at baseline and at the end of treatment, along with a variety of other measures assessing symptoms and functioning. The Pediatric OCD Treatment Study for Young Children (POTS Jr.) [37] compared CBT to relaxation therapy in children ages 5–8 in a 14-week family-based program. In POTS Jr., self-assessment measures, including the PQ-LES-Q, were adapted to be more suitable for young children (e.g., questions about dating were removed) and were changed to be parent-reported questionnaires. In addition to examining the reliability, validity, and treatment sensitivity of the PQ-LES-Q, we also examined gender and age differences in PQ-LES-Q scores among participants in POTS Jr. and POTS II.

Methods

Participants

Participants for the current study were those enrolled in either POTS II or POTS Jr.

POTS II Sample

Participants included 124 children and adolescents ages 7–17 with a primary DSM-IV-TR diagnosis of OCD. Participants were recruited as part of a randomized

controlled trial examining the efficacy of augmenting serotonin reuptake inhibitors (SRIs) with CBT or a brief form of CBT. All youth who participated in the study had experienced a partial response to SRI pharmacotherapy. Participants were randomly assigned to one of three possible treatment conditions: (1) Medication Management (MM) provided by a study psychiatrist; (2) OCD-specific CBT as delivered by a study psychologist in addition to MM by a study psychiatrist (MM + CBT); and (3) instructions in CBT (MM + I-CBT) delivered by the study psychiatrist assigned to provide MM. Recruitment took place between 2004 and 2009 at three collaborating sites: The University of Pennsylvania ($n = 41$, 33 % of sample), Duke University ($n = 35$; 28 % of sample), and Brown Medical School ($n = 48$; 39 % of sample). Institutional Review Boards at each site approved the study and consent was obtained from all participants and their families.

Participants were screened for eligibility using a three gate assessment procedure. Patients determined to be eligible were invited back for a baseline visit. Participants were eligible if they met criteria to be appropriate for outpatient treatment, did not have another primary diagnoses requiring the initiation of another active treatment, and were not taking an SRIs outside the study (for more detailed demographics, screening, and eligibility procedures please refer to the POTS II primary outcomes paper; [36]).

POTS Jr. Sample

Participants were 127 children, ages 5–8, with a primary DSM-IV-TR diagnosis of OCD. Participants were recruited as part of a randomized controlled trial examining the efficacy of family-based CBT compared to Relaxation Therapy (RT). Recruitment took place between 2006 and 2011 at three collaborating sites: The University of Pennsylvania ($n = 44$; 35 % of sample), Duke University ($n = 35$; 27 % of sample), and Brown Medical School ($n = 48$; 38 % of sample). Institutional Review Boards at each site approved the study and consent was obtained from all participants and their families.

Participants were screened for eligibility using a three gate procedure, and if they were eligible, they received a baseline assessment by an independent evaluator (IE). Participants were eligible if they met criteria to be appropriate for outpatient treatment, did not have a primary diagnoses other than OCD that required initiation of another active treatment, had a parent or guardian who could participate in treatment, and were stable on any psychiatric medications for anxiety or depression (for more detailed demographics, screening and eligibility procedures please refer to the POTS Jr. primary outcomes paper, [37]).

Procedures

In both studies, participants were assessed and all data were collected at baseline (first therapy session), and at post-treatment (after 12th session in POTS II, 14th session in POTS Jr.)

The baseline evaluation included IE-rated and self- and parent-report measures in both studies.

Assessment Measures

Quality of Life was measured using the Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q). The PQ-LES-Q is a 15-item scale measuring quality of life (QOL) in a variety of domains. It yields a total score based on summing the first 14 items (the final item is about global quality of life and not included in the total score). The scale has solid psychometric properties in children with depression, with excellent internal consistency and adequate concurrent validity [5]. This measure was self-reported in POTS II, and for POTS Jr. a parent-report version of this measure was used, based on the finding that close relatives are able to give accurate proxy ratings on QOL measures [38]. Further, the version used in POTS Jr. was amended to exclude 2 questions aimed at adolescents (e.g., about dating life).

OCD Symptoms and Severity were measured using the Child Yale-Brown Obsessive Compulsive Scale (CY-BOCS) [39] and the Clinical Global Improvement scale (CGI) [40]. The CY-BOCS is a 10-item “gold standard” clinician-administered interview yielding a combined obsessions and compulsions total score (0–40) and demonstrating adequate reliability and validity [39]. Developmentally sensitive anchors and probes were developed and the literature supports the use of the CY-BOCS in children as young as 5 years old [41]. The CGI is a 7-point scale measuring clinician-rated severity and improvement in treatment and shows adequate reliability and validity [40]. In the current study, CGI severity scores (CGI-S) as well as CGI improvement scores (CGI-I) were used.

Demographics were measured using the Conners March Developmental Questionnaire (CMDQ) [42] and included age, grade level, gender, race, and socioeconomic status. The CMDQ was completed by parents.

General Functioning was measured using the Children’s OCD Impact Scale-Revised (COIS-R) [43]. The COIS-R provides a standardized format for assessing the impact of OCD on social, school, and home functioning and shows excellent internal consistency and adequate concurrent validity [43]. Item scores range from 0 (not at all) to 3 (very much) with higher scores indicating greater functional impairment. For the POTS Jr. sample the COIS-R

was completed by parents only, while in the POTS II sample, it was completed by youth and parents.

Anxiety Symptoms in POTS II were assessed using the Multidimensional Anxiety Scale for Children [44] which is a 39-item self- and parent-report scale designed to assess a wide range of anxiety symptoms. The scale has been shown to have solid psychometric properties [44, 45]. The MASC produces a total score, as well as four subscales, including Physical Symptoms, Social Anxiety, Harm Avoidance and Separation/Panic. Parent- and child-reported MASC total scores discriminate between children with and without anxiety disorders [44].

Anxiety Symptoms in POTS Jr. were assessed using the Screen for Child Anxiety Related Emotional Disorders-Revised, Parent Version (SCARED-R) [46, 47]. The SCARED is a 66-item parent-reported scale of severity of anxiety symptoms in youth. The measure has demonstrated good internal consistency and concurrent and discriminant validity [47].

Data Analytic Plan

Analyses were performed using data from participants in POTS II and POTS Jr. who completed the above measures. All data analyses were performed in SPSS (Version 22). Missing data were handled using the same procedures for both samples. Participants for whom more than 25 % of item-level data for the baseline PQ-LES-Q were missing were excluded from analyses ($n = 14$ for POTS Jr., $n = 20$ for POTS II). Single imputation using the expectation maximum likelihood algorithm was used for missing data <25 % ($n = 18$ for POTS Jr., $n = 43$ for POTS II). Missing data from other measures and time points was handled the same way. Based on these exclusions, final sample sizes for the PQ-LES-Q for reliability and pre-treatment analyses were 104 for POTS II and 113 for POTS Jr. (total available sample sizes for post-treatment analyses were 82 for POTS II and 87 for POTS Jr.) For correlation analyses, sample sizes varied based on available pairs of data for each measure and at each time point (see Tables 1, 2 for sample sizes).

Reliability of the PQ-LES-Q in both the POTS Jr. and POTS II studies was examined using the Cronbach measure of internal consistency [48], which assesses the degree to which the set of question items included in the PQ-LES-Q measured the single dimension of quality of life. *Convergent validity* of the PQ-LES-Q in both studies was assessed by examining the correlations among the PQ-LES-Q and various clinical symptom and severity measures [CYBOCS, CGI-S, SCARED-R (POTS Jr.), MASC (POTS II), and the COIS] at baseline and post-treatment. *Sensitivity to change* was assessed by comparing the difference in total score at post-treatment between those determined to

be responders (CGI-I ratings of 1 or 2, “very much improved” or “much improved”) versus non-responders (CGI-I ratings of ≥ 3) Cohen’s d [49] was calculated as a measure of effect size and relied on the following conventions: Small effect = 0.20–0.49; Medium effect = 0.50–0.79; Large effect = >0.80 . Sensitivity to change of the PQ-LES-Q as a measure of clinical change was further assessed by examining correlations between the pre- and post-treatment change scores of the various measures. Finally, differences in PQ-LES-Q scores related to age and sex were examined.

Results

POTS II

Reliability

Internal consistency estimates based on Cronbach alpha were high at all time points (0.89 at baseline and 0.94 at post-treatment). The individual to total score correlations were between 0.46 and 0.75 for all questions at baseline and between 0.53 and 0.90 for all questions at post-treatment, demonstrating strong relationships.

Convergent Validity

Results shown in Table 1 demonstrate that at baseline the PQ-LES-Q was weakly correlated with the CYBOCS and the CGI-S and moderately correlated with the parent- and self-reported COIS and the self-reported MASC. The scale had virtually no correlation with the parent-reported MASC. At post-treatment the PQ-LES-Q was moderately correlated with both the self- and parent-reported COIS, CGI-S, CYBOCS, and self-reported MASC and weakly correlated with the parent-reported MASC. Of note, the parent-reported MASC was also weakly correlated with the CY-BOCS and the CGI. *Sensitivity to change*: Change scores between pre- and post-treatment were calculated for each of the measures. The PQ-LES-Q change score was weakly correlated with the parent and self-reported COIS and with the self-reported MASC, and had virtually no correlation with the CGI-S, CY-BOCS, or parent-reported MASC. Total scores (using participants who had PQ-LES-Q data) at post-treatment for treatment responders ($n = 44$) and non-responders ($n = 38$) were compared and the responders had significantly higher scores (i.e., higher quality of life) on the PQ-LES-Q than did the non-responders, $t(80) = 2.27$, $p = .03$, $d = .51$. This difference resulted in a medium effect size and provides evidence of sensitivity to change. For comparison, the effect size for

Table 1 POTS II correlations between the self-reported PQ-LES-Q and other measures

Concurrent measure	Baseline total score	Post-treatment total score	Change score
CGI-S	-.19*	-.32**	-.21*
CY-BOCS	-.25**	-.34**	-.22**
COIS-SR	-.46**	-.57**	-.38**
COIS- P	-.37**	-.44**	-.33**
MASC-SR	-.35**	-.44**	-.44**
MASC-P	-.10	-.25*	-.21*

*N*s for each measure at pretreatment ranged from 93 to 104; post-treatment *N*s ranged from 67 to 84. For correlations, *N*'s ranged from 67 to 104 across all pairs of measures and both time points

* Significant at the .05 level; ** significant at the .01 level

differences in the CY-BOCS between responders and non-responders was large ($d = 2.47$).

Age and Gender

Age and gender differences on the PQ-LES-Q total scores at pre-treatment were also assessed. Age was split into two groups: children, ages 7–12 ($n = 44$) and adolescents, ages 13–17 ($n = 60$). An independent samples *t* test indicated that there was a significant difference between the two age groups, $t(102) = 3.42$, $p < .01$, with adolescents scoring significantly lower ($M = 48.10$, $SD = 10.37$) on the PQ-LES-Q than children ($M = 54.44$, $SD = 7.66$). We also investigated the relation between age and PQ-LES-Q at pre-treatment with age as a continuous variable and found similar results, $r(102) = -.30$, $p = .002$. There was no significant difference, $t(102) = .24$, $p = .81$, in PQ-LES-Q total scores between males ($n = 48$, $M = 51.03$, $SD = 9.13$) and females ($n = 56$, $M = 50.57$, $SD = 10.41$).

POTS Jr.

Reliability

Internal consistency estimates based on Cronbach's alpha [48] were high at all time points (0.90 at baseline and 0.93 at post-treatment). The individual to total score correlations were between 0.51 and 0.83 for all questions at baseline and between 0.60 and 0.88 for all questions at the post-treatment, demonstrating strong relationships.

Convergent Validity

Results shown in Table 2 demonstrate that at baseline the PQ-LES-Q was highly correlated with the COIS, moderately correlated with the CGI-S and SCARED-R, and weakly with the CY-BOCS. At post-treatment, the PQ-LES-Q was highly correlated with the COIS, and moderately correlated with the CGI-S, SCARED-R, and CY-BOCS. *Sensitivity to Change*: Change scores between pre-

and post-treatment were calculated for each of the measures, and the PQ-LES-Q change score was weakly correlated with the CGI-S and CY-BOCS, and moderately correlated with the COIS and SCARED-R. Total scores at post-treatment (using participants who had PQ-LES-Q data) for treatment responders ($n = 53$) and non-responders ($n = 40$) were compared and the responders had significantly higher scores (i.e., higher quality of life) on the PQ-LES-Q than did the non-responders, $t(85) = 2.86$, $p = .005$, $d = .62$. This difference resulted in a medium effect size and provides evidence of sensitivity to change. For comparison, the effect size for differences in the CY-BOCS between responders and non-responders was large ($d = 2.19$).

Age and Gender

Age and gender differences on the PQ-LES-Q total scores at pre-treatment were assessed. Age was split into two groups: young children: 5 and 6 ($n = 67$, $M = 43.83$, $SD = 6.92$) and older children: 7 and 8 ($n = 46$, $M = 45.59$, $SD = 7.44$), and there was not a significant difference between age groups, $t(111) = 1.28$, $p = .202$. We obtained similar results when using age as a continuous variable, $r(111) = -.14$, $p = .15$. There was also no significant difference between males ($n = 50$, $M = 44.01$, $SD = 6.15$) and females ($n = 63$, $M = 44.97$, $SD = 7.88$) for this sample, $t(111) = -.70$, $p = .483$.

Discussion

QOL measures are an important aspect of assessment batteries for children and adolescents with OCD. They add information about the patient's and/or the parent's subjective feeling of well-being [3], and how the patient or parent thinks the OCD symptoms are affecting overall happiness. Additionally, the field of psychiatric assessment is shifting more toward focus evidence based assessments [50], which further demonstrates the necessity of having an

Table 2 POTS Jr. Correlations between the parent-reported PQ-LES-Q and other measures

Concurrent measure	Baseline total score	Post-treatment total score	Change score
CGI-S	-.42**	-.44**	-.35**
CY-BOCS	-.29*	-.46**	-.31**
COIS- P	-.71**	-.67**	-.48**
SCARED-R	-.43**	-.50**	-.40**

*N*s for each measure at pretreatment ranged from 100 to 113; post-treatment *N*s ranged from 84 to 87. For correlations, *N*'s ranged from 80 to 113 across all pairs of measures and both time points

* Significant at the .05 level; ** significant at the .01 level

empirically supported measure of QOL. Despite the value of quality of life in assessment with this population, and the need for evidence based assessment, no prior studies have investigated the reliability and validity of QOL measures in youth with OCD. We assessed the psychometric properties of the PQ-LES-Q, a youth specific measure of QOL, in two samples of youth with OCD. The POTS II sample spanned a wider age range (7–17) while the POTS Jr. sample focused on young children (ages 5–8) In both samples, the PQ-LES-Q demonstrated excellent reliability and some evidence of convergent validity, suggesting the PQ-LES-Q as a promising measure of quality of life in this population. In addition, the version of the PQ-LES-Q used in POTS Jr. was developmentally adapted for very young children by eliminating two questions and asking parent's to report of their child's QOL. Results indicate that these modifications seem to have effectively adapted the PQ-LES-Q for use with younger children.

In both the POTS II and POTS Jr. samples, the PQ-LES-Q demonstrated excellent internal consistency, suggesting that youth and parents were able to report on subjective quality of life in a coherent, reliable manner. These results are similar to Endicott et al.'s findings [5] that the PQ-LES-Q demonstrated strong reliability in a sample of youth (ages 6–17) with depression. Also in line with Endicott et al. [5], the PQ-LES-Q generally demonstrated moderate correlations with other outcome measures of global clinical status, OCD symptoms, and functioning, suggesting good convergent validity. Correlations were generally stronger at the end of treatment, also paralleling results reported by Endicott et al. [5]. This difference in correlation strength could be due to the fact that the sample as a whole was more homogeneous at the end of treatment [5]. Moderate correlations with most outcome measures in both samples demonstrate that the PQ-LES-Q measures an important indication of clinical status, but that it is not redundant to other measures. Of note, in the sample of older children with OCD (POTS II), the correlation between the PQ-LES-Q and parent-reported MASC was not significant. This finding is also consistent with Endicott et al.'s [5] results that showed a lower correlation with the MASC. In the current study, this lower correlation may be a result of

different reporters for each measure in POTS II: the MASC was parent-reported, and the PQ-LES-Q was self-reported. Alternatively, it may be that the MASC was not a good indicator of clinical change in the current sample, as it did not have significant correlations with either the CGI or the CY-BOCS. In addition, the significant difference in the PQ-LES-Q scores between responders and non-responders provides initial evidence of sensitivity to change following treatment. However, results from correlations were somewhat mixed for sensitivity to change. In the POTS II sample the QOL difference scores between pre- and post-treatment had low (though significant) correlations with the symptom outcome measures, which could indicate that the PQ-LES-Q is not a robust measure of clinical change. At the same time, the low correlations may indicate that indicate that of symptoms is not associated with positive affect or quality of life. Again, the PQ-LES-Q seems to be measuring an aspect of clinical status distinct from symptoms and global clinical status.

Analyses in the POTS II sample indicated significant differences in QOL based on age, with adolescents reporting significantly lower levels of QOL than children. One reason for this difference may be that a few questions on the PQ-LES-Q do not likely apply to younger children (e.g., questions about dating), and young children generally rated these questions high (to indicate good quality of life in this category) High ratings on these items may have inflated younger children's scores. The mixed findings for the PQ-LES-Q as a measure of clinical change in this sample may have been influenced by these age differences. For instance, QOL might be more impacted for adolescents than for young children because they have more school and social demands. The difference could also be accounted for by a variety of other factors, including developmental or phenomenological differences. Perhaps young children do not have the insight/cognitive ability to answer self-report questions about quality of life, or parents may be more able to accommodate their young children's OCD, resulting in higher quality of life for the children. These age differences indicate that researchers and clinicians should be cautious about delivering this version (self-reported and including questions about dating, etc.) of the PQ-LES-Q to younger

children, because scores may be elevated as a result of the inclusion of questions that do not apply to their lives.

Results from the POTS Jr. trial indicate that the modified version of the PQ-LES-Q was generally an effective adaptation for younger children with OCD. However, the high correlation between the PQ-LES-Q and the COIS (which has been shown to reliably measure functional impairment [43]) suggests that the PQ-LES-Q is measuring a construct highly related to functional impairment in these young children. It may be that with children as young as 5 and 6, it is hard to assess their subjective quality of life without relying on cues from their functioning, such as whether they get along with their families (a question that is on both measures; [5, 43]).

There could be a few reasons for the high correlation between the PQ-LES-Q and the COIS. First, although the questions were not changed (aside from changing “you” to “your child”), the PQ-LES-Q was parent-reported in the sample of younger children due to their developmental stage [34]. Despite evidence that parents of children this age can reliably report on many constructs related to their mental illness [34], perhaps it is difficult for parents to report on quality of life as distinct from the child’s functioning. Further, quality of life measures are aimed at assessing the patients’ subjective feelings about their own life, which may differ from what family members and clinicians judge as the child’s well-being. Second, perhaps the quality of life in young children is different than the quality of life in older children and adults, and cannot be measured by questions such as “During the past week, how have things been with your child helping around the house or getting things done or their energy level?” (Questions that may ultimately just measure functioning in young children) To accurately assess subjective quality of life in young children, it may be necessary to focus on the activities that children find important and that are associated with enjoyment. Developmental literature suggests, for example, that giving rather than receiving [51] and free-play [52] are associated with higher levels of happiness in children. Questions may need to be further modified to be more developmentally appropriate and to tap into the life experiences salient to children.

Based on the present results, researchers and clinicians are cautioned about delivering the original version of the PQ-LES-Q as a self-report measure to younger children, because scores may be elevated as a result of the inclusion of questions that do not apply to their lives. Otherwise, our results with two samples of youth with OCD together with previous results with depressed youth [5] suggest that the PQ-LES-Q is able to measure quality of life in children and adolescents across different diagnoses. These findings bolster evidence that the PQ-LES-Q may be applicable to youth with a variety of mental disorders, similarly to the

way the adult version has been applied to adult populations with a range of disorders (e.g., anxiety disorders and schizophrenia [53]), though more studies are needed.

Limitations

The sample size, although large for a clinical trial for children with OCD, was not that of an epidemiological study, and thus is only preliminary evidence for reliability and validity of the PQ-LES-Q in children with OCD. Further, the self-report measures did not have a 100 % response rate, especially for post-treatment surveys, so the results should be taken with caution. There was also a lack of diversity in socio-economic status and race/ethnicity in both samples, so the results may not be applicable to other populations. Thus, results need to be replicated. It will be useful to study the reliability of this measure in additional samples of young children and to compare the reliability and validity of the PQ-LES-Q to non-clinical youth to establish norms.

Clinical Implications

Assessing quality of life in adults and children alike is an important indicator of well-being that is valuable for treatment and patient satisfaction. The goal of therapy is to help the client improve his or her life, and quality of life is a good indicator of this construct [5]. The current results provide further evidence of the reliability and validity of the PQ-LES-Q for use with in children and adolescents, but cautions clinicians against using the PQ-LES-Q as a self-report measure for children under 8 years old. Specifically, with young children, clinicians should consider eliminating inappropriate questions and gathering information from the parent. Future studies should examine the PQ-LES-Q’s reliability in a more diverse sample, including with healthy patient populations compared to clinical samples. Further studies could also develop a quality of life questionnaire that better takes into account the developmental stage of the child.

Summary

The current study explored the reliability and validity of the PQ-LES-Q in two clinical samples of children with OCD. The age range of the first sample was 7–17, and participants completed the self-reported PQ-LES-Q. The second sample was children ages 5–8, and because of the participants’ developmental stage, the PQ-LES-Q was adapted for use by parents to fill out on behalf of the child participants. Results demonstrated that the PQ-LES-Q demonstrated good reliability and moderate validity in the

sample of older children. However, a significant difference between age groups in the first sample may indicate that the PQ-LES-Q did not properly assess QOL in the younger age range. The adapted PQ-LES-Q used in POTS Jr., however, demonstrated good validity and reliability in the sample of young children. This indicates that clinicians and researchers should use caution when administering the PQ-LES-Q as a self-report measure to younger children.

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