

# Appendix der interdisziplinären evidenz- und konsensbasierten S3-Leitlinie für Diagnostik und Therapie von Zwangsstörungen im Kindes- und Jugendalter

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Deutsche Gesellschaft  
für Kinder- und Jugendpsychiatrie,  
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## Appendix B

### Empfehlung 3.4.3. Allgemeine Fragen zur Therapie bei Zwangsstörungen im Kindes- und Jugendalter: Koexistierende Störungen

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Comorbid bipolar disorder and obsessive–compulsive disorder in children and adolescents: treatment implications</p> <p><b>A:</b> Amerio et al.</p> <p><b>J:</b> 2016</p> <p><b>Z:</b> <i>Australian &amp; New Zealand Journal of Psychiatry</i></p>	<p>Review</p> <p>7 studies:</p> <ul style="list-style-type: none"> <li>• 4 case reports</li> <li>• 2 cross-sectional studies</li> <li>• 1 clinical trial</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 433</li> </ul>	<ul style="list-style-type: none"> <li>• mood stabilizers</li> <li>• atypical antipsychotics</li> <li>• antidepressants</li> </ul>	<p>Y-BOCS, YMRS, HAM-D, CGI</p>	<p>Mood stabilization was effective as a first objective in a comorbid bipolar disorder and OCD, as opposed to immediate treatment with SRIs.</p>	<p>1+</p>	<p>Mood stabilization as a first objective in comorbid bipolar disorder and OCD.</p>

**Empfehlung 3.5.1. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Was ist die psychotherapeutische Behandlung der ersten Wahl?**

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> The effectiveness of treatment for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Abramowitz et al. <b>J:</b> 2005 <b>Z:</b> <i>Behavior Therapy</i></p>	<p>Metaanalysis 18 studies: • mostly repeated-measure designs with a single group • 7 placebo-controlled RCTs • 3 comparisons of active treatments</p>	<ul style="list-style-type: none"> <li>• aged &lt;18 years</li> <li>• primary diagnosis of OCD (study inclusion criterion)</li> <li>• comorbidity allowed if OCD was a main diagnosis</li> <li>• N = 843</li> <li>• mean n patients per treatment group = 30 (11–94)</li> <li>• 58.3% male</li> </ul>	<ul style="list-style-type: none"> <li>• SRI medications: clomipramine, fluoxetine, paroxetine, sertraline, fluvoxamine</li> <li>• ERP</li> <li>• placebo</li> </ul>	<p>Treatment outcome measures, primarily the CY-BOCS</p>	<p>ERP and SRI are effective in reducing pediatric OCD symptoms. ERP was superior to SRI medication; however, there were methodological differences between pharmacology and psychotherapy studies.</p>	1++	ERP, parental involvement.
<p><b>T:</b> Evidence base update for psychosocial treatments for pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Freeman et al. <b>J:</b> 2014 <b>Z:</b> <i>Journal of Clinical Child &amp; Adolescent Psychology</i></p>	<p>Review 18 studies: • 9 RCTs • 5 open • 2 naturalistic • 1 multiple baseline design • 1 effectiveness</p>	<ul style="list-style-type: none"> <li>• aged ≤19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 663</li> <li>• 37–80% male</li> </ul>	<ul style="list-style-type: none"> <li>• individual CBT</li> <li>• family-focused individual &amp; group CBT</li> <li>• non-family-focused group CBT</li> <li>• technology-based CBT</li> </ul>	<p>CY-BOCS, Y-BOCS, CHOCI, NIMH-GOCS (CGI, OBQ, FAS)</p>	<p>CBT was an effective first-line treatment for youth with OCD. Both individual- and individual family-based treatments were classified as “probably efficacious.” Preliminary support was shown for technology-based CBT.</p>	1++	CBT as a first-line treatment.
<p><b>T:</b> Intensive cognitive behavioural therapy for obsessive-compulsive disorder: a systematic review and meta-analysis</p> <p><b>A:</b> Jonsson et al. <b>J:</b> 2015 <b>Z:</b> <i>Journal of Obsessive-Compulsive and Related Disorders</i></p>	<p>Meta-analysis, Review 17 studies: • 4 RCTs • 4 controlled studies • 9 naturalistic studies. • 11 studies with adults, 6 with youth</p>	<ul style="list-style-type: none"> <li>• children, adolescents and adults</li> <li>• mean age = 27 years (adults, 35 years; youth = 12 years)</li> <li>• primary diagnosis of OCD (ICD/ DSM)</li> <li>• comorbidity allowed if OCD was a main diagnosis</li> <li>• N = 646</li> <li>• 383 patients in intensive individual therapy</li> <li>• 52% male</li> </ul>	<ul style="list-style-type: none"> <li>• intensive CBT</li> </ul>	<p>Treatment outcome measures. (Moderators)</p>	<p>Intensive CBT is an effective treatment for OCD in both youths and adults. In comparison with standard CBT, it may enhance immediate treatment effects.</p>	1++	Efficacy of intensive CBT.
<p><b>T:</b> The effectiveness of selective serotonin reuptake inhibitors for treatment of obsessive-compulsive disorder in adolescents and children: a systematic review and meta-analysis</p> <p><b>A:</b> Kotapati et al. <b>J:</b> 2019 <b>Z:</b> <i>Frontiers in Psychiatry</i></p>	<p>Meta-analysis, Review 12 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 958</li> <li>• mean age range: 11–15 years</li> <li>• 43.7–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• SSRIs</li> <li>• CBT</li> <li>• placebo</li> <li>• combination (CBT + SSRIs)</li> <li>• no intervention</li> </ul>	<p>CY-BOCS</p>	<p>CBT was effective as a first-line treatment, with substitution with SSRI, dependent on patient preference. Adding CBT to ongoing SSRI treatment (for non-responders and partial responders) was effective, but the opposite was not beneficial. Different levels of effectiveness observed in the SSRIs class.</p>	1++	CBT as a first-line treatment.

<p><b>T:</b> A meta-analysis of cognitive behavior therapy and medication for child obsessive-compulsive disorder: moderators of treatment efficacy, response, and remission</p> <p><b>A:</b> McGuire et al. <b>J:</b> 2015 <b>Z:</b> <i>Depression and anxiety</i></p>	<p>Meta-analysis 20 studies: RCTs</p>	<ul style="list-style-type: none"> <li>aged &lt;18 years</li> <li>primary diagnosis of OCD</li> <li>N = 507 in CBT studies</li> <li>N = 789 in SRI studies</li> <li>mean age: 7.1–14.6 years</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>SRI</li> </ul>	<p>CY-BOCS, NIMH-GOCS, CGI-I</p>	<p>CBT produced a large treatment effect, while SRIs produced moderate treatment effects. Comorbid anxiety disorders and tics/chronic tic disorders are good candidates for CBT. Therapeutic outcome was associated with moderating variables.</p>	1+	<p>CBT highly effective as treatment.</p>
<p><b>T:</b> Behavioural and cognitive behavioural therapy for obsessive compulsive disorder in children and adolescents</p> <p><b>A:</b> O’Kearney et al. <b>J:</b> 2006 <b>Z:</b> <i>Cochrane Database of Systematic Reviews</i></p>	<p>Review 8 studies: RCTs (12 comparisons)</p>	<ul style="list-style-type: none"> <li>aged ≤18 (4–18) years</li> <li>primary diagnosis of OCD</li> <li>N = 343</li> </ul>	<ul style="list-style-type: none"> <li>BT/CBT (alone or in combination)</li> <li>wait-list</li> <li>attention placebo</li> <li>pill placebo</li> <li>medication</li> </ul>	<p>CY-BOCS, NIMH-GOCS, CGI, remission rate</p>	<p>BT/CBT alone is effective for OCD, but may result in better outcomes when combined with medication, compared to medication alone.</p>	1++	<p>Efficacy of BT/CBT (as effective as medication alone).</p>
<p><b>T:</b> Cognitive-behavioral therapy for obsessive-compulsive disorder: a meta-analysis of treatment outcome and moderators</p> <p><b>A:</b> Olatunji et al. <b>J:</b> 2013 <b>Z:</b> <i>Journal of Psychiatric Research</i></p>	<p>Meta-analysis 16 studies: RCTs 3 studies with children</p>	<ul style="list-style-type: none"> <li>children, adolescents and adults</li> <li>mean age: 11.8–39.2 years</li> <li>primary diagnosis of OCD (DSM)</li> <li>N = 756</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>psychological placebo</li> <li>pill placebo</li> <li>waiting-list control</li> </ul>	<p>Y-BOCS, CY-BOCS, MOCI</p>	<p>CBT is effective in the treatment of OCD. Reduction of symptoms was also observed at follow-up.</p>	1-	<p>Efficacy of CBT.</p>
<p><b>T:</b> Cognitive behavioral and pharmacological treatments of OCD in children: a systematic review and meta-analysis</p> <p><b>A:</b> Öst et al. <b>J:</b> 2016 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis, Review 34 studies: RCTs</p> <ul style="list-style-type: none"> <li>25 studies on CBT</li> <li>9 studies on SRI</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD (DSM/ICD)</li> <li>N = 1991</li> <li>mean age =12.5 (5.8–15.0) years</li> <li>54.1% males</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>SRI</li> <li>combination (CBT + SRI)</li> <li>placebo</li> <li>waiting-list control</li> </ul>	<p>CY-BOCS. (Moderators)</p>	<p>CBT leads to better treatment effects than SRI or combined treatments irrespective of the format.</p>	1-	<p>CBT better than medication. CBT better than combination therapy.</p>
<p><b>T:</b> Psychological treatment of obsessive-compulsive disorder in children and adolescents: a meta-analysis</p> <p><b>A:</b> Rosa-Alcazar et al. <b>J:</b> 2015 <b>Z:</b> <i>Spanish Journal of Psychology</i></p>	<p>Meta-analysis 46 studies: • 28 one-group studies • 17 comparison studies with random assignment • 1 comparison two-groups study</p>	<ul style="list-style-type: none"> <li>aged &lt;19 years</li> <li>primary diagnosis of OCD</li> <li>N = 1164 in post-test measurements</li> <li>median age: 13 (6–15.5) years</li> <li>53.8% males (median)</li> </ul>	<ul style="list-style-type: none"> <li>different types of CBT (54 groups): psychoeducation, ERP, cognitive restructuring, relapse prevention, behavioral experiments, problem solving, biofeedback</li> <li>control</li> </ul>	<p>CY-BOCS, NIMH-GOCS, LOI-CV, CHOCI. (Moderators)</p>	<p>Multicomponent programs involving ERP, cognitive strategies and relapse prevention are the most promising treatment strategies. Parental involvement plays an important role in treatment.</p>	1-	<p>Efficacy of ERP (CBT).</p>
<p><b>T:</b> Differential efficacy of cognitive-behavioral therapy and pharmacological</p>	<p>Meta-analysis 18 studies: controlled trials</p>	<ul style="list-style-type: none"> <li>aged &lt;19 years</li> <li>primary</li> </ul>	<ul style="list-style-type: none"> <li>CBT (individual or group)</li> </ul>	<p>CY-BOCS, NIMH-GOCS</p>	<p>The results support the efficacy of three types of intervention for pediatric</p>	1++	<p>Combination better than CBT. CBT better than medication.</p>

<p>treatments for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Sanchez-Meca et al. <b>J:</b> 2014 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>with random and non-random assignment</p>	<p>diagnosis of OCD</p> <ul style="list-style-type: none"> <li>• N = 1223 in the post-test (656 in the treatment groups and 567 in the control groups)</li> <li>• mean age: 11–12.7 years</li> <li>• 46.8–55.8% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication</li> <li>• combined treatments</li> <li>• control</li> </ul>		<p>OCD: CBT, pharmacological, and combined. Combined treatments exhibited the best results.</p>		
<p><b>T:</b> A systematic review of the clinical effectiveness and cost-effectiveness of pharmacological and psychological interventions for the management of obsessive-compulsive disorder in children/adolescents and adults</p> <p><b>A:</b> Skapinakis et al. <b>J:</b> 2016 <b>Z:</b> <i>Health Technology Assessment</i></p>	<p>Review</p> <p>86 studies: RCTs only.</p> <ul style="list-style-type: none"> <li>• 22 studies (26%) in children and adolescents</li> </ul>	<ul style="list-style-type: none"> <li>• children, adolescents and adults</li> <li>• aged ≤74 years (age range for children and adolescents, 6–18 years)</li> <li>• primary diagnosis of OCD (ICD/DSM)</li> <li>• N = 8611 (7306 adults and 1305 children and adolescents)</li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, clomipramine, sertraline, fluvoxamine, citalopram, paroxetine</li> <li>• CBT/BT/CT</li> <li>• placebo</li> <li>• psychological placebo</li> <li>• waitlist</li> </ul>	<p>Y-BOCS, CY-BOCS</p>	<p>*Conclusions for children and adolescents:</p> <p>Monotherapy with CBT or in combination with sertraline were the best treatments. CBT or CBT combined with a SSRI was more likely to be cost-effective. Individual tailoring of therapy impacts cost-effectiveness. Individually tailored therapies have important implications on cost-effectiveness.</p>	<p>1++</p>	<p>Efficacy of monotherapy with CBT and combination therapy.</p>
<p><b>T:</b> Standard individual cognitive behaviour therapy for paediatric obsessive-compulsive disorder: a systematic review of effect estimates across comparisons</p> <p><b>A:</b> Skarphedinsson et al. <b>J:</b> 2015 <b>Z:</b> <i>Nordic Journal of Psychiatry</i></p>	<p>Review</p> <p>13 studies: RCTs or cluster RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤17 years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• N = 757</li> <li>• mean age = 7.1–14.5 years</li> <li>• 48% male</li> </ul>	<ul style="list-style-type: none"> <li>• standard individual CBT (SI-CBT)</li> <li>• non-active treatments: pill-placebo, therapy-placebo, waitlist</li> <li>• active treatments: SSRI, group-CBT, family-CBT, brief CBT, combination of CBT and SRI</li> </ul>	<p>CY-BOCS</p>	<p>SI-CBT was superior to waitlist and placebo therapy, with no difference compared to active treatments. Placebo therapy and active treatments were more challenging comparisons to SI-CBT than the waitlist group.</p>	<p>1++</p>	<p>Efficacy of CBT, combination therapy and medication.</p>
<p><b>T:</b> A ten-year review of the efficacy of cognitive-behavioral treatment for obsessive-compulsive disorder in children and adolescents</p> <p><b>A:</b> Stock &amp; Andrews <b>J:</b> 2004 <b>Z:</b> <i>Developmental Disabilities Bulletin</i></p>	<p>Review</p> <p>6 studies</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• diagnosis of OCD</li> <li>• N = 213</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• medication</li> <li>• combination (CBT + medication)</li> <li>• pill placebo</li> </ul>	<p>CY-BOCS, NIMH-GOCS</p>	<p>CBT seems to be an effective treatment in children and adolescents with OCD.</p>	<p>1-</p>	<p>CBT as a first-line treatment.</p>
<p><b>T:</b> Systematic review and meta-analysis: cognitive-behavioral therapy for obsessive-compulsive disorder in children and adolescents</p> <p><b>A:</b> Uhre et al. <b>J:</b> 2020</p>	<p>Meta-analysis, Review</p> <p>12 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD (DSM/ICD)</li> <li>• N = 819</li> <li>• age range 4–18 years</li> <li>• 65% patients</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• SSRIs</li> <li>• intervention</li> </ul>	<p>CY-BOCS, level of functioning, COIS-C, COIS-P, EWSAS-C, serious adverse effects</p>	<p>CBT has comparable effects to SSRIs and may be more efficacious than no intervention for pediatric OCD, though there is low certainty about the effect estimates.</p>	<p>1++</p>	<p>CBT and SSRIs have comparable effects.</p>

<p><b>Z:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i></p>		<p>with <math>\geq 1</math> comorbid disorder • 48% male</p>					
<p><b>T:</b> Meta-analysis of randomized, controlled treatment trials for pediatric obsessive-compulsive disorder  <b>A:</b> Watson et al. <b>J:</b> 2008 <b>Z:</b> <i>Child psychology and psychiatry</i></p>	<p>Meta-analysis 13 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged <math>\leq 17</math> years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• <math>N = 1016</math> for pharmacotherapy to control comparisons</li> <li>• <math>N = 161</math> for CBT to control comparisons</li> <li>• mean age: 10.75–14.5 years</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• medication: clomipramine, fluoxetine, fluvoxamine, paroxetine, sertraline</li> <li>• controls</li> </ul>	<p>CY-BOCS.</p>	<p>Larger effects sizes were found for CBT; nevertheless, the meta-analysis could not determine which treatment was superior. Both treatments individually and in combination were significantly superior to placebo.</p>	<p>1-</p>	<p>Efficacy of CBT.</p>
<p><b>T:</b> Efficacy of cognitive-behavioral therapy in pediatric obsessive-compulsive disorder: a meta-analysis  <b>A:</b> Wu, Lang &amp; Zhang <b>J:</b> 2016 <b>Z:</b> <i>Medical Science Monitor: International Medical Journal of Experimental and Clinical Research</i></p>	<p>Meta-analysis 13 studies: 7 were one-group pre-post studies</p>	<ul style="list-style-type: none"> <li>• aged <math>&lt; 18</math> years</li> <li>• primary diagnosis of OCD</li> <li>• <math>N = 415</math></li> <li>• age: 5–18 years</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> </ul>	<p>CY-BOCS</p>	<p>CBT is efficacious in treating pediatric OCD.</p>	<p>1-</p>	<p>Efficacy of CBT.</p>

### Empfehlung 3.5.2. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Wirksamkeit KVT im Familienbezug

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Evidence base update for psychosocial treatments for pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Freeman et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>Journal of Clinical Child &amp; Adolescent Psychology</i></p>	<p>Review</p> <p>18 studies:</p> <ul style="list-style-type: none"> <li>• 9 RCTs</li> <li>• 5 open</li> <li>• 2 naturalistic</li> <li>• 1 multiple baseline design</li> <li>• 1 effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 663</li> <li>• 37–80% male</li> </ul>	<ul style="list-style-type: none"> <li>• individual CBT</li> <li>• family-focused individual &amp; group CBT</li> <li>• non-family-focused group CBT</li> <li>• technology-based CBT</li> </ul>	<p>CY-BOCS, Y-BOCS, CHOCI, NIMH-GOCS (CGI, OBQ, FAS)</p>	<p>CBT was an effective first-line treatment for youth with OCD. Both individual- and individual family-based treatments were classified as “probably efficacious.” Preliminary support was shown for technology-based CBT.</p>	1++	Support for efficacy of group family-based CBT, but limited conclusions.
<p><b>T:</b> Cognitive-behavioral high parental involvement treatments for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Iniesta-Sepulveda et al.</p> <p><b>J:</b> 2017</p> <p><b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis</p> <p>27 studies:</p> <ul style="list-style-type: none"> <li>• 13 RCTs</li> <li>• 12 open trial</li> <li>• 2 case series</li> </ul>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD (DSM/ICD)</li> <li>• N = 893 at posttest measurements</li> <li>• age range: 5.76–15 years</li> <li>• 51.40% male (median proportion)</li> </ul>	<ul style="list-style-type: none"> <li>• CBT with high family involvement (CBFT)</li> <li>• controls</li> </ul>	<p>CY-BOCS</p>	<p>CBT using a family-based approach is efficient in reducing OCD symptoms in pediatric patients.</p>	1++	Role of parental involvement.
<p><b>T:</b> Family-based psychological treatment for obsessive compulsive disorder in children and adolescents: a meta-analysis and systematic review</p> <p><b>A:</b> McGrath &amp; Abbott</p> <p><b>J:</b> 2019</p> <p><b>Z:</b> <i>Clinical Child and Family Psychology Review</i></p>	<p>Meta-analysis, Review</p> <p>37 studies:</p> <ul style="list-style-type: none"> <li>• 19 uncontrolled trials</li> <li>• 15 RCTs</li> <li>• 3 multiple baseline controlled trials</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1727</li> <li>• mean age: 5.8–14.5 years</li> <li>• 55% male (median)</li> </ul>	<ul style="list-style-type: none"> <li>• family-based CBT with ERP</li> </ul>	<p>Primarily CY-BOCS, Y-BOCS. (Family factor outcomes)</p>	<p>The results point to the importance of addressing family factors in the treatment of pediatric OCD to promote positive outcomes.</p>	1++	Role of family factors.
<p><b>T:</b> Cognitive behavioral and pharmacological treatments of OCD in children: a systematic review and meta-analysis</p> <p><b>A:</b> Öst et al.</p> <p><b>J:</b> 2016</p> <p><b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis, Review</p> <p>34 studies:</p> <p>RCTs</p> <ul style="list-style-type: none"> <li>• 25 studies on CBT</li> <li>• 9 studies on SRI</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD (DSM/ICD)</li> <li>• N = 1991</li> <li>• mean age =12.5 (5.8–15.0) years</li> <li>• 54.1% males</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• SRI</li> <li>• combination (CBT + SRI)</li> <li>• placebo</li> <li>• waiting-list control</li> </ul>	<p>CY-BOCS. (Moderators)</p>	<p>CBT leads to better treatment effects than SRI or combined treatments irrespective of the format.</p>	1-	Family-based CBT superior than placebo, but not superior than individual CBT. No significant effect of parental involvement for CBT.

<p><b>T:</b> Psychological treatment of obsessive-compulsive disorder in children and adolescents: a meta-analysis</p> <p><b>A:</b> Rosa-Alcazar et al.</p> <p><b>J:</b> 2015</p> <p><b>Z:</b> <i>Spanish Journal of Psychology</i></p>	<p>Meta-analysis 46 studies: • 28 one-group studies • 17 comparison studies with random assignment • 1 comparison two-groups study</p>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1164 in post-test measurements</li> <li>• median age: 13 (6–15.5) years</li> <li>• 53.8% males (median)</li> </ul>	<ul style="list-style-type: none"> <li>• different types of CBT (54 groups): psychoeducation, ERP, cognitive restructuring, relapse prevention, behavioral experiments, problem solving, biofeedback</li> <li>• control</li> </ul>	<p>CY-BOCS, NIMH-GOCS, LOI-CV, CHOCI. (Moderators)</p>	<p>Multicomponent programs involving ERP, cognitive strategies and relapse prevention are the most promising treatment strategies. Parental involvement plays an important role in treatment.</p>	<p>1-</p>	<p>The largest effect sizes for family-based CBT (compared to individual and group CBT). Parental involvement was positively associated with outcome.</p>
<p><b>T:</b> Differential efficacy of cognitive-behavioral therapy and pharmacological treatments for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Sanchez-Meca et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis 18 studies: controlled trials with random and non-random assignment</p>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1223 in the post-test (656 in the treatment groups and 567 in the control groups)</li> <li>• mean age: 11–12.7 years</li> <li>• 46.8–55.8% male</li> </ul>	<ul style="list-style-type: none"> <li>• CBT (individual or group)</li> <li>• medication</li> <li>• combined treatments</li> <li>• control</li> </ul>	<p>CY-BOCS, NIMH-GOCS</p>	<p>The results support the efficacy of three types of intervention for pediatric OCD: CBT, pharmacological, and combined. Combined treatments exhibited the best results.</p>	<p>1++</p>	<p>Large but not significant effect of parental involvement.</p>
<p><b>T:</b> A meta-analytic review of the relationship between family accommodation and OCD symptom severity</p> <p><b>A:</b> Strauss et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>Journal of anxiety disorders</i></p>	<p>Meta-analysis, Review 14 studies: • 7 studies with children and adolescents • 7 studies with adults</p>	<ul style="list-style-type: none"> <li>• clinically significant symptoms of OCD</li> <li>• N = 849 (N = 389 children and adolescents)</li> <li>• males 44%–62%</li> <li>• age range: 6–68 years.</li> </ul>	<ul style="list-style-type: none"> <li>• relationship between family accommodation and OCD symptoms severity</li> </ul>	<p>Y-BOCS, CY-BOCS ; quantitative measure of family accommodation: FAS-IR, FAS-PR, FAS-SR.</p>	<p>There was a significant relationship between family accommodation and OCD symptoms. However, due to the cross-sectional data, the causality could not be established.</p>	<p>1+</p>	<p>Family accommodation and severity.</p>
<p><b>T:</b> Family involvement in the psychological treatment of obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Thompson-Hollands et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>Journal of Family Psychology</i></p>	<p>Meta-analysis 29 studies: • 20 single-group within-subject analyses • 12 between-group comparisons of two or more conditions • 26 acute post-treatment outcomes • 16 follow-up outcomes • 9 group treatment • 7 studies in adults</p>	<ul style="list-style-type: none"> <li>• children, adolescents, and adults</li> <li>• OCD as principal target of treatment</li> <li>• N = 1366 (youth and adults)</li> <li>• mean age: 17.89 years (SD, 9.72; range, 7.1–37.0)</li> <li>• mean sample size 47.10 (SD, 31.38; range, 14–124)</li> </ul>	<ul style="list-style-type: none"> <li>• CBT with family involvement</li> </ul>	<p>Treatment outcome measure, global functioning. (Moderators)</p>	<p>Results indicate a robust overall response to family-inclusive treatment for OCD and point to key moderators for more effective treatment</p>	<p>1-</p>	<p>Family involvement.</p>

### Empfehlung 3.5.3. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Wirksamkeit KVT im Gruppensetting

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Evidence base update for psychosocial treatments for pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Freeman et al. <b>J:</b> 2014 <b>Z:</b> <i>Journal of Clinical Child &amp; Adolescent Psychology</i></p>	<p>Review</p> <p>18 studies:</p> <ul style="list-style-type: none"> <li>• 9 RCTs</li> <li>• 5 open</li> <li>• 2 naturalistic</li> <li>• 1 multiple baseline design</li> <li>• 1 effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 663</li> <li>• 37–80% male</li> </ul>	<ul style="list-style-type: none"> <li>• individual CBT</li> <li>• family-focused individual &amp; group CBT</li> <li>• non-family-focused group CBT</li> <li>• technology-based CBT</li> </ul>	<p>CY-BOCS, Y-BOCS, CHOCI, NIMH-GOCS (CGI, OBQ, FAS)</p>	<p>CBT was an effective first-line treatment for youth with OCD. Both individual- and individual family-based treatments were classified as “probably efficacious.” Preliminary support was shown for technology-based CBT.</p>	1++	Support for efficacy of group CBT, but limited conclusions.
<p><b>T:</b> Psychological treatment of obsessive-compulsive disorder in children and adolescents: a meta-analysis</p> <p><b>A:</b> Rosa-Alcazar et al. <b>J:</b> 2015 <b>Z:</b> <i>Spanish Journal of Psychology</i></p>	<p>Meta-analysis</p> <p>46 studies:</p> <ul style="list-style-type: none"> <li>• 28 one-group studies</li> <li>• 17 comparison studies with random assignment</li> <li>• 1 comparison two-groups study</li> </ul>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1164 in post-test measurements</li> <li>• median age: 13 (6–15.5) years</li> <li>• 53.8% males (median)</li> </ul>	<ul style="list-style-type: none"> <li>• different types of CBT (54 groups): psychoeducation, ERP, cognitive restructuring, relapse prevention, behavioral experiments, problem solving, biofeedback</li> <li>• control</li> </ul>	<p>CY-BOCS, NIMH-GOCS, LOI-CV, CHOCI. (Moderators)</p>	<p>Multicomponent programs involving ERP, cognitive strategies and relapse prevention are the most promising treatment strategies. Parental involvement plays an important role in treatment.</p>	1-	The largest effect sizes for family-based CBT, followed by individual and group formats.

**Empfehlung 3.5.5. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Wirksamkeit von KVT Behandlung bei koexistierender Ticstörung**

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> A meta-analysis of cognitive behavior therapy and medication for child obsessive-compulsive disorder: moderators of treatment efficacy, response, and remission</p> <p><b>A:</b> McGuire et al. <b>J:</b> 2015 <b>Z:</b> <i>Depression and Anxiety</i></p>	<p>Meta-analysis 20 studies: RCTs.</p>	<ul style="list-style-type: none"> <li>aged &lt;18 years</li> <li>primary diagnosis of OCD</li> <li>N = 507 in CBT studies</li> <li>N = 789 in SRI studies</li> <li>mean age: 7.1–14.6 years</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>SRI</li> </ul>	<p>CY-BOCS, NIMH-GOCS, CGI-I</p>	<p>CBT produced a large treatment effect, while SRIs produced moderate treatment effects. Comorbid anxiety disorders and tics/chronic tic disorders are good candidates for CBT. Therapeutic outcome was associated with moderating variables.</p>	1+	<p>CBT is effective in OCD with tics.</p>
<p><b>T:</b> Moderators and predictors of response to cognitive behaviour therapy for pediatric obsessive-compulsive disorder: a systematic review</p> <p><b>A:</b> Turner et al. <b>J:</b> 2018 <b>Z:</b> <i>Psychiatry Research</i></p>	<p>Review 35 studies (4 for moderator analysis; 1 for moderator and predictor analyses, and 30 for predictor analyses):</p> <ul style="list-style-type: none"> <li>RCTs</li> <li>open controlled trials with quasi-randomized allocation of participants</li> <li>non-controlled trials</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD (explicit study criterion)</li> <li>N = 365</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>active medication</li> <li>combination (CBT + medication)</li> <li>pill placebo</li> <li>other psychotherapy</li> <li>wait list or treatment-as-usual (TAS)</li> </ul>	<p>CY-BOCS, (moderators, predictors)</p>	<p>Results for OCD with tics: CBT (but not sertraline) was superior to pill-placebo. Continuing CBT was inferior to starting a medication with sertraline, but only for OCD with tics.</p>	1++	<p>Presence of tics should be considered while choosing the initial treatment strategy and for non-responders to CBT.</p>

### Empfehlung 3.5.6. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Psychotherapeutische Fernbehandlung

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Behavioral intervention technologies and psychotherapy with youth: a review of the literature</p> <p><b>A:</b> Bunge et al.</p> <p><b>J:</b> 2015</p> <p><b>Z:</b> <i>Current Psychiatry Reviews</i></p>	<p>Review</p> <p>4 studies (of 53 total) on OCD:</p> <ul style="list-style-type: none"> <li>• 2 pilot studies</li> <li>• 1 case series</li> <li>• 1 case study</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD (4 studies)</li> <li>• N = 51</li> </ul>	<ul style="list-style-type: none"> <li>• behavioral intervention technologies: internet site, video game, telephone, mobile application</li> </ul>	CY-BOCS	The review found general support for behavioral intervention technologies for childhood and adolescent disorders, including OCD.	1+	Preliminary support of behavioral intervention technologies in pediatric OCD.
<p><b>T:</b> Efficacy of technology-delivered cognitive behavioural therapy for OCD versus control conditions, and in comparison with therapist-administered CBT: meta-analysis of randomized controlled trials</p> <p><b>A:</b> Dettore et al.</p> <p><b>J:</b> 2015</p> <p><b>Z:</b> <i>Cognitive Behaviour Therapy</i></p>	<p>Meta-analysis</p> <p>8 studies</p>	<ul style="list-style-type: none"> <li>• no predefined age (adults, children/adolescents)</li> <li>• primary diagnosis of OCD</li> <li>• N = 420 in the post-treatment test (all studies; N = 31 for &lt;16 years)</li> </ul>	<ul style="list-style-type: none"> <li>• non face-to-face CBT/ technology-delivered CBT (T-CBT) versus face-to-face CBT or control condition.</li> </ul>	Y-BOCS, CY-BOCS, DOCS.	T-CBT is a promising form of treatment delivery for OCD.	1++	Technology-delivered CBT is effective in (pediatric) OCD.
<p><b>T:</b> Evidence base update for psychosocial treatments for pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Freeman et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>Journal of Clinical Child &amp; Adolescent Psychology</i></p>	<p>Review</p> <p>18 studies:</p> <ul style="list-style-type: none"> <li>• 9 RCTs</li> <li>• 5 open</li> <li>• 2 naturalistic</li> <li>• 1 multiple baseline design</li> <li>• 1 effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 663</li> <li>• 37–80% male</li> </ul>	<ul style="list-style-type: none"> <li>• individual CBT</li> <li>• family-focused individual &amp; group CBT</li> <li>• non-family-focused group CBT</li> <li>• technology-based CBT</li> </ul>	CY-BOCS, Y-BOCS, CHOCI, NIMH-GOCS (CGI, OBQ, FAS)	CBT was an effective first-line treatment for youth with OCD. Both individual- and individual family-based treatments were classified as “probably efficacious.” Preliminary support was shown for technology-based CBT.	1++	Preliminary support for efficacy and acceptability of technology-delivered CBT.

### Empfehlung 3.6.2. Empfehlungen zur Pharmakotherapie: Welche Medikation soll eingesetzt werden?

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> The effectiveness of treatment for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Abramowitz et al. <b>J:</b> 2005 <b>Z:</b> <i>Behavior Therapy</i></p>	<p>Meta-analysis 18 studies: • mostly repeated-measure designs with a single group • 7 placebo-controlled RCTs • 3 comparisons of active treatments</p>	<ul style="list-style-type: none"> <li>aged &lt;18 years</li> <li>primary diagnosis of OCD (study inclusion criterion)</li> <li>comorbidity allowed if OCD was a main diagnosis</li> <li>N = 843</li> <li>mean n patients per treatment group = 30 (11–94)</li> <li>58.3% male</li> </ul>	<ul style="list-style-type: none"> <li>SRI medications: clomipramine, fluoxetine, paroxetine, sertraline, fluvoxamine</li> <li>ERP</li> <li>placebo</li> </ul>	Treatment outcome measures, primarily the CY-BOCS	ERP and SRI are effective in reducing pediatric OCD symptoms. ERP was superior to SRI medication; however, there were methodological differences between pharmacology and psychotherapy studies.	1++	SRI medication more effective than placebo, but less effective than ERP.
<p><b>T:</b> Clinical response and risk for reported suicidal ideation and suicide attempts in pediatric antidepressant treatment</p> <p><b>A:</b> Bridge et al. <b>J:</b> 2007 <b>Z:</b> <i>JAMA</i></p>	<p>Meta-analysis 27 studies: including 6 studies on OCD; RCTs</p>	<ul style="list-style-type: none"> <li>aged &lt;19 years</li> <li>primary diagnosis of OCD (MDD and non-OCD anxiety disorders were not considered)</li> <li>N = 718</li> </ul>	<ul style="list-style-type: none"> <li>antidepressant medication</li> <li>placebo</li> </ul>	Treatment outcome measures (CY-BOCS), suicidal ideation	Relative to placebo, antidepressants are efficacious for pediatric OCD. Benefits appear to be much greater than risks from suicidal ideation.	1++	Efficacy of antidepressant medication.
<p><b>T:</b> Which SSRI? A meta-analysis of pharmacotherapy trials in pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Geller et al. <b>J:</b> 2003 <b>Z:</b> <i>The American Journal of Psychiatry</i></p>	<p>Meta-analysis 12 studies; randomized, double-blind, placebo- or active-comparator-controlled; study designs: • 7 parallel • 3 cross-over • 1 withdrawal • 1 substitution</p>	<ul style="list-style-type: none"> <li>aged ≤19 years</li> <li>primary diagnosis of OCD (DSM)</li> <li>N = 1044</li> <li>29–73.7% male</li> </ul>	<ul style="list-style-type: none"> <li>medication: paroxetine, fluoxetine, fluvoxamine, sertraline, clomipramine</li> <li>placebo control</li> </ul>	CY-BOCS, NIMH-GOCS, LOI-CV, CGI	Serotonergic medications are highly significantly superior to placebo in treating OCD in pediatric patients. Clomipramine was statistically superior to SSRIs, but given its pharmacokinetic properties and side effects, it may not be a first-line treatment.	1+	SSRI as a first-choice medication. Clomipramine effective, but has side effects.
<p><b>T:</b> Efficacy of antidepressant medications in children and adolescents with obsessive-compulsive disorder: a systematic appraisal</p> <p><b>A:</b> Gentile <b>J:</b> 2011 <b>Z:</b> <i>Journal of Clinical Psychopharmacology</i></p>	<p>Review 27 studies: • RCTs • open-label studies</p>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD</li> <li>N = 928</li> </ul>	<ul style="list-style-type: none"> <li>medication: fluoxetine, fluvoxamine, paroxetine, sertraline, citalopram, clomipramine</li> <li>placebo</li> </ul>	CY-BOCS, Y-BOCS, LOI, CGI, NIMH-GOCS	Clomipramine and sertraline, should be considered as first-choice pharmacological agents for treating pediatric OCD.	1+	Clomipramine and sertraline as first-choice medication.
<p><b>T:</b> Selective serotonin reuptake inhibitors in pediatric psychopharmacology: a review of the evidence</p> <p><b>A:</b> Hammerness et al. <b>J:</b> 2006</p>	<p>Review 19 studies on OCD: controlled clinical trials</p>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD</li> <li>N ≈ 1000</li> </ul>	<ul style="list-style-type: none"> <li>SSRIs: fluoxetine, paroxetine, fluvoxamine, sertraline, citalopram</li> <li>placebo</li> </ul>	Primarily CY-BOCS	Short- and medium-term efficacy of SSRIs, including fluoxetine, fluvoxamine, paroxetine, and sertraline.	1+	Efficacy of SSRIs.

<p><b>Z:</b> <i>The Journal of Pediatrics</i></p>							
<p><b>T:</b> Pharmacotherapy for anxiety disorders in children and adolescents  <b>A:</b> Ipser et al. <b>J:</b> 2010 <b>Z:</b> <i>Cochrane</i></p>	<p>Review 22 studies: • RCTs • parallel-group and crossover designs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• diagnosis of anxiety disorders (DSM)</li> <li>• N = 2519</li> <li>• mean age = 12 years</li> <li>• 52.1% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication: SSRIs, SNRIs, TCAs, benzodiazepines</li> <li>• placebo control</li> </ul>	<p>CGI-I, CY-BOCS</p>	<p>Medication (short-term) can be effective in pediatric anxiety disorders. There is no evidence that any particular class of medication is more effective or better tolerated. The use of benzodiazepines cannot be recommended. Evidence supporting the value of long-term medication interventions is limited and inconsistent.</p>	<p>1++</p>	<p>No difference between SSRIs. Side effects low but reported for fluoxetine and paroxetine. Benzodiazepines not recommended.</p>
<p><b>T:</b> The place of and evidence for serotonin reuptake inhibitors (SRIs) for obsessive compulsive disorder (OCD) in children and adolescents: views based on a systematic review and meta-analysis  <b>A:</b> Ivarsson et al. <b>J:</b> 2015 <b>Z:</b> <i>Psychiatry Research</i></p>	<p>Meta-analysis, Review 14 studies: • RCTs • quasi-RCTs • cluster-RCTs • first phase of RCTs with cross-over designs</p>	<ul style="list-style-type: none"> <li>• aged ≤17 years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• N = 1002</li> <li>• mean age: 11.3–14.5 years</li> <li>• 43–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, paroxetine, fluvoxamine, sertraline, clomipramine</li> <li>• CBT</li> <li>• combination with SRIs versus placebo, SRIs versus CBT, SRIs and CBT versus placebo, and SRIs and CBT versus CBT alone</li> </ul>	<p>CY-BOCS, LOI-CV, CGI-I, serious adverse effects, attrition</p>	<p>CBT efficacy exceeds that of SRIs. Moderate effect sizes for SRIs. Combining SRIs and CBT does not increase efficacy compared to CBT only, while the combination shows favorable outcomes versus SRI alone.</p>	<p>1++</p>	<p>Clomipramine as most effective drug. No difference among SSRIs.</p>
<p><b>T:</b> The effectiveness of selective serotonin reuptake inhibitors for treatment of obsessive-compulsive disorder in adolescents and children: a systematic review and meta-analysis  <b>A:</b> Kotapati et al. <b>J:</b> 2019 <b>Z:</b> <i>Frontiers in Psychiatry</i></p>	<p>Meta-analysis, Review 12 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 958</li> <li>• mean age range: 11–15 years</li> <li>• 43.7–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• SSRIs</li> <li>• CBT</li> <li>• placebo</li> <li>• combination (CBT + SSRIs)</li> <li>• no intervention</li> </ul>	<p>CY-BOCS</p>	<p>CBT was effective as a first-line treatment, with substitution with SSRI, dependent on patient preference. Adding CBT to ongoing SSRI treatment (for non-responders and partial responders) was effective, but the opposite was not beneficial. Different levels of effectiveness observed in the SSRIs class.</p>	<p>1++</p>	<p>Fluoxetine and sertraline more effective than fluvoxamine.</p>
<p><b>T:</b> Efficacy and safety of selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors, and placebo for common psychiatric disorders among children and adolescents: a systematic review and meta-analysis  <b>A:</b> Locher et al. <b>J:</b> 2017 <b>Z:</b> <i>JAMA Psychiatry</i></p>	<p>Meta-analysis, Review 36 studies: RCTs 8 trials on OCD</p>	<ul style="list-style-type: none"> <li>• aged &lt;18 years</li> <li>• diagnosis of OCD, anxiety disorders, depressive disorders, PTSD (DSM)</li> <li>• N = 807 (OCD)</li> <li>• mean age: 12.9 years (SD: 5.1)</li> <li>• 48.6% males</li> </ul>	<ul style="list-style-type: none"> <li>• medication: SSRIs, SNRIs</li> <li>• placebo</li> </ul>	<p>Disorder-specific scale (e.g., CY-BOCS), general severity scale (e.g., GSI)</p>	<p>SSRIs and SNRIs were more beneficial than placebo in children and adolescents (yet with a small and disorder-specific effect). There were larger differences between drug and placebo for anxiety disorders than for other conditions. The large response to placebo was especially seen in depressive disorders. There were more common severe adverse events for SSRIs and SNRIs than for placebo.</p>	<p>1+</p>	<p>Fluvoxamine: best effects over all studied disorders.</p>

<p><b>T:</b> A meta-analysis of cognitive behavior therapy and medication for child obsessive-compulsive disorder: moderators of treatment efficacy, response, and remission</p> <p><b>A:</b> McGuire et al. <b>J:</b> 2015 <b>Z:</b> <i>Depression and Anxiety</i></p>	<p>Review 20 studies: RCTs</p>	<ul style="list-style-type: none"> <li>aged &lt;18 years</li> <li>primary diagnosis of OCD</li> <li>N = 507 in CBT studies</li> <li>N = 789 in SRI studies</li> <li>mean age: 7.1–14.6 years</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>SRI</li> </ul>	<p>CY-BOCS, NIMH-GOCS, CGI-I</p>	<p>CBT produced a large treatment effect, while SRIs produced moderate treatment effects. Comorbid anxiety disorders and tics/chronic tic disorders are good candidates for CBT. Therapeutic outcome was associated with moderating variables.</p>	<p>1+</p>	<p>SRI: moderate treatment effects.</p>
<p><b>T:</b> The pharmacological management of childhood anxiety disorders: a review</p> <p><b>A:</b> Reinblatt &amp; Riddle <b>J:</b> 2007 <b>Z:</b> <i>Psychopharmacology</i></p>	<p>Review 21 studies: 11 studies on OCD; RCTs</p>	<ul style="list-style-type: none"> <li>aged &lt;18 years</li> <li>diagnosis of OCD (non-OCD anxiety disorders were not considered)</li> <li>N = 1244</li> </ul>	<ul style="list-style-type: none"> <li>medication: SSRIs, tricyclic antidepressants</li> <li>placebo</li> </ul>	<p>CY-BOCS, NIMH-GOCS, LOI</p>	<p>There is good evidence for the efficacy of SSRIs and tricyclic antidepressants to treat pediatric OCD. The choice should be made based on the risk of drug interactions and pharmacokinetic properties.</p>	<p>1+</p>	<p>Efficacy of SSRIs and tricyclic antidepressants.</p>
<p><b>T:</b> Pharmacological treatments for obsessive-compulsive disorder in children and adolescents: a qualitative review</p> <p><b>A:</b> Rosa-Alcazar, Iniesta-Sepulveda, Rosa-Alcazar <b>J:</b> 2013 <b>Z:</b> <i>Actas Españolas de Psiquiatría</i></p>	<p>Review 61 studies</p>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD (DSM, ICD)</li> <li>N = 2564</li> </ul>	<ul style="list-style-type: none"> <li>medication: tricyclic antidepressants, SSRIs, third generation monotherapy, drug augmentation</li> <li>combination therapy (medication + CBT)</li> <li>placebo, other</li> </ul>	<p>Not defined</p>	<p>Medication has adequate efficiency in reducing OCD symptoms in children and adolescents.</p>	<p>1-</p>	<p>SSRIs as first choice medication, less potent than clomipramine, but better tolerated.</p>
<p><b>T:</b> Comparing the effects of second-generation antipsychotics versus selective serotonin reuptake inhibitors in refractory obsessive-compulsive disorder: a systematic review of the past, present, and future clinical trials</p> <p><b>A:</b> Sayyah &amp; Rahim <b>J:</b> 2016 <b>Z:</b> <i>Asian Journal of Pharmaceutical and Clinical Research</i></p>	<p>Review 16 studies (out of 78) on OCD in children and adolescents; RCTs</p>	<ul style="list-style-type: none"> <li>aged ≤18 years</li> <li>primary diagnosis of OCD (DSM/ICD)</li> <li>N = 1313</li> </ul>	<ul style="list-style-type: none"> <li>medication (SSRIs: fluoxetine, fluvoxamine, sertraline, paroxetine)</li> <li>placebo</li> <li>routine drug therapy</li> <li>CBT/BT</li> </ul>	<p>CY-BOCS, CGI, NIMH-OCS</p>	<p>Fluvoxamine is effective as a first-line treatment in pediatric and adult OCD.</p>	<p>1-</p>	<p>Efficacy of fluvoxamine.</p>
<p><b>T:</b> Meta-analysis of randomized, controlled treatment trials for pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Watson et al. <b>J:</b> 2008 <b>Z:</b> <i>Child psychology and psychiatry</i></p>	<p>Meta-analysis 13 studies: RCTs</p>	<ul style="list-style-type: none"> <li>aged ≤17 years</li> <li>primary diagnosis of OCD (DSM)</li> <li>N = 1016 for pharmacotherapy to control comparisons</li> <li>N = 161 for CBT to control comparisons</li> <li>mean age: 10.75–14.5 years</li> </ul>	<ul style="list-style-type: none"> <li>CBT</li> <li>medication: clomipramine, fluvoxamine, paroxetine, sertraline</li> <li>controls</li> </ul>	<p>CY-BOCS.</p>	<p>Larger effects sizes were found for CBT; nevertheless, the meta-analysis could not determine which treatment was superior. Both treatments individually and in combination were significantly superior to placebo.</p>	<p>1-</p>	<p>Efficacy of pharmacotherapy.</p>

### Empfehlung 3.6.9. Empfehlungen zur Pharmakotherapie: Psychopharmakotherapie mit Clomipramin und andere trizyklische Antidepressiva

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> The effectiveness of treatment for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Abramowitz et al.</p> <p><b>J:</b> 2005</p> <p><b>Z:</b> <i>Behavior Therapy</i></p>	<p>Meta-analysis 18 studies:</p> <ul style="list-style-type: none"> <li>• mostly repeated-measure designs with a single group</li> <li>• 7 placebo-controlled RCTs</li> <li>• 3 comparisons of active treatments</li> </ul>	<ul style="list-style-type: none"> <li>• aged &lt;18 years</li> <li>• primary diagnosis of OCD (study inclusion criterion)</li> <li>• comorbidity allowed if OCD was a main diagnosis</li> <li>• <math>N = 843</math></li> <li>• mean <math>n</math> patients per treatment group = 30 (11–94)</li> <li>• 58.3% male</li> </ul>	<ul style="list-style-type: none"> <li>• SRI medications: clomipramine, fluoxetine, paroxetine, sertraline, fluvoxamine</li> <li>• ERP</li> <li>• placebo</li> </ul>	Treatment outcome measures, primarily the CY-BOCS	ERP and SRI are effective in reducing pediatric OCD symptoms. ERP was superior to SRI medication; however, there were methodological differences between pharmacology and psychotherapy studies.	1++	No difference in efficacy between clomipramine and other SRIs.
<p><b>T:</b> Which SSRI? A meta-analysis of pharmacotherapy trials in pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Geller et al.</p> <p><b>J:</b> 2003</p> <p><b>Z:</b> <i>The American Journal of Psychiatry</i></p>	<p>Meta-analysis 12 studies; randomized, double-blind, placebo- or active-comparator-controlled; study designs:</p> <ul style="list-style-type: none"> <li>• 7 parallel</li> <li>• 3 cross-over</li> <li>• 1 withdrawal</li> <li>• 1 substitution</li> </ul>	<ul style="list-style-type: none"> <li>• aged <math>\leq 19</math> years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• <math>N = 1044</math></li> <li>• 29–73.7% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication: paroxetine, fluoxetine, fluvoxamine, sertraline, clomipramine</li> <li>• placebo control</li> </ul>	CY-BOCS, NIMH-GOCS, LOI-CV, CGI	Serotonergic medications are highly significantly superior to placebo in treating OCD in pediatric patients. Clomipramine was statistically superior to SSRIs, but given its pharmacokinetic properties and side effects, it may not be a first-line treatment.	1+	Clomipramine more effective than SSRIs, but has side effects.
<p><b>T:</b> Efficacy of antidepressant medications in children and adolescents with obsessive-compulsive disorder: a systematic appraisal</p> <p><b>A:</b> Gentile</p> <p><b>J:</b> 2011</p> <p><b>Z:</b> <i>Journal of Clinical Psychopharmacology</i></p>	<p>Review 27 studies:</p> <ul style="list-style-type: none"> <li>• RCTs</li> <li>• open-label studies</li> </ul>	<ul style="list-style-type: none"> <li>• aged <math>\leq 18</math> years</li> <li>• primary diagnosis of OCD</li> <li>• <math>N = 928</math></li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, fluvoxamine, paroxetine, sertraline, citalopram, clomipramine</li> <li>• placebo</li> </ul>	CY-BOCS, Y-BOCS, LOI, CGI, NIMH-GOCS	Clomipramine and sertraline, should be considered as first-choice pharmacological agents for treating pediatric OCD.	1+	Both SSRIs and tricyclic antidepressants are effective in treating pediatric OCD.
<p><b>T:</b> Pharmacotherapy for anxiety disorders in children and adolescents</p> <p><b>A:</b> Ipser et al.</p> <p><b>J:</b> 2010</p> <p><b>Z:</b> <i>Cochrane</i></p>	<p>Review 22 studies:</p> <ul style="list-style-type: none"> <li>• RCTs</li> <li>• parallel-group and crossover designs</li> </ul>	<ul style="list-style-type: none"> <li>• aged <math>\leq 18</math> years</li> <li>• diagnosis of anxiety disorders (DSM)</li> <li>• <math>N = 2519</math></li> <li>• mean age = 12 years</li> <li>• 52.1% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication: SSRIs, SNRIs, TCAs, benzodiazepines</li> <li>• placebo control</li> </ul>	CGI-I, CY-BOCS	Medication (short-term) can be effective in pediatric anxiety disorders. There is no evidence that any particular class of medication is more effective or better tolerated. The use of benzodiazepines cannot be recommended. Evidence supporting the value of long-term medication interventions is limited and inconsistent.	1++	Efficacy of medication (short-term), including clomipramine. No evidence that any class of medication is more effective or better tolerated.
<p><b>T:</b> The place of and evidence for serotonin reuptake inhibitors (SRIs) for obsessive compulsive disorder (OCD) in children and adolescents: views</p>	<p>Meta-analysis, Review 14 studies:</p> <ul style="list-style-type: none"> <li>• RCTs</li> <li>• quasi-RCTs</li> <li>• cluster-RCTs</li> </ul>	<ul style="list-style-type: none"> <li>• aged <math>\leq 17</math> years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• <math>N = 1002</math></li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, paroxetine, fluvoxamine, sertraline, clomipramine</li> </ul>	CY-BOCS, LOI-CV, CGI-I, serious adverse effects, attrition	CBT efficacy exceeds that of SRIs. Moderate effect sizes for SRIs. Combining SRIs and CBT does not increase efficacy compared to CBT only, while the combination	1++	Clomipramine more efficacious than SSRIs.

<p>based on a systematic review and meta-analysis</p> <p><b>A:</b> Ivarsson et al. <b>J:</b> 2015 <b>Z:</b> <i>Psychiatry Research</i></p>	<ul style="list-style-type: none"> <li>• first phase of RCTs with cross-over designs</li> </ul>	<ul style="list-style-type: none"> <li>• mean age: 11.3–14.5 years</li> <li>• 43–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• combination with SRIs versus placebo, SRIs versus CBT, SRIs and CBT versus placebo, and SRIs and CBT versus CBT alone</li> </ul>		<p>shows favorable outcomes versus SRI alone.</p>		
<p><b>T:</b> Cognitive behavioral and pharmacological treatments of OCD in children: a systematic review and meta-analysis</p> <p><b>A:</b> Öst et al. <b>J:</b> 2016 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis, Review</p> <p>34 studies: RCTs</p> <ul style="list-style-type: none"> <li>• 25 studies on CBT</li> <li>• 9 studies on SRI</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD (DSM/ICD)</li> <li>• N = 1991</li> <li>• mean age =12.5 (5.8–15.0) years</li> <li>• 54.1% males</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• SRI</li> <li>• combination (CBT + SRI)</li> <li>• placebo</li> <li>• waiting-list control</li> </ul>	<p>CY-BOCS. (Moderators)</p>	<p>CBT leads to better treatment effects than SRI or combined treatments irrespective of the format.</p>	<p>1-</p>	<p>Higher effects sizes for clomipramine than other SSRIs.</p>
<p><b>T:</b> The pharmacological management of childhood anxiety disorders: a review</p> <p><b>A:</b> Reinblatt &amp; Riddle <b>J:</b> 2007 <b>Z:</b> <i>Psychopharmacology</i></p>	<p>Review</p> <p>21 studies: 11 studies on OCD; RCTs</p>	<ul style="list-style-type: none"> <li>• aged &lt;18 years</li> <li>• diagnosis of OCD (non-OCD anxiety disorders were not considered)</li> <li>• N = 1244</li> </ul>	<ul style="list-style-type: none"> <li>• medication: SSRIs, tricyclic antidepressants</li> <li>• placebo</li> </ul>	<p>CY-BOCS, NIMH-GOCS, LOI</p>	<p>There is good evidence for the efficacy of SSRIs and tricyclic antidepressants to treat pediatric OCD. The choice should be made based on the risk of drug interactions and pharmacokinetic properties.</p>	<p>1+</p>	<p>Efficacy of SSRIs and clomipramine.</p>
<p><b>T:</b> Differential efficacy of cognitive-behavioral therapy and pharmacological treatments for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Sanchez-Meca et al. <b>J:</b> 2014 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis</p> <p>18 studies: controlled trials with random and non-random assignment</p>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1223 in the post-test (656 in the treatment groups and 567 in the control groups)</li> <li>• mean age: 11–12.7 years</li> <li>• 46.8–55.8% male</li> </ul>	<ul style="list-style-type: none"> <li>• CBT (individual or group)</li> <li>• medication</li> <li>• combined treatments</li> <li>• control</li> </ul>	<p>CY-BOCS, NIMH-GOCS</p>	<p>The results support the efficacy of three types of intervention for pediatric OCD: CBT, pharmacological, and combined. Combined treatments exhibited the best results.</p>	<p>1++</p>	<p>Clomipramine more efficacious than SSRIs, but more side effects.</p>
<p><b>T:</b> Systematic review and meta-analysis: early treatment responses of selective serotonin reuptake inhibitors and clomipramine in pediatric obsessive-compulsive disorder</p> <p><b>A:</b> Varigonda et al. <b>J:</b> 2016 <b>Z:</b> <i>The Journal of the American Academy of Child and Adolescent Psychiatry</i></p>	<p>Meta-analysis, Review</p> <p>9 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years (treatment population)</li> <li>• primary diagnosis of OCD</li> <li>• N = 801</li> </ul>	<ul style="list-style-type: none"> <li>• medication: SSRIs, clomipramine</li> <li>• placebo</li> </ul>	<p>CY-BOCS</p>	<p>The greatest incremental treatment gains in pediatric OCD were present early in SSRI treatment. This is similar to adults with OCD and children and adults with major depression. The difference in efficacy between clomipramine and placebo was higher than that between SSRIs and placebo.</p>	<p>1++</p>	<p>Clomipramine more efficacious than SSRIs.</p>

### Empfehlung 3.6.10. Empfehlungen zur Pharmakotherapie: Andere Medikamente

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Glutamatergic agents in the treatment of compulsivity and impulsivity in child and adolescent psychiatry: a systematic review of the literature</p> <p><b>A:</b> Mechler et al.</p> <p><b>J:</b> 2017</p> <p><b>Z:</b> <i>Zeitschrift für Kinder-und Jugendpsychiatrie und Psychotherapie</i></p>	<p>Review</p> <p>6 studies (out of 21) on OCD:</p> <ul style="list-style-type: none"> <li>• 5 RCTs</li> <li>• 1 open-label trial</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• diagnosis of OCD, including trichotillomania and nail-biting (other diagnoses, i.e., ASD / PDD / FXS or ADHD, were not considered)</li> <li>• N = 194</li> </ul>	<ul style="list-style-type: none"> <li>• Riluzole</li> <li>• D-cycloserine</li> <li>• N-acetylcysteine</li> </ul>	<p>CY-BOCS, MGH-HPS</p>	<p>N-acetylcysteine has potential for treatment of pediatric OCD.</p>	<p>1++</p>	<p>Limited evidence, but some potential for N-acetylcysteine in treating pediatric OCD.</p>

### Empfehlung 3.6.11. Empfehlungen zur Pharmakotherapie: Augmentation mit Antipsychotika

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Polypharmacy with antidepressants in children and adolescents</p> <p><b>A:</b> Diaz-Caneja et al.</p> <p><b>J:</b> 2014</p> <p><b>Z:</b> <i>International Journal of Neuropsychopharmacology</i></p>	<p>Review</p> <p>4 studies (out of 37) on OCD reporting augmentation with antipsychotics:</p> <ul style="list-style-type: none"> <li>• naturalistic</li> <li>• open label</li> <li>• case series</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 103</li> </ul>	<ul style="list-style-type: none"> <li>• SRI/ SSRIs / clomipramine + SGAs / aripiprazole / risperidone</li> </ul>	<p>CY-BOCS, Y-BOCS, C-GAS, CGI-I, CGI-S, efficacy/safety</p>	<p>Current limited evidence supports augmentation of SSRIs with SGAs in treatment-resistant pediatric OCD.</p>	<p>1+</p>	<p>Some evidence for augmentation of SSRIs with SGAs in treatment-resistant pediatric OCD.</p>

### Empfehlung 3.7. Wirksamkeit von Kombinationstherapie von KVT mit Medikation

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Meta-analysis: hoarding symptoms associated with poor treatment outcome in obsessive-compulsive disorder</p> <p><b>A:</b> Bloch et al. <b>J:</b> 2014 <b>Z:</b> <i>Molecular Psychiatry</i></p>	<p>Meta-analysis 4 studies (out of 21) on OCD in children and adolescents; only case-control and cohort studies in this group</p>	<p>In 4 relevant studies: • aged ≤19 years • primary diagnosis of OCD, with and without hoarding symptoms • N = 193</p>	<ul style="list-style-type: none"> <li>• medication</li> <li>• behavioral therapy</li> <li>• combination</li> </ul>	CGI, DY-BOCS.	Hoarding symptoms were associated with a poor response to traditional OCD treatment.	1++	Hoarding symptoms associated with poor treatment response.
<p><b>T:</b> The place of and evidence for serotonin reuptake inhibitors (SRIs) for obsessive compulsive disorder (OCD) in children and adolescents: views based on a systematic review and meta-analysis</p> <p><b>A:</b> Ivarsson et al. <b>J:</b> 2015 <b>Z:</b> <i>Psychiatry Research</i></p>	<p>Meta-analysis, Review 14 studies: • RCTs • quasi-RCTs • cluster-RCTs • first phase of RCTs with cross-over designs</p>	<ul style="list-style-type: none"> <li>• aged ≤17 years</li> <li>• primary diagnosis of OCD (DSM)</li> <li>• N = 1002</li> <li>• mean age: 11.3–14.5 years</li> <li>• 43–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, paroxetine, fluvoxamine, sertraline, clomipramine</li> <li>• CBT</li> <li>• combination with SRIs versus placebo, SRIs versus CBT, SRIs and CBT versus placebo, and SRIs and CBT versus CBT alone</li> </ul>	CY-BOCS, LOI-CV, CGI-I, serious adverse effects, attrition	CBT efficacy exceeds that of SRIs. Moderate effect sizes for SRIs. Combining SRIs and CBT does not increase efficacy compared to CBT only, while the combination shows favorable outcomes versus SRI alone.	1++	Combination is not superior to CBT alone.
<p><b>T:</b> The effectiveness of selective serotonin reuptake inhibitors for treatment of obsessive-compulsive disorder in adolescents and children: a systematic review and meta-analysis</p> <p><b>A:</b> Kotapati et al. <b>J:</b> 2019 <b>Z:</b> <i>Frontiers in Psychiatry</i></p>	<p>Meta-analysis, Review 12 studies: RCTs</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 958</li> <li>• mean age range: 11–15 years</li> <li>• 43.7–65% male</li> </ul>	<ul style="list-style-type: none"> <li>• SSRIs</li> <li>• CBT</li> <li>• placebo</li> <li>• combination (CBT + SSRIs)</li> <li>• no intervention</li> </ul>	CY-BOCS	CBT was effective as a first-line treatment, with substitution with SSRI, dependent on patient preference. Adding CBT to ongoing SSRI treatment (for non-responders and partial responders) was effective, but the opposite was not beneficial. Different levels of effectiveness observed in the SSRIs class.	1++	Benefit from adding CBT to ongoing SSRI treatment, but not vice versa.
<p><b>T:</b> Behavioural and cognitive behavioural therapy for obsessive compulsive disorder in children and adolescents</p> <p><b>A:</b> O’Kearney et al. <b>J:</b> 2006 <b>Z:</b> <i>Cochrane Database of Systematic Reviews</i></p>	<p>Review 8 studies: RCTs (12 comparisons)</p>	<ul style="list-style-type: none"> <li>• aged ≤18 (4–18) years</li> <li>• primary diagnosis of OCD</li> <li>• N = 343</li> </ul>	<ul style="list-style-type: none"> <li>• BT/CBT (alone or in combination)</li> <li>• wait-list</li> <li>• attention placebo</li> <li>• pill placebo</li> <li>• medication</li> </ul>	CY-BOCS, NIMH-GOCS, CGI, remission rate	BT/CBT alone is effective for OCD, but may result in better outcomes when combined with medication, compared to medication alone.	1++	Better outcomes of combination compared to medication alone, but not BT/CBT alone.
<p><b>T:</b> Cognitive behavioral and pharmacological treatments of OCD in children: a systematic review and meta-analysis</p> <p><b>A:</b> Öst et al. <b>J:</b> 2016 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis, Review 34 studies: RCTs • 25 studies on CBT • 9 studies on SRI</p>	<ul style="list-style-type: none"> <li>• aged ≤18 years</li> <li>• primary diagnosis of OCD (DSM/ICD)</li> <li>• N = 1991</li> <li>• mean age =12.5 (5.8–15.0) years</li> <li>• 54.1% males</li> </ul>	<ul style="list-style-type: none"> <li>• CBT</li> <li>• SRI</li> <li>• combination (CBT + SRI)</li> <li>• placebo</li> <li>• waiting-list control</li> </ul>	CY-BOCS. (Moderators)	CBT leads to better treatment effects than SRI or combined treatments irrespective of the format.	1-	CBT more efficacious than medication. CBT more efficacious than combination.

<p><b>T:</b> Differential efficacy of cognitive-behavioral therapy and pharmacological treatments for pediatric obsessive-compulsive disorder: a meta-analysis</p> <p><b>A:</b> Sanchez-Meca et al. <b>J:</b> 2014 <b>Z:</b> <i>Journal of Anxiety Disorders</i></p>	<p>Meta-analysis 18 studies: controlled trials with random and non-random assignment</p>	<ul style="list-style-type: none"> <li>• aged &lt;19 years</li> <li>• primary diagnosis of OCD</li> <li>• N = 1223 in the post-test (656 in the treatment groups and 567 in the control groups)</li> <li>• mean age: 11–12.7 years</li> <li>• 46.8–55.8% male</li> </ul>	<ul style="list-style-type: none"> <li>• CBT (individual or group)</li> <li>• medication</li> <li>• combined treatments</li> <li>• control</li> </ul>	<p>CY-BOCS, NIMH-GOCS</p>	<p>The results support the efficacy of three types of intervention for pediatric OCD: CBT, pharmacological, and combined. Combined treatments exhibited the best results.</p>	<p>1++</p>	<p>Efficacy of CBT, pharmacotherapy, and combination. Best effects for the combination.</p>
<p><b>T:</b> A systematic review of the clinical effectiveness and cost-effectiveness of pharmacological and psychological interventions for the management of obsessive-compulsive disorder in children/adolescents and adults</p> <p><b>A:</b> Skapinakis et al. <b>J:</b> 2016 <b>Z:</b> <i>Health Technology Assessment</i></p>	<p>Review 86 studies: RCTs only. • 22 studies (26%) in children and adolescents</p>	<ul style="list-style-type: none"> <li>• children, adolescents and adults</li> <li>• aged ≤74 years (age range for children and adolescents, 6–18 years)</li> <li>• primary diagnosis of OCD (ICD/DSM)</li> <li>• N = 8611 (7306 adults and 1305 children and adolescents)</li> </ul>	<ul style="list-style-type: none"> <li>• medication: fluoxetine, clomipramine, sertraline, fluvoxamine, citalopram, paroxetine</li> <li>• CBT/BT/CT</li> <li>• placebo</li> <li>• psychological placebo</li> <li>• waitlist</li> </ul>	<p>Y-BOCS, CY-BOCS</p>	<p>*Conclusions for children and adolescents: Monotherapy with CBT or in combination with sertraline were the best treatments. CBT or CBT combined with a SSRI was more likely to be cost-effective. Individual tailoring of therapy impacts cost-effectiveness. Individually tailored therapies have important implications on cost-effectiveness.</p>	<p>1++</p>	<p>CBT or CBT combined with a SSRI are more likely to be cost-effective.</p>

## Appendix C

### Empfehlung 3.5.1. Die psychotherapeutische Behandlung der ersten Wahl

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Evaluation of exposure with response-prevention for obsessive compulsive disorder in childhood and adolescence</p> <p><b>A:</b> Bolton &amp; Perrin</p> <p><b>J:</b> 2008</p> <p><b>Z:</b> <i>Journal of Behavior Therapy and Experimental Psychiatry</i></p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 (mean = 13.2; range: 8–17)</li> <li>• primary diagnosis of OCD</li> <li>• N = 20</li> <li>• 14 males, 6 females</li> </ul>	<ul style="list-style-type: none"> <li>• exposure with response-prevention (E/RP) delivered over 5-weeks</li> <li>• wait-list condition</li> </ul>	CY-BOCS, CHOCI	Statistically and clinically significant symptom improvement was found in the E/RP group relative to controls. The effect was maintained 14 weeks later.	1+	Exposure with response-prevention is an effective treatment strategy for children and adolescents with OCD.
<p><b>T:</b> Cognitive-behavior therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder</p> <p><b>A:</b> The Pediatric OCD Treatment Study Team</p> <p><b>J:</b> 2004</p> <p><b>Z:</b> <i>JAMA</i></p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 (mean = 11.7 ± 2.7; range: 7–17)</li> <li>• primary diagnosis of OCD</li> <li>• N = 112</li> <li>• 56 males, 56 females</li> </ul>	<ul style="list-style-type: none"> <li>• cognitive-behavior therapy (CBT) alone</li> <li>• sertraline alone</li> <li>• combined CBT and sertraline</li> <li>• pill placebo</li> </ul>	CY-BOCS	There was a statistically significant effect for CBT alone, sertraline alone, and combined treatment relative to placebo. Combined treatment proved superior to CBT alone and to sertraline alone, which did not differ from each other. The active treatments were well-tolerated.	1++	Treatment of OCD in children and adolescents should begin with the combination of CBT with an SSRI or CBT alone.

### Empfehlung 3.5.2. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Wirksamkeit KVT im Familienbezug

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Family-based treatment of early childhood obsessive-compulsive disorder. The Pediatric Obsessive-Compulsive Disorder Treatment Study for young children (POTS Jr) - a randomized clinical trial</p> <p><b>A:</b> Freeman et al. <b>J:</b> 2014 <b>Z:</b> <i>JAMA Psychiatry</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤8 (mean = 7.2 ± 1.2; range: 5–8)</li> <li>primary diagnosis of OCD</li> <li>N = 127</li> <li>60 males, 67 females</li> </ul>	<ul style="list-style-type: none"> <li>family-based cognitive behavior therapy (FB-CBT) with exposure and response prevention (for 14 weeks)</li> <li>family-based relaxation treatment (FB-RT) control condition</li> </ul>	CY-BOCS, COIS, CGI	Family-based CBT proved superior to a relaxation program in reducing symptoms and functional impairment in children aged 5 to 8 with OCD.	1++	Family-based CBT was superior to a relaxation condition in young children with OCD.
<p><b>T:</b> Family-based exposure and response prevention therapy for preschool-aged children with obsessive-compulsive disorder: a pilot randomized controlled trial</p> <p><b>A:</b> Lewin et al. <b>J:</b> 2014 <b>Z:</b> <i>Behaviour Research and Therapy</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤8 (mean = 5.8 ± 1.6; range: 3–8)</li> <li>primary diagnosis of OCD</li> <li>N = 31</li> <li>22 males, 9 females</li> </ul>	<ul style="list-style-type: none"> <li>family-based exposure/response prevention (E/RP) (12 sessions, twice weekly over 6 weeks)</li> <li>treatment as usual (TAU)</li> </ul>	CY-BOCS	65% of individuals in the E/RP group and 7% of individuals in the TAU group were treatment responders. Symptom remission occurred in 35% of individuals in the E/RP group and 0% of individuals in the TAU group.	1+///	Developmentally tailored E/RP is effective and well-tolerated in preschool-aged children with OCD.
<p><b>T:</b> Controlled comparison of family cognitive behavioral therapy and psychoeducation/relaxation training for child obsessive-compulsive disorder</p> <p><b>A:</b> Piacentini et al. <b>J:</b> 2011 <b>Z:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤17 (mean = 12.2 ± 2.5; range: 8–17)</li> <li>primary diagnosis of OCD</li> <li>N = 71</li> <li>26 males, 45 females</li> </ul>	<ul style="list-style-type: none"> <li>exposure-based cognitive-behavioral therapy + structured family intervention (FCBT)</li> <li>psychoeducation + relaxation training (PRT); 12 sessions over 14 weeks</li> </ul>	CY-BOCS, COIS, FAS	FCBT showed higher response rates and faster symptom reduction relative PRT. Remission rates were 42.5% and 17.6% for FCBT and PRT, respectively. The improvement was preceded by reductions in family accommodation.	1+	FCBT is effective for reducing OCD severity and related impairment.
<p><b>T:</b> Randomised controlled trial of parent-enhanced CBT compared with individual CBT for Obsessive Compulsive Disorder in young people</p> <p><b>A:</b> Reynolds et al. <b>J:</b> 2013 <b>Z:</b> <i>Journal of Consulting and Clinical Psychology</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤17 (mean for individual CBT group = 14.4 ± 1.35; mean for parent-enhanced CBT = 14.6 ± 1.61; range: 12–17)</li> <li>primary diagnosis of OCD</li> <li>N = 50</li> </ul>	<ul style="list-style-type: none"> <li>individual cognitive-behavioral therapy (CBT) (= low parental involvement)</li> <li>parent-enhanced CBT (= high parental involvement)</li> </ul>	CY-BOCS	High and low parental involvement in CBT significantly reduced OCD and anxiety symptoms. The effect was maintained at 6 months. There was no evidence that one method of delivery was superior than the other.	1+///	High and low parental involvement in CBT are both effective for OCD in youth.

**Empfehlung 3.5.3. Psychotherapie bei Zwangsstörungen im Kindes- und Jugendalter: Wirksamkeit KVT im Gruppensetting**

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Group cognitive-behavioral therapy versus sertraline for the treatment of children and adolescents with obsessive-compulsive disorder</p> <p><b>A:</b> Asbahr et al. <b>J:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i> <b>Z:</b> 2005</p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 (mean for group CBT = 13.7 ± 2.32; mean for sertraline = 12.4 ± 2.76; range: 9–17)</li> <li>• primary diagnosis of OCD</li> <li>• N = 40</li> <li>• 26 males, 14 females</li> </ul>	<ul style="list-style-type: none"> <li>• group cognitive behavioral therapy (12 weekly sessions)</li> <li>• sertraline: 25 mg for the first week, titrated to a maximum dose of 200 mg</li> </ul>	<p>CY-BOCS, NIMH-GOCS, CGI</p>	<p>There were significant improvements for both group CBT and sertraline after 12 weeks of treatment. There was a lower rate of symptom relapse for those treated with group CBT than those that were medicated.</p>	<p>1++</p>	<p>Support for effectiveness of group CBT, which should be considered as an alternative to either individual CBT or medication.</p>

### Empfehlung 3.5.5. Wirksamkeit von KVT Behandlung bei koexistierender Ticstörung

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Tic-related obsessive-compulsive disorder (OCD): phenomenology and treatment outcome in the Pediatric OCD Treatment Study II</p> <p><b>A:</b> Conelea et al. <b>J:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i> <b>Z:</b> 2014</p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 years (range: 7–17; mean for OCD group with tics = 13.55 ± 2.78; mean OCD group without tics = 13.65 ± 2.77)</li> <li>• primary diagnosis of OCD</li> <li>• partial responders to an SSRI</li> <li>• N = 124 (groups of 66 and 58)</li> <li>• 58 males, 66 females</li> </ul>	<ul style="list-style-type: none"> <li>• medication management</li> <li>• medication management + instructions in cognitive-behavioral therapy (CBT)</li> <li>• medication management + full CBT</li> </ul>	CY-BOCS, NIMH-GOCS, CGI-S, COIS	Tics were identified in 53% of the sample. Overall, there were no differences between individuals with tic-related and non-tic-related OCD in terms of demographics, OCD severity, comorbidity and treatment outcome.	1++	Tics are frequent in OCD and responded equally to medication management and its mixed forms with CBT.
<p><b>T:</b> Tics moderate sertraline, but not cognitive-behavior therapy response in pediatric obsessive-compulsive disorder patients who do not respond to cognitive-behavior therapy</p> <p><b>A:</b> Skarphedinsson et al. <b>J:</b> <i>Journal of Child and Adolescent Psychopharmacology</i> <b>Z:</b> 2015</p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 years (mean = 14.0 ± 2.7; range: 7–17)</li> <li>• primary diagnosis of OCD</li> <li>• N = 50 (groups of 22 and 28)</li> <li>• 24 males, 26 females</li> <li>• 12 participants with a comorbid tic disorder</li> </ul>	<ul style="list-style-type: none"> <li>• sertraline over 16 weeks (starting dose of 25 mg/day, titrated up to 100 mg by week 4, and to a maximum of 200 mg by week 8)</li> <li>• continued cognitive-behavioral therapy (CBT) over 16 weeks</li> </ul>	CY-BOCS	Sertraline was superior to continued CBT in CBT nonresponders with a comorbid tic disorder, whereas patients without tic disorders showed no significant differences between treatments.	1+	Nonresponders with a comorbid tic disorder may benefit more from a serotonin reuptake inhibitor than from continued CBT.

### Empfehlung 3.5.6. Psychotherapeutische Fernbehandlung

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Internet-delivered, family-based treatment for early-onset OCD: a pilot randomized trial</p> <p><b>A:</b> Comer et al. <b>J:</b> <i>Journal of Consulting and Clinical Psychology</i> <b>Z:</b> 2017</p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤8 years (mean = 6.65 ± 1.3, range: 4–8);</li> <li>primary diagnosis of OCD</li> <li>N = 22</li> <li>13 males, 9 females</li> </ul>	<ul style="list-style-type: none"> <li>videoteleconferencing-delivered family-based cognitive-behavioral therapy (FB-CBT)</li> <li>clinic-based FB-CBT</li> </ul>	CY-BOCS, CGI-S, CGAS, CSR	Significant improvements from baseline to posttreatment, and continuing through follow-up 6 months later. No significant differences across outcomes from videoteleconferencing-delivered and clinic-based FB-CBT.	1++	Video-teleconferencing may extend the reach of real-time expert services for pediatric OCD.
<p><b>T:</b> Therapist-guided, internet-delivered cognitive-behavioral therapy for adolescents with obsessive-compulsive disorder: a randomized controlled trial</p> <p><b>A:</b> Lenhard et al. <b>J:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i> <b>Z:</b> 2017</p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤17 (mean = 14.60 ± 1.71; range: 12–17)</li> <li>primary diagnosis of OCD</li> <li>N = 67 (groups of 34 and 33)</li> <li>36 males, 31 females</li> </ul>	<ul style="list-style-type: none"> <li>clinician- and parent-supported ICBT program</li> <li>waitlist</li> <li>12 weeks of intervention with a follow-up after 3 months</li> </ul>	CY-BOCS	Clinician- and parent-supported ICBT was found superior to waitlist. There were further improvements from posttreatment to follow-up. The positive effect was associated with high satisfaction and no relevant side effects.	1++	Therapist-guided ICBT is a promising low-intensity intervention for adolescents with OCD.
<p><b>T:</b> Preliminary investigation of web-camera delivered cognitive-behavioral therapy for youth with obsessive-compulsive disorder</p> <p><b>A:</b> Storch et al. <b>J:</b> <i>Psychiatry Research</i> <b>Z:</b> 2011</p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤16 years (range: 7–16; mean for therapy group = 11.0 ± 2.5; mean waitlist group = 11.2 ± 2.8)</li> <li>primary diagnosis of OCD</li> <li>N = 31</li> <li>19 males, 12 females</li> </ul>	<ul style="list-style-type: none"> <li>family-based cognitive-behavioral therapy delivered via web-camera (W-CBT)</li> </ul>	CY-BOCS, CGI-I, CGI-S, remission status	W-CBT group was superior to the waitlist arm on all the primary outcome measures post-intervention. At a 3-month follow-up, 8 of 14 (57%) individuals in the therapy group met the remission criteria.	1++	Cognitive-behavioral therapy delivered via web-camera is a promising strategy for treatment dissemination in pediatric OCD.
<p><b>T:</b> Augmentation of treatment as usual with online cognitive bias modification of interpretation training in adolescents with obsessive compulsive disorder: a pilot study</p> <p><b>A:</b> Salemink et al. <b>J:</b> <i>Journal of Behavior Therapy and Experimental Psychiatry</i> <b>Z:</b> 2015</p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤19 (mean = 15.4 ± 2.2; range: 12–19)</li> <li>primary diagnosis of OCD</li> <li>N = 16 (groups of 9 and 7)</li> <li>6 males, 10 females</li> </ul>	<ul style="list-style-type: none"> <li>treatment as usual (TAU) with an additional online Cognitive Bias Modification of Interpretation training (CBM-I)</li> <li>TAU with a placebo variant</li> </ul>	CY-BOCS, RCADS, OBQ-CV, CDI	Significant reductions in clinician-rated and self-reported obsessive symptoms. Suggestive, but still inconclusive effects of CBM-I training as addition to TAU.	1-	Promising value of CBM-I training as an add-on to TAU in adolescents with OCD.
<p><b>T:</b> Telephone cognitive-behavioral therapy for adolescents with obsessive-compulsive disorder: a randomized controlled non-inferiority trial</p> <p><b>A:</b> Turner et al.</p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤18 (range: 11–18; mean for CBT group = 14.50 ± 2.19; mean for TCBT group = 14.50 ± 2.19)</li> <li>primary</li> </ul>	<ul style="list-style-type: none"> <li>telephone cognitive-behavioral therapy (TCBT)</li> <li>standard clinic-based, face-to-face CBT</li> </ul>	CY-BOCS	TCBT is effective and not inferior to standard clinic-based CBT in the short term and midterm. The improvement was associated with a high patient satisfaction.	1++	Telephone CBT is a promising method for overcoming barriers in accessing therapy in adolescent OCD.

<b>J:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i> <b>Z:</b> 2014		diagnosis of OCD • N = 72 (36 per group) • 39 males, 33 females					
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### Empfehlung 3.6.3. Wie erfolgt die Auswahl des SSRI?

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> A randomized controlled clinical trial of citalopram versus fluoxetine in children and adolescents with obsessive-compulsive disorder (OCD)</p> <p><b>A:</b> Alaghband-Rad &amp; Hakimshoostary</p> <p><b>J:</b> 2009</p> <p><b>Z:</b> <i>European Child &amp; Adolescent Psychiatry</i></p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤18 (mean = 13.8 ± 3.05; range: 7–18)</li> <li>• primary diagnosis of OCD</li> <li>• N = 29</li> <li>• 17 males, 12 females</li> </ul>	<ul style="list-style-type: none"> <li>• fluoxetine (20 mg/day) for 6 weeks</li> <li>• citalopram (20 mg/day) for 6 weeks</li> </ul>	CY-BOCS, CGI	<p>There was a significant improvement post-treatment as measured by CY-BOCS, but not by CGI. There was no between-group differences in drug efficacy and safety. Headache and tremore were the most common adverse effects for citalopram and fluoxetine, respectively.</p>	1-/+	Citalopram is as safe and effective as fluoxetine for pediatric OCD.

### Empfehlung 3.6.5. Pharmakotherapie für Kinder und Jugendliche mit Zwangsstörungen und Familiarität

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Predictors and moderators of treatment outcome in the pediatric obsessive compulsive treatment study (POTS I)</p> <p><b>A:</b> Garcia et al.</p> <p><b>J:</b> <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry</i></p> <p><b>Z:</b> 2010</p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 (mean = 11.7 ± 2.7; range: 7–17)</li> <li>• primary diagnosis of OCD</li> <li>• N = 112</li> <li>• 56 males, 56 females</li> </ul>	<ul style="list-style-type: none"> <li>• sertraline</li> <li>• cognitive behavioral therapy (CBT)</li> <li>• sertraline + CBT</li> <li>• pill placebo</li> </ul>	CY-BOCS, moderators/ predictors	A greater improvement across treatments was observed for those with lower OCD severity, lower functional impairment, lower comorbid externalizing symptoms, lower family accommodation and higher insight. There was a sixfold decrease in effect size in the CBT group with a family history of OCD, compared to its counterparts without a family history of OCD.	1++	Individuals with a family history of OCD may benefit better from a combination of CBT and an SSRI, than CBT alone.

### Empfehlung 3.6.10. Empfehlungen zur Pharmakotherapie: Andere Medikamente

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> 12-week, placebo-controlled trial of add-on riluzole in the treatment of childhood-onset obsessive-compulsive disorder</p> <p><b>A:</b> Grant et al. <b>J:</b> <i>Neuropsychopharmacology</i> <b>Z:</b> 2014</p>	<ul style="list-style-type: none"> <li>• RCT</li> </ul>	<ul style="list-style-type: none"> <li>• aged ≤17 (mean = 14.5 ± 2.4; range: 7–17)</li> <li>• primary diagnosis of OCD (17 with a concomitant autism spectrum disorder)</li> <li>• N = 60 (30 per group)</li> <li>• 44 males, 16 females</li> </ul>	<ul style="list-style-type: none"> <li>• riluzole (final dose: 100 mg/day)</li> <li>• placebo in addition to the current treatment</li> </ul>	CY-BOCS, CGI-S, CGAS	There were significant symptom reductions in the course of treatment, but no difference between the riluzole and placebo groups.	1-	No evidence for superiority of riluzole over placebo as an adjunctive therapy for pediatric OCD.

### Empfehlung 3.6.11. Augmentation mit Antipsychotika

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Successful treatment response with aripiprazole augmentation of SSRIs in refractory obsessive-compulsive disorder in childhood</p> <p><b>A:</b> Ardic et al. <b>J:</b> 2017 <b>Z:</b> <i>Child Psychiatry &amp; Human Development</i></p>	<p>Open study</p> <ul style="list-style-type: none"> <li>retrospective chart review study</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤17 years (mean for males = 13.7 ± 2.4; mean for females = range: 6–17)</li> <li>primary diagnosis of OCD</li> <li>N = 48</li> <li>34 males, 14 females</li> </ul>	<ul style="list-style-type: none"> <li>SSRIs + augmentation with aripiprazole</li> <li>a mean dose of 2.2 ± 1.1 mg/day at initial evaluation (range: 1.25–5), and of 3.4 ± 2.2 mg/day at final evaluation</li> <li>treatment duration: 12 weeks</li> </ul>	CGI-I, CGI-S, CY-BOCS	There was a significant clinical improvement with aripiprazole augmentation. A significant weight gain was observed.	2+	Augmentation with aripiprazole as a promising symptom management strategy of treatment-refractory OCD.
<p><b>T:</b> A promising preliminary study of aripiprazole for treatment-resistant childhood obsessive-compulsive disorder</p> <p><b>A:</b> Ercan et al. <b>J:</b> 2015 <b>Z:</b> <i>Journal of Child and Adolescent Psychopharmacology</i></p>	<p>Open study</p> <ul style="list-style-type: none"> <li>consecutive series</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤18 years (mean = 10.9 ± 2.9)</li> <li>primary diagnosis of OCD (treatment-resistant)</li> <li>N = 16</li> <li>7 males, 9 females</li> </ul>	<ul style="list-style-type: none"> <li>monotherapy with aripiprazole</li> <li>4.75 mg/day (range: 2–7.5 mg)</li> <li>treatment duration: 12 weeks</li> </ul>	CGI-I, CGI-S, CY-BOCS	Significant improvements in symptoms in 13 of 16 patients after 12 weeks of treatment with aripiprazole.	2+	Support for efficacy of a single-agent aripiprazole treatment in the SSRI-resistant pediatric OCD.
<p><b>T:</b> Aripiprazole augmentation in 39 adolescents with medication-resistant obsessive-compulsive disorder</p> <p><b>A:</b> Masi et al. <b>J:</b> 2010 <b>Z:</b> <i>Journal of Clinical Psychopharmacology</i></p>	<p>Open study</p> <ul style="list-style-type: none"> <li>consecutive series</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤18 years (mean = 14.6 ± 1.2, range: 12–18)</li> <li>primary diagnosis of OCD (treatment-refractory)</li> <li>N = 39</li> <li>28 males, 11 females</li> </ul>	<ul style="list-style-type: none"> <li>SSRIs + augmentation with aripiprazole</li> <li>12.2 ± 3.4 mg/day (range: 5–20 mg)</li> <li>treatment duration: 12 weeks</li> </ul>	CGI-S, CGAS	Augmentation with aripiprazole was overall well tolerated and effective in 59% of the patients. Reports of mild transitory agitation (10%), mild sedation (10%), and sleep disorders (8%), but no discontinuation because of adverse effects.	2+	Support for efficacy of aripiprazole as augmentation to SSRIs with mild side effects.
<p><b>T:</b> Antipsychotic augmentation of selective serotonin reuptake inhibitors in resistant tic-related obsessive-compulsive disorder in children and adolescents: A naturalistic comparative study</p> <p><b>A:</b> Masi et al. <b>J:</b> 2013 <b>Z:</b> <i>Journal of Psychiatric Research</i></p>	<p>Open study</p> <ul style="list-style-type: none"> <li>consecutive series</li> </ul>	<ul style="list-style-type: none"> <li>aged ≤17 years (mean = 13.7 ± 2.4, range: 8–17)</li> <li>diagnosis of OCD (treatment-refractory), tic-related OCD</li> <li>N = 69</li> <li>62 males, 7 females</li> </ul>	<ul style="list-style-type: none"> <li>SSRIs + augmentation with risperidone (n = 35)</li> <li>SSRIs + augmentation with aripiprazole (n = 34)</li> <li>risperidone: 1.7 ± 0.8 mg/day; range: 0.5–3 mg</li> <li>aripiprazole: 8.9 ± 3.1 mg/day; range: 2.5–12.5 mg</li> <li>monthly measurements during 3 consecutive months; a</li> </ul>	CGI-S, C-GAS	Response rate in OCD symptomology was 56.5%. There was no effect of OCD subtypes or comorbidity. No difference in efficacy between risperidone and aripiprazole augmentation. Reports of side effects (weight gain and sedation for aripiprazole; mild/moderate agitation for risperidone), but no discontinuation because of adverse effects.	2+	Support for efficacy of risperidone and aripiprazole as augmentation to SSRIs with mild-to-moderate side effects.

			follow-up after 6 months				
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### Empfehlung 3.6.13. Augmentation von KVT mit D-Cycloserin

Quelle	Studiendesign	Population	Intervention	Primärer Outcome	Schlussfolgerungen	SIGN Grading	Empfehlung
<p><b>T:</b> Effects of homework compliance on cognitive-behavioural therapy with D-cycloserine augmentation for children with obsessive-compulsive disorder</p> <p><b>A:</b> Olatunji et al. <b>J:</b> 2015 <b>Z:</b> <i>Depression and Anxiety</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤18 years (mean = 15.0 ± 2.03; range: 12–18)</li> <li>primary diagnosis of OCD</li> <li>N = 27 (groups of 13 and 14)</li> <li>14 males, 13 females</li> </ul>	<ul style="list-style-type: none"> <li>D-cycloserine (50 mg) augmentation of cognitive-behavioral therapy (CBT)</li> <li>placebo</li> </ul>	CY-BOCS	For patients who received D-cycloserine augmentation (but not in the placebo group), homework compliance was associated with treatment outcome.	1+	D-cycloserine may facilitate the effects of CBT for patients with high levels of homework compliance.
<p><b>T:</b> Efficacy of augmentation of cognitive behavior therapy with weight-adjusted d-cycloserine vs placebo in pediatric obsessive-compulsive disorder: a randomized clinical trial</p> <p><b>A:</b> Storch et al. <b>J:</b> 2016 <b>Z:</b> <i>JAMA Psychiatry</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤17 years (mean = 12.7 ± 2.9; range: 7–17)</li> <li>primary diagnosis of OCD</li> <li>N = 142 (groups of 70 and 72)</li> <li>66 males, 76 females</li> </ul>	<ul style="list-style-type: none"> <li>D-cycloserine (25 or 50 mg) plus cognitive-behavioral therapy – 10 CBT sessions</li> <li>placebo plus CBT</li> </ul>	CY-BOCS	D-cycloserine augmentation of CBT did not demonstrate statistically different outcomes from placebo augmentation of CBT.	1++	D-cycloserine plus CBT did not confer additional benefit in youth with OCD.
<p><b>T:</b> D-cycloserine augmentation of cognitive behavior therapy for pediatric OCD: predictors and moderators of outcome</p> <p><b>A:</b> Wilhelm et al. <b>J:</b> 2018 <b>Z:</b> <i>Journal of Affective Disorders</i></p>	• RCT	<ul style="list-style-type: none"> <li>aged ≤17 years (mean = 12.7 ± 2.9; range: 7–17)</li> <li>primary diagnosis of OCD</li> <li>N = 142 (groups of 70 and 72)</li> <li>66 males, 76 females</li> </ul>	<ul style="list-style-type: none"> <li>D-cycloserine plus cognitive-behavioral therapy (CBT)</li> <li>placebo plus CBT</li> </ul>	CY-BOCS, CGI-S, moderators/predictors	No baseline variables moderated the effects of D-cycloserine augmentation on CBT outcome. Some variables were associated with a decreased likelihood of remission, and with a higher improvement.	1++	No robust evidence for baseline factors determining most beneficial effects from D-cycloserine.

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