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## **Abstract**

**PROBLEM:** Evidence exists for the use of cognitive behavioral therapy (CBT) combined with externalising techniques from narrative therapy for Pediatric Obsessive Compulsive Disorder (OCD), however no research gives a detailed account of what the externalising process looks like in session or how it is incorporated into conceptualisation. Literature is appraised with respect to the referral, assessment, formulation, intervention and outcome.

**METHODS:** The case describes a ten year old boy who was referred with severe OCD. The evidence based CBT model for OCD in child and adolescent populations was applied to the case. This was integrated with the externalising technique from narrative therapy. Using these models a shared formulation of the difficulties was developed, and created a new narrative. The intervention was assessed using the single-case experimental design.

**FINDINGS AND CONCLUSIONS:** On all but one routine outcome measure positive clinically significant changes were made, and the young person managed to reach their therapeutic goals. Gains maintained over a month follow up period. The use of externalising was an effective and developmentally appropriate intervention and is discussed further. The case highlighted the need for more research detailing externalising processes.

**Key Words:** Cognitive Behavior Therapy, Obsessive Compulsive Disorder, Child and Adolescent, Narrative Therapy, Externalising.

## **Introduction**

**Obsessive Compulsive Disorder.** According to the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric, 2013) Obsessive Compulsive Disorder (OCD) is defined by the occurrence of obsessions and/or compulsions.

The impact of OCD on quality of life is significant when compared to the general population in adults and children (Lack et al., 2009; Macy et al., 2013). If untreated paediatric OCD can be chronic (Rufer, Grothusen, Maß, Peter, & Hand, 2005) and in the United States 25% of all adult OCD cases had an onset prior to 14 years old, with 25% of all males experiencing onset prior to 10 years old (American Psychiatric, 2013). Being able to offer an effective treatment to children and young people (CYP) who have OCD could help improve their quality of life and reduce longterm symptoms (Williams et al., 2010).

**Cognitive Model of OCD.** The cognitive model of OCD stipulates that obsessional thoughts in OCD do not differ from the intrusive thoughts experienced by the general population (Salkovskis, 1999; Salkovskis & McGuire, 2003). An obsession can develop when someone catastrophically misinterprets the significance of such intrusions (Rachman, 1997). Salkovskis (1999) states that when someone interprets an intrusion as meaning that they may be at harm, or could be responsible for causing or preventing harm, an obsessional pattern could develop. It is these appraisals that cause someone to feel anxious and/or depressed and result in compulsive behaviours; therefore Salkovskis (1999) notes that a key factor in the link between obsessions and compulsive behaviours is the appraisal of responsibility. This can then result in the person paying more attention to the intrusion, making it more accessible, which leads to attempts to decrease responsibility (compulsions), which inevitably produces more doubt and increases the chances of having more intrusions (Salkovskis, 1999).

**Cognitive Behavioural Therapy for OCD.** Cognitive Behavioural Therapy (CBT) helps the client develop a new and less threatening way of viewing their problems (Salkovskis, 1999).

Through the use of a collaborative therapeutic relationship, and guided discovery, together a Theory A and Theory B are developed; one being the client's obsessional belief and the other being the new less threatening explanation. The client is supported to test the validity of these different theories. Using exposure response prevention (ERP) allows the client to discover that their compulsions have been maintaining their obsessive cycles (Salkovskis, 1999).

Studies exploring the effectiveness of treatments for OCD have highlighted the positive impact of CBT on symptom reduction (McGuire et al., 2015; Torp et al., 2015) when compared to wait list controls (Barrett, Healy-Farrell, & March, 2004b; Williams et al., 2010) and at six month (Williams et al., 2010) and yearly follow ups (Kay, Eken, Jacobi, Riemann, & Storch, 2016). This evidence has been consistent for both individual and group formats (Barrett, Healy-Farrell, & March, 2004a), as well as using intensive and weekly based treatment (Kay et al., 2016; Storch, Geffken, Merlo, Mann, et al., 2007). A meta-analysis by Olatunji (2013) found that random control trials with children had higher effect sizes than those using adults. Trials comparing the effectiveness of CBT and psychopharmacological treatments have found that CBT interventions are equivalent or surpass the symptom reduction results found by medication, (Abramowitz, Whiteside, & Deacon, 2005; Freeman et al., 2009; McGuire et al., 2015; Storch et al., 2013) and are more effective at 9 month follow up (Asbahr et al., 2005). The National Institute for Health and Care Excellence (NICE, 2005) guidelines therefore state that CYP with a diagnosis of OCD should be offered CBT, and that medication should only be offered if there is no response to psychological input (NICE, 2005).

The NICE (2005) guidelines also state that treatment should involve the family. There has been much research into 'family accommodation' in pediatric OCD, which describes the process whereby the family maintain or assist in the CYPs rituals (Albert et al., 2010). Research has shown that involving the family can be important when working with CYP with OCD as a positive relationship between family accommodation and symptom severity has been found

(Caporino, 2012; Flessner et al., 2011; Peris, 2008; Storch, Geffken, Merlo, Jacob, et al., 2007) and decreased accommodation is linked with positive responses to psychological treatments (Lebowitz, Panza, Su, & Bloch, 2012) including CBT (Merlo, 2009).

**Narrative Therapy for OCD.** Whilst CBT for OCD is the favored treatment Narrative Therapy may have comparable outcomes for clients (McLuckie, 2006). Specifically CYP may benefit from the externalising technique which allows the family, child and professional to use the child's own language to name the OCD; separating it from the child. This enables the child to break away from being defined by the OCD and the system is given another way to think (McLuckie, 2006). The language developed can be incorporated into the treatment and be used to develop stories and symbolic representations and narratives about OCD (McLuckie, 2006). This new narrative enables the child, and family members, to engage in the development of metaphors and play during treatment such as using detective metaphors to piece together clues (McLuckie, 2006).

A lack of empirical research and evidence is currently available for the use of Narrative Therapy (McLuckie, 2006). However externalising incorporated into the CBT programme for OCD by March and Mulle (1998) which is empirically supported (Barrett, Farrell, Pina, Peris, & Piacentini, 2008; Shoenfelt & Weston, 2007) and has been found to be significantly more effective than waitlist controls when combined with family CBT (Barrett et al., 2004a). Though many studies evaluate its effectiveness (Barrett et al., 2008; Shoenfelt & Weston, 2007; Wagner, 2003) none of the research gives a detailed account of what the externalising aspect of the intervention looks like and how it is incorporated into the CBT formulation.

**The Current Study.** The current single case study aims to explore the use of CBT and externalising techniques from Narrative Therapy in the treatment of OCD in a ten year old, offering a detailed account of the new narrative developed, and how it was used within the formulation. Due to outcomes of previous research, this study hypothesis that the intervention

will be effective in reducing OCD symptoms from the point of view of the client and parent. As well as adding to existing evidence on the use of CBT with pediatric OCD it will also highlight the benefits of using externalising techniques.

**Referral.** Lucas (pseudonym) is a ten year old boy who lives with his mother, Rebecca, his step-dad, Johnathon, and his younger brother, Thomas, who is 7 years old. He was referred to CAMHS (Child and Adolescent Mental Health Services) in December 2015 by his GP. Lucas had concerns about becoming unwell and/or dying after touching things, and he was excessively hand washing. This had resulted in Lucas feeling very distressed and having painful dermatitis.

**Assessment.** Lucas reported that he washed his hands about 12 times a day, as a result of some intrusive worries that he would get germs on his hands, which would give him a disease and he would die as a result. Lucas was very anxious and scared, and believed that washing his hands got rid of the germs and kept him safe. Lucas's hands were red and sore, and it appeared that he might be washing them more than 12 times a day and it was taking up the majority of his time. Lucas's difficulties began in 2015, which he attributed to two events; watching a film about the spread of a disease (January) and sniffing an infected petri dish in a science lesson after which he was seriously ill (July).

**History.** Lucas had been experiencing these difficulties for a couple of years and had sought previous help from another CAMHS as well as his school counselor.

**Method.** The current study used a two-phase (A/B) single case experimental design (SCED) with an extended follow-up of one and two weeks, and one month. Standardised measures (see 3.4 below) were completed prior to, during and after the intervention, and were used to measure changes in the dependent variables which consisted of OCD symptom ratings from Lucas and his mum. An idiosyncratic rating scale (see 3.4 below) measured the amount of time spent

thinking about obsessions (Silly Gremlin Thoughts) and completing compulsions (Silly Gremlin Actions) was completed daily during the intervention.

The A/baseline phase consisted of 3 sessions prior to Lucas starting the intervention and follow up at 1 and 2 weeks, one month and four months post intervention. Phase B was the intervention phase as described below (section 6). The aim was to examine whether a CBT intervention using externalising techniques was an effective intervention for OCD.

**Formal Outcome Measures.** During the initial assessment and at the end of treatment, three different formal outcome measures were used:

- The CY-BOCS (Children's Yale-Brown Obsessive Compulsive Scale) explores the presence and severity of both obsessions and compulsions (López-Pina et al., 2015), as well as a symptom checklist (Freeman, Flessner, & Garcia, 2011). It has a very good internal consistency ( $\alpha=0.87$ ) and a good to excellent inter-rater reliability (Freeman et al., 2011). The CY-BOCS has a total score of 40, with cuts off at 0-7 for subclinical, 8-15 for mild, 16-23 for moderate, 24-31 for severe and 32-40 for extreme.
- The RCADS (Revised Child Anxiety and Depression Scale) consists of 47 items that assess for Separation Anxiety Disorder (SAD), Generalised Anxiety Disorder (GAD), Social Phobia, Obsessive Compulsive Disorder (OCD), Panic Disorder and Major Depressive Disorder (Weiss & Chorpita, 2011). Research has demonstrated that the RCADS has inertial consistency as well as a factor structure that is consistent with the DSM-IV (Chorpita, Moffitt, & Gray, 2005) .

When Lucas first came into the service, six months prior to the current treatment beginning, as well as during the initial assessment and at the end of therapy Lucas's mother completed the following measure:

- The RACDS-P (Revised Child Anxiety and Depression Scale – Parent Version) is a similar construct to the RCADS, assessing for the child's anxiety and depression

symptoms (Weiss & Chorpita, 2011). The parent version similarly has high initial consistency and is accurate at assessing symptoms of depression and anxiety in young people (Ebesutani, Bernstein, Nakamura, Chorpita, & Weisz, 2010).

Each week Lucas and his mum complete an OCD symptom tracker, which consistent of the OCD symptoms questions from the RCADS and the RCADS-P. Follow up data was collected on all measures at four months post the intervention ending.

**Goals.** Lucas's therapeutic goals were to only wash his hands when they needed washing and worry less about germs. An idiosyncratic measure of goal attainment was developed in collaboration with Lucas to capture progress towards this goal which incorporated the externalising of OCD. Lucas was encouraged to externalise his OCD by giving it a name and drawing it. Independent from the therapist Lucas was able to label his OCD 'The Silly Gremlin' and he was asked to report how many hours each day he had experienced 'Silly Gremlin thoughts' representing obsessions, and how long he spent completing 'Silly Gremlin actions', representing compulsions. Importantly, this used Lucas's own language, to represent his difficulties.

**Conceptualisation.** Using collaborative discussion a formulation was developed with Lucas and his mother. Lucas's presentation fit the CBT model for OCD (Figure 1). Lucas was experiencing many intrusive thoughts, which were focused on germs being on different items. The cognitions at the core of Lucas's OCD were that from touching something dirty he would be contaminated which would make him unwell and cause him to get a disease that would potentially kill him.

This caused Lucas to feel very anxious and worried, and he wanted to be able to prevent this feared outcome. As a result Lucas engaged in excessive hand washing, which was his main compulsion, and which Lucas believed would remove any poison or dangerous germ that may be on his hand. Lucas also engaged in a number of behaviours that helped to maintain the OCD



such as avoidance, reassurance seeking in order to share the responsibility (Salkovskis & McGuire, 2003) and focusing his attention on germs and dirt in order to make sure he remained alert to any danger.

Externalising techniques were used to develop an age appropriate formulation with Lucas. As noted above Lucas named his OCD the Silly Gremlin, which went at the centre of the formulation and reflected the meaning of Lucas's obsessions. After naming his OCD the Silly Gremlin and drawing it out Lucas and the therapist collaboratively continued the conceptualisation of Lucas's OCD using further externalising. The Silly Gremlin was seen by Lucas as dirty so he was placed at the top of a drain pipe, which contained all of Lucas's Silly Gremlin thoughts. The Silly Gremlin lived at the bottom of this drain pipe, but would come out when he was activated, which would be by situations that would trigger Lucas's obsessional thoughts. When the Silly Gremlin was active Lucas described it as having lots of little gremlins telling him what to do, which represented Lucas's compulsions.

**Intervention.** Lucas was seen a total of 20 times: 3 assessment sessions, 16 treatment sessions and 1 follow-up session. Following NICE (2005) guidelines Lucas was offered CBT sessions which he attended primarily with his mother, however his step-father, sister and grandfather also attended. Lucas was offered to have some time alone each sessions, but declined. The intervention was based around CBT protocols and guidelines (March & Mulle, 1998; Salkovskis & McGuire, 2003) and externalising narrative therapy techniques as described in McLuckie (2006) (Table 1) .

**Outcome.** Data from the RCADS and the RCADS-P, including the weekly OCD symptom tracking data, were converted into t-scores.

RCADS and the RCADS-P both showed improvements in Lucas's mental health (Figure 2 and 3). The RCADS do not show any clinically significant change, as the pre-intervention measure did not report any subscales over the clinical cut off (65) Figure 2). The RCADS-P on all

subscales, bar social phobia, shows a clinically significant reduction in scores from the November 2015 to the end of treatment in September 2016, as well as at one month follow up, however at four months follow up the RCADS-P was two points above the clinical cut off for OCD (Figure 3).

The CY-BOCS reported a clinically significant change over an overall score of 26 (severe) to 7.5 (subclinical/ mild) at the end of treatment, to 12 (mild) at one month follow up and to 9 (mild) at four month follow up (Table 3).

Lucas and his mother both reported clinical change on the OCD symptom tracking from the RCADS and the RCADS-P (Figure 4 and 5). At the beginning of treatment they both reported scores above the clinical cut off of 65 (parent = 72, Lucas=71), but these had dropped to below clinical cut off at the end of treatment (parent = 59, Lucas = 35), at one month follow up (parent = 55, Lucas = 44) and were maintained at four month follow up for Lucas (41), but his mother reported a slight increase (67).

By the end of the intervention Lucas had reduced the amount of time spent having obsessional thoughts and completing compulsions. His hand washing was limited to times that he felt were appropriate, such as after the toilet and before food, however he would sometimes eat food without handwashing. As seen in the data gathered by the idiosyncratic measure (Figure 6) Lucas's hand washing, and avoidance, had reduced from 8 hours down to 0 hours a day, and his obsessional thoughts reduced from 7.5 hours down to 1 hour a day.

## **Discussion**

**Outcomes, Theory and Limitations.** The current case was designed to explore the effectiveness of CBT for OCD with externalising techniques on symptom outcome with a young person. Prior to the intervention Lucas's scores on the RCADS were not above clinical cut off, which is surprising as his OCD symptom tracking score, which uses the same questions as the RCADS, were above threshold. Lucas completed the RCADS at home, and in his initial

sessions time was spent helping him complete the OCD symptom tracker and think about how the questions related to his difficulties. Therefore the initial RCADS may not be a true reflection of his symptom severity due to his lack of understanding how they relate to his symptoms. This theory is supported by his scores on the CY-BOCS which were completed with Lucas and gave him a score within the severe range (26). The RCADS-P scores were above clinical cut off for GAD, Panic, SAD and OCD.

During the intervention, B phase, the OCD symptom tracking data shows that for Lucas and his mother things got slightly worse before they got better. It is possible that at the beginning of the intervention, as Lucas started to work through his hierarchy, he felt the need to complete his compulsions more. Lucas's data show a spike in session 8 which coincided with Lucas realising that his parents and the therapist had no control over his ERP experiments. Up until this point Lucas believed that if an adult had not stopped him completing an experiment then there must have been no germs, as he believed they would not put him in danger. Time was spent helping Lucas to explore and challenge these beliefs. To gather evidence Lucas completed an experiment in therapy where he touched the bin and licked his hands without telling anyone before he did it. From this point the scores started to come back down.

At the end of the intervention OCD symptom tracking scores from Lucas and his mother, and scores from the CY-BOCS had all come down to below clinical significance suggesting that the intervention had been successful. Lucas's mother also reported scores below the clinical cut off for all domains on the RCADS-P. Thus all standardised measures that were above clinical cut-off dropped to below cut-off by the end of the intervention and at one month follow up. This was true at four month follow up bar the OCD symptom tracking on the RCADS-P which was two points above clinical cut off. This discrepancy in symptom reporting is similar to the discrepancy that has been shown between Lucas and his mum from the start of the intervention and might be explained by factors such as Lucas wishing to please the therapist,

parental anxiety or a questionnaire responding style. The idiosyncratic data captured showed a reduction in Lucas's obsessions and compulsions by around 6 hours a day. Therefore the study has demonstrated a positive effective of a CBT treatment for young people with externalising techniques experiencing severe OCD which is maintained at follow up.

At follow up both scores from Lucas and his mother had increased slightly on the OCD symptom tracker, however they were not close to being clinically significant. This is similar to the CY-BOCS scores, as Lucas's scores had increased from 7.5 to 12. However this is still within the mild range and does not meet clinical significance. These both show that the intervention was effective in helping to maintain the reduction OCD symptoms at one month follow up. Unfortunately follow up data is limited to four months and future research would hopefully extend this.

The current study has added to the existing literature that examines the effectiveness of CBT, but has also added extended limited literature that looks at combining Narrative techniques with CBT. It has offered a detailed account of what the externalising component of the intervention looked like, and how it was incorporated in the formulation, which extends the literature. The SCED methodology of the study means that the results are only based upon one subject, and therefore lacks external validity and the ability to be generalised to the wider population (Morgan, 2008; Willis, 2014). Future research may wish to continue to explore narrative and CBT for paediatric OCD and offer more data that is representative of the larger clinical population.

As noted above the first RCADS-P scores show that Lucas was reaching clinical significance for parent reported GAD, Panic and SAD as well as OCD. These had all come down to below clinical significance by the end of treatment, demonstrating that working on Lucas's OCD symptoms had a positive impact on his comorbid anxiety disorders. Using the CBT model on Lucas's OCD symptoms fit with his goal of wanting to wash his hands and to worry less,

however work could have equally focused on his separation anxiety as this was elevated. Research has shown that a history of SAD can result in greater severity of OCD symptoms and is associated with experiencing Panic Disorder in children (Mroczkowski et al., 2011) therefore working towards reducing Lucas's SAD symptoms may have also reduced his OCD symptoms. There is research to suggest that CBT treatment for SAD is effective in symptoms reduction (Kendall, 1994; Schneider et al., 2011; Schneider et al., 2013). A SAD formulation may have been able to incorporate Lucas's dad leaving, which appeared to be a very significant life event for him which was not captured by the CBT OCD formulation.

**Reflections.** I found using the Narrative technique of externalising very powerful as it felt like a developmentally friendly way of thinking about Lucas's problems and gave him autonomy over how we talked about his difficulties and separated him from the OCD. Once we had complete the assessment the Silly Gremlin narrative then gave a developmentally appropriate way collaboratively develop a formulation of Lucas's OCD, and think about how this was maintained. Within the sessions I had access to an iPad which was an incredibly helpful resource in being able to creatively externalise Lucas's OCD. Using the internet we were able to find images that he felt represented his externalisation. We were then able to print them in session and stick them onto his formulation and fear hierarchy. Art materials were used, such as colouring pens and paper, so that Lucas could add to the print outs or create his own. Encouraging Lucas to continue this process at home and bring work back into sessions enabled the sessions to remain within the one hour time slot available. Lucas appeared to really enjoy using the Silly Gremlin narrative, and it enabled us to talk about a difficult and distressing subject in a more playful way. Lucas used the externalising his OCD outside of his sessions. At the end of our work together his mum brought in a photo of a picture that Lucas had drawn which depicted him expressing his anger at the Silly Gremlin. Lucas expressed how cathartic

he had found the process and he had been able to visualise the Silly Gremlin, or his OCD, dying.

## References

- Abramowitz, J. S., Whiteside, S. P., & Deacon, B. J. (2005). The effectiveness of treatment for pediatric obsessive-compulsive disorder: A meta-analysis. *Behavior Therapy, 36*(1), 55-63.
- Albert, U., Bogetto, F., Maina, G., Saracco, P., Brunatto, C., & Mataix-Cols, D. (2010). Family accommodation in obsessive-compulsive disorder: Relation to symptom dimensions, clinical and family characteristics. *Psychiatry Research, 179*(2), 204-211. doi:10.1016/j.psychres.2009.06.008
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders : DSM-5* (Fifth edition, ed.). Arlington, Va.: Arlington, Va. : American Psychiatric Publishing.
- Asbahr, F., Castillo, A., Ito, L., Latorre, M., Moreira, M., & Lotufo-Neto, F. (2005). Group Cognitive-Behavioral Therapy Versus Sertraline for the Treatment of Children and Adolescents With Obsessive-Compulsive Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 44*(11), 1128-1136.
- Barrett, P., Farrell, L., Pina, A., Peris, T., & Piacentini, J. (2008). Evidence-Based Psychosocial Treatments for Child and Adolescent Obsessive-Compulsive Disorder. *Journal of Clinical Child & Adolescent Psychology, 37*(1), 131-155.
- Barrett, P., Healy-Farrell, L., & March, J. (2004a). Cognitive-Behavioral Family Treatment of Childhood Obsessive Compulsive Disorder: A Controlled Trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(1), 46-62.

- Barrett, P., Healy-Farrell, L., & March, J. (2004b). Cognitive-Behavioral Family Treatment of Childhood Obsessive-Compulsive Disorder: A Controlled Trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43(1), 46-62.
- Caporino, N. (2012). A Structural Equation Analysis of Family Accommodation in Pediatric Obsessive- Compulsive Disorder. *Journal of Abnormal Child Psychology*, 40(1), 133-144. doi:10.1007/s10802-011-9549-8
- Chorpita, B., Moffitt, C., & Gray, J. (2005). Psychometric properties of the Revised Child Anxiety and Depression Scale in a clinical sample. *Behaviour Research and Therapy*, 43(3), 309-322.
- Ebesutani, C., Bernstein, A., Nakamura, B. J., Chorpita, B. F., & Weisz, J. R. (2010). A Psychometric Analysis of the Revised Child Anxiety and Depression Scale- Parent Version in a Clinical Sample. *Journal of Abnormal Child Psychology*, 38(2), 249-260.
- Flessner, C. A., Freeman, J. B., Sapyta, J., Garcia, A., Franklin, M. E., March, J. S., & Foa, E. (2011). Predictors of Parental Accommodation in Pediatric Obsessive-Compulsive Disorder: Findings from the Pediatric Obsessive-Compulsive Disorder Treatment Study (POTS) Trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(7), 716-725. doi:10.1016/j.jaac.2011.03.019
- Freeman, J., Choate-Summers, M., Garcia, A., Moore, P., Sapyta, J., Khanna, M., . . . Franklin, M. (2009). The Pediatric Obsessive- Compulsive Disorder Treatment Study II: rationale, design and methods. *Child and Adolescent Psychiatry and Mental Health*, 3, 4-4.
- Freeman, J., Flessner, C., & Garcia, A. (2011). The Children's Yale- Brown Obsessive Compulsive Scale: Reliability and Validity for Use among 5 to 8 Year Olds with Obsessive- Compulsive Disorder. *Journal of Abnormal Child Psychology*, 39(6), 877-883.

- Kay, B., Eken, S., Jacobi, D., Riemann, B., & Storch, E. A. (2016). Outcome of multidisciplinary, CBT- focused treatment for pediatric OCD. *42*, 7-8.
- Kendall, P. (1994). Treating anxiety disorders in children: results of a randomized clinical trial. *Journal of consulting and clinical psychology*, *62*, 100.
- Lack, C., Storch, E., Keeley, M., Geffken, G., Ricketts, E., Murphy, T., & Goodman, W. (2009). Quality of life in children and adolescents with obsessive- compulsive disorder: base rates, parent– child agreement, and clinical correlates. *Soc Psychiat Epidemiol*, *44*(11), 935-942.
- Lebowitz, R., Panza, K., Su, J., & Bloch, M. (2012). Family accommodation in obsessive– compulsive disorder. *Expert Review of Neurotherapeutics*, *12*(2).
- López-Pina, J., Sánchez-Meca, J., López-López, J., Marín-Martínez, F., Núñez-Núñez, R., Rosa-Alcázar, A., . . . Ferrer-Requena, J. (2015). Reliability Generalization Study of the Yale–Brown Obsessive–Compulsive Scale for Children and Adolescents *Journal of Personality Assessment*, *97*(1), **42 - 54** 42 - 54.
- Macy, A., Theo, J., Kaufmann, S., Ghazzaoui, R., Pawlowski, P., Fakhry, H., . . . IsHak, W. (2013). Quality of life in obsessive compulsive disorder. *CNS Spectrums*, *18*(01), 21 - 33.
- March, J., & Mulle, K. (1998). *OCD in children and adolescents : a cognitive-behavioral treatment manual*. New York ; London: New York ; London : Guilford Press.
- McGuire, J. F., Piacentini, J., Lewin, A. B., Brennan, E. A., Murphy, T. K., & Storch, E. A. (2015). A Meta-Analysis of Cognitive Behavioral Therapy and medication for child Obsessive-Compulsive Disorder: moderators of treatment efficacy, response, and remission. *Depression and Anxiety*, *32*(8), 580-593. doi:10.1002/da.22389
- McLuckie, A. (2006). Narrative Family Therapy for Paediatric Obsessive Compulsive Disorder. *Journal of Family Psychotherapy*, *16*(4), 83-106.



- Merlo, L. J. (2009). Decreased Family Accommodation Associated With Improved Therapy Outcome in Pediatric Obsessive- Compulsive Disorder. *Journal of Consulting & Clinical Psychology, 77*(2), 355-361. doi:10.1037/a0012652
- Morgan, D. L. (2008). *Single-Case Research Methods for the Behavioral and Health Sciences*. Thousand Oaks: Thousand Oaks : SAGE Publications.
- Mroczkowski, M., Goes, F., Riddle, M., Grados, M., Bienvenu, O., Greenberg, B., . . . Samuels, J. (2011). Separation anxiety disorder in OCD. *Depression and anxiety, 28*(3), 256.
- NICE, The National Institute for Health and Care Excellence. (2005). Obsessive-compulsive disorder and body dysmorphic disorder: treatment.: National Collaborating Centre for Mental Health.
- Olatunji, B., Davis, M., Powers, M., & Smits, J. (2013). Cognitive- behavioral therapy for obsessive- compulsive disorder: A meta- analysis of treatment outcome and moderators. *Journal of Psychiatric Research, 47*(1), 33-41.
- Peris, T. S. (2008). Correlates of Accommodation of Pediatric Obsessive- Compulsive Disorder: Parent, Child, and Family Characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(10), 1173-1182.  
doi:10.1097/CHI.0b013e3181825a91
- Rachman, S. (1997). A cognitive theory of obsessions. *Behaviour Research and Therapy, 35*(9), 793-802.
- Rufer, M., Grothusen, A., Maß, R., Peter, H., & Hand, I. (2005). Temporal stability of symptom dimensions in adult patients with obsessive– compulsive disorder. *Journal of Affective Disorders, 88*(1), 99-102.
- Salkovskis, P. (1999). Understanding and treating obsessive-compulsive disorder. *Behaviour research and therapy, 37 Suppl 1*, S29.

- Salkovskis, P., & McGuire, J. (2003). Cognitive-Behavioural Theory of Obsessive-Compulsive Disorder. In R. Menzies & P. De Silva (Eds.), *Obsessive-compulsive disorder theory, research and treatment*. Chichester ; Hoboken, NJ: Chichester ; Hoboken, NJ : John Wiley.
- Schneider, S., Blatter-Meunier, J., Herren, C., Adornetto, C., In-Albon, T., & Lavallee, K. (2011). Disorder-specific cognitive-behavioral therapy for separation anxiety disorder in young children: a randomized waiting-list-controlled trial. *Psychotherapy and psychosomatics*, *80*(4), 206-215.
- Schneider, S., Blatter-Meunier, J., Herren, C., In-Albon, T., Adornetto, C., Meyer, A., & Lavallee, K. (2013). The Efficacy of a Family-Based Cognitive-Behavioral Treatment for Separation Anxiety Disorder in Children Aged 8–13: A Randomized Comparison With a General Anxiety Program. *Journal of Consulting and Clinical Psychology*, *81*(5), 932-940. doi:10.1037/a0032678
- Shoenfelt, J., & Weston, C. (2007). Managing Obsessive Compulsive Disorder in Children and Adolescents. *Psychiatry (Edgmont)*, *4*(5), 47 - 53.
- Storch, E., Bussing, R., Small, B. J., Geffken, G. R., McNamara, J. P., Rahman, O., . . . Murphy, T. K. (2013). Randomized, placebo- controlled trial of cognitive-behavioral therapy alone or combined with sertraline in the treatment of pediatric obsessive–compulsive disorder. *Behaviour Research and Therapy*, *51*(12), 823-829. doi:10.1016/j.brat.2013.09.007
- Storch, E., Geffken, G., Merlo, L., Jacob, M., Murphy, T., Goodman, W., . . . Grabill, K. (2007). Family Accommodation in Pediatric Obsessive– Compulsive Disorder. *Journal of Clinical Child & Adolescent Psychology*, *36*(2), 207-216. doi:10.1080/15374410701277929

- Storch, E., Geffken, G. R., Merlo, L. J., Mann, G., Duke, D., Munson, M., . . . Goodman, W. K. (2007). Family- Based Cognitive- Behavioral Therapy for Pediatric Obsessive- Compulsive Disorder: Comparison of Intensive and Weekly Approaches. *Journal of the American Academy of Child & Adolescent Psychiatry, 46*(4), 469-478.
- Torp, N. C., Dahl, K., Skarphedinsson, G., Thomsen, P. H., Valderhaug, R., Weidle, B., . . . Ivarsson, T. (2015). Effectiveness of cognitive behavior treatment for pediatric obsessive- compulsive disorder: Acute outcomes from the Nordic Long- term OCD Treatment Study ( NordLOTS). *Behaviour Research and Therapy, 64*, 15-23.  
doi:10.1016/j.brat.2014.11.005
- Wagner, P. (2003). Cognitive-behavioral therapy for children and adolescents with obsessive compulsive disorder. *Brief Treatment and Crisis Intervention, 3*(3), 291 - 306.
- Weiss, D., & Chorpita, B. (2011). Revised Children’s Anxiety and Depression Scale: User’s Guide. California: University of California Los Angeles.
- Williams, T., Salkovskis, P., Forrester, L., Turner, S., White, H., & Allsopp, M. (2010). A randomised controlled trial of cognitive behavioural treatment for obsessive compulsive disorder in children and adolescents. *Eur Child Adolesc Psychiatry, 19*(5), 449-456. doi:10.1007/s00787-009-0077-9
- Willis, B. (2014). The Advantages and Limitations of Single Case Study Analysis.  
Retrieved from <http://www.e-ir.info/2014/07/05/the-advantages-and-limitations-of-single-case-study-analysis/>

### **List of figure legends**

Figure 1: A diagram of Lucas’s formulation of OCD within a CBT framework.

Table 1: A description of the intervention delivered with Lucas.

Table 2: The fear hierarchy developed by Lucas.

Figure 2: A line graph showing the RCADS results for the beginning and end of the intervention (April and September 2016), one month follow up (October 2016) and four months follow up (February 2017).

Figure 3: A line graph showing the RCADS-P results for the beginning and end of the intervention (November 2015, April and September 2016), one month follow up (October 2016), and four months follow up (February 2017).

Table 3: A table of Lucas's CY-BOCS results from pre and post intervention.

Figure 4: A line graph showing Lucas's self-reported OCD symptom tracking results.

Figure 5: A line graph showing Lucas's mother's self-reported OCD symptom tracking scores.

Figure 6: A line graph showing the average time Lucas spent per week having Silly Gremlin Thoughts and Silly Gremlin Actions.

Appendix one: A table showing the different behavioural experiments that Lucas completed during the intervention.