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Comorbid Hoarding and Obsessive Compulsive Disorder Manifested During Early Childhood

Tania Borda[1], Danielle H. Gardini[2], and Fugen Neziroglu[2]

Abstract

This case report outlines the use of cognitive behavioral therapy (CBT) used to treat an 11-year-old female, "Gabriela," with comorbid hoarding and obsessive compulsive disorder (OCD). Gabriela participated in treatment involving CBT and exposure and response prevention (ERP) sessions for OCD and hoarding, following a cognitive rehabilitation software program designed for cognitive impairment. Upon completion of the treatment, Gabriela no longer exhibited behaviors consistent with a comorbid hoarding and OCD diagnosis and demonstrated marked improvements in her presenting problems (mental rituals; hoarding items for magical thinking purposes). This case report supports the focus of research, continuing to explore hoarding and comorbidity diagnoses across the life span.

Keywords

compulsive hoarding, age group: pediatric/child, obsessive compulsive disorder (OCD), comorbidity, pediatric OCD

1 Theoretical and Research Basis for Treatment

Accumulating and storing resources and/or materials are an innately adaptive phenomenon that occurs in both animals (Keen-Rhinehart, Dailey, & Bartness, 2010) and humans (Mathews, Delucchi, Cath, Willemsen, & Boomsma, 2014); however, there is a clear distinction between natural acquirement of items and a severe urge for accumulating items that may be deemed unnecessary. At the extreme end of this continuum, some humans collect so many possessions that their homes become uninhabitable and are then unable to function effectively in their own environment. This behavior is characterized as compulsive hoarding. Compulsive hoarding is identified by three specific characteristics: "the acquisition of, and failure to discard a large number of possessions; living spaces cluttered so as to preclude activities for which those spaces were designed; and significant distress or impairment of in functioning caused by the hoarding" (Frost & Hartl, 1996, p. 341). Hoarding behavior is distinctive from collecting objects that are considered interesting and valuable for a means of presenting these items on display. This behavior is not classified as pathological unless accompanied by extreme clutter (Steketee & Frost, 2003). In severe hoarding cases, the clutter inhibits normal activities of daily living such as cooking,

[1]Bio Behavioral Institute, Buenos Aires, Argentina
[2]Bio Behavioral Institute, Great Neck, NY, USA

Corresponding Author:
Fugen Neziroglu, Bio Behavioral Institute, 935 Northern Boulevard, Suite 102, Great Neck, NY 11021, USA.
Email: neziroglu@gmail.com

cleaning, moving through the house, and even sleeping (Steketee & Frost, 2003). Clutter in the homes of people with hoarding problems is extremely disorganized, which contributes to putting these persons in danger of falls, fires, and health risks.

Until *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013a), hoarding symptoms were classified as an aspect of obsessive compulsive disorder (OCD). References to excessive saving date back to medieval literature; the "hoarders" in Dante's *Divine Comedy* (1995 edition) saved up large amounts of money they never spent. Famous early psychologists William James, Erich Fromm, and Sigmund Freud described cases of hoarding and speculated about the underlying causes (Fontenelle & Grant, 2014); yet, only over the past two decades has hoarding been systematically researched as a discrete psychiatric syndrome. The cognitions of many individuals who hoard can be understood in this light—obsessions characterized by a fear of losing things and compulsions to acquire and save objects; however, a number of factors suggest that hoarding may be a unique variation or even a disorder entirely discrete from OCD, despite the frequent comorbidity. For example, more than 80% of individuals with hoarding symptoms do not show any core symptoms of OCD (Frost, Steketee, & Tolin, 2011; Pertusa et al., 2008; Samuels et al., 2008). Notably, the prevalence of hoarding has been estimated to be as much as twice that of OCD (Samuels et al., 2008), which contradicts the conceptualization of compulsive hoarding as a subtype of OCD. As many as 82% of primary hoarding patients do not meet diagnostic criteria for any other form of OCD (Frost, 2010), and patients with other anxiety disorders (particularly, generalized anxiety disorder [GAD]) are more likely to endorse hoarding symptoms than are those with OCD (Tolin, Meunier, Frost, & Steketee, 2010). Furthermore, although OCD patients typically have relative insight into their condition, patients with hoarding symptoms frequently lack insight and find the accumulation of clutter to be the primary concern rather than uncovering the underlying behaviors contributing to and resulting in the clutter (Bloch et al., 2014).

Although hoarding symptoms often correlate with OCD symptoms, they have also been seen to correlate strongly with additional symptoms. For example, hoarding symptoms are also found to be comorbid with major depressive disorder, social phobia, obsessive compulsive personality disorder (OCPD), and generalized anxiety disorder. That is not to discount the cases in which comorbidity of hoarding and OCD exist. Reportedly, hoarding occurs in almost 30% of adults with OCD (Steketee & Frost, 2003). Among adults with OCD, those with hoarding symptoms have, on average, an earlier onset age of OCD, more severe obsessive compulsive symptoms, and greater prevalence of major depression, generalized anxiety, social phobia, and pathological grooming behaviors, more limited insight, and poorer response to treatment. Adults with hoarding also have been found to have greater numbers of obsessive compulsive, dependent, and schizotypal personality disorder traits (Frost, Krause, & Steketee, 1996; Frost, Steketee, Williams, & Warren, 2000; Mataix-Cols, Baer, Rauch, & Jenike, 2000; Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002; Mataix-Cols, Rauch, Manzo, Jenike, & Baer, 1999; Samuels et al., 2002; Samuels et al., 2007).

Remarkably, there is little research published of hoarding behaviors present in youth; however, the study of hoarding in childhood and adolescence is important because hoarding symptoms (a) have an onset that often begins in childhood and adolescence (b) are chronic and persist into adulthood, and (c) are associated with a number of negative outcomes and sequelae. In fact, retrospective studies of adults who hoard report that for the majority of participants (70%), hoarding behaviors began before the age of 20 years, with an estimated median age ranging from 11 to 15 years (Tolin et al., 2010). The estimated prevalence of hoarding in adolescents (2%) is similar to that observed in adults (Ivanov et al., 2013), whereas the prevalence in children is still unknown.

Many individuals who hoard report little distress or lack insight into the problems caused by their behavior; therefore, hoarding is also associated with high levels of family frustration

(Murphy & Flessner, 2015). In many cases, attempts by family members and caregivers to facilitate discarding are met with anxious reluctance or stoic refusal (Murphy & Flessner, 2015). These factors are a couple of reasons why individuals with hoarding behaviors do not seek treatment until the issue severely impedes upon family functionality. This provides reasoning for the lack of research of hoarding behaviors in youth.

Although most research places emphasis on examining hoarding behavior in adulthood, evidently, these symptoms are present in childhood and adolescence as well. In fact, to best understand hoarding in youth, it is essential to compare symptoms across the life span. Research shows that children and adolescents with compulsive hoarding exhibit distinctive features compared with adults. Most notably, disorganization and excessive clutter are not required criteria for youth to meet a diagnosis of hoarding. The dysfunction exhibited is not merely maintained by disorganization, which is sometimes nonexistent. Clutter has been seen as typically controlled by parental tolerance, interference, and accommodation (Storch et al., 2007). Parents are able to intervene by discarding hoarded items. Dysfunction is presented more by the child's rigidity and restrictions placed upon his or her personal belongings. Frost (2010) suggest that possessions create a facade of safety used to cope with actual or perceived dangers. These perceived dangers are different between youth and adults. Among youth, hoarding may be an attempt to cope with uncontrollable situations such as trauma, family chaos, peer problems, or need for perfection.

Hoarding is typically distinguished due to the amount of clutter accumulated. Aforesaid disorganization is not always an observable feature. Some individuals may be more suitable identified as collectors; however, there are significant differences between a hoarding problem and a collection. When people collect, their items are typically organized in a systematic fashion, which is not usually seen in hoarding behavior. In addition, collectors acquire items with intent to display them for other people to appreciate. In contrast to hoarding, individuals rather keep their possessions hidden usually due to experiencing feelings of the shame (Frost, 2010). Collectors may be described as obsessive, but that is the only similar characteristic compared with hoarding disorder.

Furthermore, children with comorbid OCD and hoarding symptoms differ in clinical presentation from children with only OCD symptoms (Storch et al., 2007). Storch et al. (2007) studied 80 children and adolescents treated at an OCD clinic (7-17 year olds). Compared with nonhoarding patients, the 21% found with significant hoarding symptoms were described as having "worse insight, more magical-thinking obsessions, ordering/arranging compulsions, higher levels of anxiety, aggression, somatic complaints, and overall externalizing and internalizing symptoms" (Storch et al., 2007). Another study examined 257 children and adolescents (6-18 year olds who were referred to a pediatric mood and anxiety clinic. Compared with the other patients, the 15 with whom hoarding was the most severe, stable, and impairing, obsessive compulsive symptom had the most severe and impairing illness, and the greatest prevalence of panic disorder and bipolar disorder (Masi et al., 2010). Furthermore, Frank et al. (2014) studied 68 children treated at a pediatric anxiety clinic (4-10 year olds). Compared with nonhoarding patients, the hoarding group was described as having an earlier age of onset and a greater prevalence of comorbid attention deficit/ hyperactivity disorder (ADHD), as well as comorbid anxiety disorder (e.g., generalized anxiety, social anxiety, or separation anxiety disorders). A study that analyzed OCD symptoms in 238 children and adolescents (8-18 year olds) attending a pediatric OCD clinic found high scores on a hoarding/checking scale to be associated with longer duration of illness, increased levels of pervasive slowness, indecisiveness, pathological doubt, and mood disorders including major depressive disorder (Mataix-Cols, Nakatani, Micali, & Heyman, 2008).

There are also distinctions seen between hoarding disorder and comorbid hoarding and OCD (Frost et al., 2011). One prominent difference involves cognitive functioning: "While thoughts about hoarding are generally [experienced] as distressing within the context of OCD, they are neither distressing nor repetitive in hoarding disorder" (Frost et al., 2011). Research has shown correlation

between hoarding behavior and information processing deficits, particularly, within areas of attention, memory, and executive functioning (Frost, 2010). In the area of attention, there is sometimes a tendency to hyper focus. In regard with executive functioning skills, there are observable problems with planning, categorization, and organization. Individuals who hoard tend to live their lives focused visually and spatially instead of categorically, which is more typical (Frost, 2010).

2 Case Introduction

"Gabriela," is an 11-year-old Caucasian female attending the fifth grade at a private trilingual (Spanish, German, and English) school in City of Buenos Aires. She lives with her biological parents and has a twin brother, whom receives psychosocial and pharmacological treatment for autism spectrum disorder (ASD). Both parents have a doctoral degree level of education. Parents report that around the age of 4 years, Gabriela began to exhibit restrictive behaviors of acquiring possessions, avoidance of throwing away possessions, social isolation, as well as increased control, suspicion, and fear/avoidance of others touching her belongings. At the onset of these behaviors, Gabriela's parents were immediately concerned these behaviors were characteristic of ASD, given Gabriela's twin brother's diagnosis and their knowledge of ASD features including social deficits and restrictive interests.

Gabriela's behavior became more isolative at school. She started to not participate in play and refused to partake in recess. Gabriela's teacher notified her parent's of this new behavior. Coincidently, Gabriela's parents were becoming more concerned with her hoarding behavior, whereas Gabriela was primarily concerned with the intrusive violent images she was experiencing. Gabriela lacked insight in any other area of concern; she did not have any awareness of the collecting behavior or social isolation as being problematic. Gabriela's symptoms are suitable for a diagnosis of comorbid hoarding and OCD.

3 Presenting Complaints

Gabriela's teacher reported concern for Gabriela's social functioning and its impact on her academic motivation. The teacher stated, "She does not work when she does not want to." Per report, Gabriela preferred the subject of mathematics and chose not to participate in elective activities including music, theater, and gym class. The teacher explained that Gabriela refused to leave the classroom during recess. She also refused to share her school material with her peers as she was having difficulty working in groups. She denied any concerns of contamination. Resultantly, the teacher referred Gabriela for a psychological evaluation to assess her overall functioning and to receive recommendations on how to deal with her in the classroom. By the time of the psychological evaluation, Gabriela was already beginning to exhibit school refusal.

Gabriela's parents' primary concern was her hoarding behaviors. At home, Gabriela stopped allowing others inside her room. She often arrived late to school due to various complaints so she would not need to attend school. Furthermore, Gabriela had several activities that she routinely followed and completed. She "took care" of 17 cats that lived near her home, which involved feeding them and seeking veterinary attention, as necessary. She described emptying the shampoo bottles and her mother's perfume bottles as being her responsibility. She also collected specific items and would try to keep in her mind her lucky underwear, socks, pen, and the boxes with collected bus/airplane tickets from the family. Gabriela also spent time engaged in compulsions checking on her items and seeking reassurance for her family and friend's safety.

Throughout the school year, Gabriela started to report having repetitive violent images of peers hurting her or the reverse. She explained that when these images entered her mind, she would neutralize the image to "imagining one of my good friends." She would then seek reassurance from her parents by asking whether her friend was okay. Gabriela reported experiencing immense distress

about having intrusive images of her friends who were violent. Her reported distress also demonstrated on the Anxiety Disorders Interview Schedule for *DSM*-IV (ADIS-IV) was characteristic of depressive symptoms including flat affect and low mood meeting criteria for dysthymia.

4 History

Based on parental report, Gabriela's family history is significant for depression and OCD. Her mother reported that the maternal grandfather had been diagnosed with bipolar disorder and the maternal great aunt as being extremely neat (not formally diagnosed). Gabriela's father reported that the paternal uncle is under psychological and pharmacological treatment for OCD. Gabriela's parents further described themselves as being obsessive at work and very exigent with Gabriela's school performance and grades. Reportedly, both parents receive psychotherapy.

Gabriela's family moved to Berlin, Germany when she was 2 years old and stayed there for about 2 years. The family then moved to Argentina. Gabriela entered the fourth kindergarten class in September, which is late in the year for Argentina (typically start date is in March). Reportedly, Gabriela was fluently speaking and writing in German but only comprehending Spanish. According to Gabriela's parents, her symptoms presented around the time of their move to Argentina. During this time, teachers described her as happy, enthusiastic, and curious; however, parents report that during this time, Gabriela began to refuse inviting friends to her home and disliked sharing her toys and school materials, even with her brother. These burgeoning behaviors did not seem to affect her academic performance as her school did not report academic difficulties; in fact, Gabriela was selected as the best student of the fifth kindergarten class. It is our experience that a move is often a trigger for hoarding behavior.

During primary school (ages 6-11 years), the parents reported that Gabriela's symptoms exacerbated leading to school refusal. Gabriela began exhibiting more control, rigidity, and inability to share her personal belongings and had to complete her routines such as feeding the cats. Gabriela was explicit in her fear of something happening to her belongings in her bedroom while she was away from home. Moreover, she began to show a disinterest in leaving her bedroom, even at times when it needed to be cleaned. Around this time, Gabriela also started showing a heightened interest in family's vacations. She started to collect all the tickets in various boxes that she labeled and organized by name.

5 Assessment

Written, informed consent was obtained prior to the clinical interview. A semistructured format was used for the clinical interview and evaluation of psychopathology. The assessments that were administered focused on measuring symptoms and behaviors of OCD and compulsive hoarding. In addition, specialized measures designed to assess hoarding behaviors, family difficulties, and neurocognitive problems were included. The assessments were administered before treatment (baseline) began to obtain baseline criteria, at the midpoint of treatment to monitor progress, and a posttreatment assessment was collected after completion of treatment.

The ADIS-IV is a clinician-rated structured diagnostic instrument administered to Gabriela's parents. It assesses the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; APA, 1994) diagnostic criteria for all anxiety disorders, as well as additional commonly co-occurring diagnoses (Silverman & Albano, 1996). This was helpful to measure for symptoms of separation anxiety disorder, specific phobia, OCD, and dysthymia. High scores were obtained across all scales including separation anxiety, dysthymia, and specific phobia. The *Pediatric Quality of Life* (PedsQL) *Inventory* assesses factors contributing to Gabriela's current quality of life (Varni, Seid, & Rode, 1999). She obtained low scores in the areas of psychosocial health, physical, and social functioning. The *Personality Inventory* for *DSM-5* (PID-5) assesses personality characteristics

specific to hoarding behavior and OCD-related symptoms (APA, 2013a). PID-5 results showed high scores on Negative, Detachment, and Psychoticism. These subscales can be related to descriptions similar to obsessive compulsive personality disorder.

The *Children's Yale–Brown Obsessive Compulsive Scale* (CY-BOCS) *and Symptom Checklist* Spanish version was utilized, which is an exact replica of the English version. This scale is a 10-item semistructured measure of obsession and compulsion severity rated on a 5-point Likert-type scale and a one-item measure of Gabriela's insight into her own symptoms. The *Symptom Checklist* assesses for the presence of a wide range of OCD symptoms (Scahill et al., 1997). In addition to obsessive compulsive symptoms, hoarding behaviors were also assessed with the CY-BOCS Symptom Checklist. Obsession items endorsed as high include fear of family or friends being harmed, losing possessions, and saving items. Compulsions endorsed include checking behaviors and seeking reassurance of safety. To meet full criteria of a clinical diagnosis of OCD, the following symptoms are determined as clinically significant: recurrent and persistent intrusive/unwanted thoughts, urges, and/or images causing marked distress/anxiety; attempts at repressing these urges; significant impairment in social, occupational, or other important areas of functioning (APA, 2013). The *OCD Family Functioning* (OFF) *Scale* was developed to examine the content, extent, and perspectives of functional impairment in families affected by OCD. It is designed as a 42-item self-report questionnaire consisting of three major subscales (Stewart et al., 2011). OFF Scale scores represent improvement in all three subscales throughout treatment.

The *Obsessional Beliefs Questionnaire, Child Version* (OBQ-CV) is a self-report measure containing 44 items assessing maladaptive beliefs corresponding with OCD. Items of the adult version of the OBQ were adapted as a reliable psychometric tool for children and adolescents. Compared with the adult version, OBQ-CV items are rated on a 5-point Likert-type-scale ranging from 1 to 5. Gabriela's scores consistently decreased between pre-, mid-, and posttest representing a lessened severity level. *Saving Inventory-Revised* is a self-report measuring validated for the assessment of hoarding disorder symptom severity (Frost, Steketee, & Grisham, 2004). It designed as a 23-item self-rated measure using a 5-point (0-4) Likert-type scoring scale. Gabriela's scores gradually decreased shown by midtest and posttest ratings. *Trail Making Test* is an extensively used test designed to assess executive functioning, especially, with but not limited to survivors' of a stroke (Sánchez-Cubillo et al., 2009). Successful performance requires various cognitive skills that include letter and number recognition, mental flexibility, visual scanning, and motor function. Performance is evaluated using two visual conceptual and visuomotor tracking conditions: Part A involves connecting numbers 1 to 25 in ascending order, and Part B requires connecting numbers and letters in an alternating and ascending fashion. Gabriela's *Trail Making Test* scores consequently decreased in completion time and errors from across testing.

Data collected from the assessments, the clinical interview with Gabriela, and the family clinical interview demonstrated that Gabriela met the diagnostic criteria for comorbid hoarding and OCD. In addition, scores on the ADIS-IV showed symptoms of separation anxiety and depression. Primary areas of concern that contributed to her diagnosis included poor insight, emotional attachment, a heightened sense of responsibility for possessions, and the need for enforcing control and restriction of belongings. Moreover, Gabriela began exhibiting maladaptive behavioral patterns including the refusal of discarding items or attending school. Intervention focused on directly treating symptoms of hoarding and OCD. At the conclusion of treatment, objective data demonstrated significant improvement in these areas (hoarding and OCD) as well as separation, anxiety, and depression. Measures also identified improvement in working memory and executive functioning skills. See Table 1 for assessment results.

6 Case Conceptualization

Gabriela presented with behaviors classified as comorbid hoarding and OCD symptoms. At the beginning of treatment, Gabriela's reasoning for collecting was explored. It became apparent that Gabriela hoarded items for two separate reasons: items hoarded had a magical thinking

Table 1. Assessment Results.

Psychological questionnaire	Pretest Baseline	Midtest Session 87	Posttest Session 125
ADIS-IV			
Separation anxiety	Yes	No	No
Specific phobia	Yes	Yes	No
Aggressive obsessions	Yes	Yes	No
Doubting obsession	Yes	Yes	Yes
Hoarding obsession	Yes	No	No
Symmetry obsession	Yes	No	No
Hoarding compulsion	Yes	No	No
Ordering compulsion	Yes	No	No
Right thing compulsion	Yes	No	No
Over and over again	Yes	Yes	No
Dysthymia	Yes	No	No
CY-BOCS (Spanish version) Total Score	43	29	16
Obsession subtotal	21	15	9
Compulsion subtotal	22	14	7
PedsQL Inventory			
Physical functioning	34	58	72
Psychosocial health	9	10	14
Emotional functioning	50	63	73
Social functioning	30	32	41
School functioning	55	57	63
OBQ-CV			
Responsibility + threat	49	42	37
Perfectionism + certainty	64	52	46
Control + importance of thoughts	51	39	32
PID-5-BF Total Score	9.4	4.4	3.8
Negative	2.4	1.6	1.4
Detachment	2.2	1	0.8
Antagonism	1.2	0.8	0.8
Disinhibition	1.2	0.8	0.8
Psychoticism	2.4	0.2	0
Savings-Inventory Revised			
Clutter	16	4	3
Difficulty discarding/saving	24	8	5
Acquistion	21	9	7
Savings Cognitions Inventory			
Emotional attachment	55	23	20
Control	16	7	7
Responsibility	27	15	14
Memory	8	3	3
OFF Scale	Current OCD/worst ever OCD		
Family functioning impairment	38/39	25/37	21/38
Symptom specific impairment	24/28	12/25	9/27
Family role specific impairment	3/3	2/4	2/5
Total score	65/70	39/66	32/70
Trail Making Test	Time/errors		
Part A	46 s/0	32 s/0	25 s/0
Part B	89 s/1	70 s/0	61 s/0

Note. ADIS-IV= Anxiety Disorders Interview Schedule for *DSM*-IV; CY-BOCS = Children's Yale–Brown Obsessive Compulsive Scale; PedsQL = Pediatric Quality of Life; OBQ-CV = Obsessional Beliefs Questionnaire, Child Version; PID-5-BF = Personality Inventory for *DSM-5–Brief Form*; OFF = OCD Family Functioning; OCD = obsessive compulsive disorder; *DSM* = *Diagnostic and Statistical Manual of Mental Disorders*.

component and items collected for a purely collective purpose. The items hoarded were associated with bringing good luck. These "lucky items" included her mother's empty shampoo bottles, perfume bottles, and her own articles of clothing. Gabriela gathered items for her collection that she considered memorabilia (e.g., tickets from family trips), which she kept organized and in a specific order. She also started to become possessive and controlling over all of her belongings leading to social isolation. This was an effort to control or protect her possessions for fear of damage, loss, or being moved. This rigidity further manifested into refusal to attend school, refusal to leave the classroom, refusal of sharing her materials, and refusal to allow others into her bedroom. While at school, Gabriela was also experiencing preoccupying thoughts about something bad happening to her possessions at home while she was away. She was fearful of her possessions being displaced and one of her routines being disrupted while she was not home to protect them. Many restrictions were placed upon her possessions: not sharing her belongings with friends or family, keeping her possessions specifically organized, and refusing to allow others in her room without her.

As the hoarding behaviors sustained, symptoms of OCD exacerbated. Gabriela experienced obsessions of intrusive violent images of her friends, which heightened anxiety levels. Compulsions involved mental rituals; Gabriela would switch the negative mental image with a positive image of that friend. Gabriela reported highest feelings of distress attributed with these obsessions and compulsions.

Given Gabriela's presenting symptoms cognitive behavioral therapy (CBT) including exposure with response prevention was considered to be the optimal treatment option. Throughout the course of treatment, Gabriela would gradually confront anxiety-provoking stimuli after having learned more appropriate coping mechanisms. In addition, the parents would be provided with information to aid in the exposure process and foster Gabriela's independent coping skills.

7 Course of Treatment and Assessment Progress

Gabriela participated in 2 hr of weekly CBT with a licensed clinical psychologist for a total of 185 sessions for a year of treatment. Individual therapy with a family component transitioned between home and office settings. In either setting, individual therapy was followed by 15-min family therapy. Treatment followed a CBT intervention for compulsive hoarding presented by the book, *Overcoming Compulsive Hoarding* (Neziroglu, Bubrick, & Yaryura-Tobias, 2004). This structured treatment outlined CBT strategies and skill-based methods of sorting through clutter, prevention of acquiring clutter, maintenance of decluttering, and relapse prevention.

The first four sessions focused on gathering assessment data. These initial sessions incorporated psychoeducation of compulsive hoarding behaviors, differentiating hoarding behavior from obsessive compulsive symptoms, and identifying expectations for treatment. The structure of these sessions was as follows: Gabriela's parents accompanied her for the first 15 min of therapy followed by individual therapy for the remaining 45 min; the second and third sessions were conducted as individual therapy; the fourth session was conducted as individual therapy for the first 15 min with family therapy for the remaining 45 min. The following therapy sessions were structured as beginning with 45 min of individual therapy followed by 15-min family therapy sessions. Homework was assigned for completion in-between therapy sessions. Considered as an important therapy component, this focused on Gabriela practicing the same exposure from the therapy session with parental support as needed.

Therapeutic treatment goals concentrated first and foremost on improving Gabriela's overall quality of life and social engagement. With this consideration, focus was on increasing functional living space in her bedroom, creating appropriate organization and storage of her items, maintaining treatment gains, improving decision making and organizational skills, and challenging irrational thinking patterns. CBT approaches involved exposure with response prevention

specific to compulsive acquisition and a decluttering strategy. Specifically, emphasis was placed on the functionality of living space, whereas teaching her how to challenge her cognitions regarding the need to hoard everything to remember special sentimental events.

The decluttering strategy included a step-by-step process. First, it was necessary to limit the acquisition of new items while clearing space. Next, target areas were identified, which determined the current focal point of decluttering. An important factor of treatment was to focus on one area at a time. Target areas included the bathroom and Gabriela's closet. The home therapy visits focused on this process of decluttering and sorting through Gabriela's possessions, which was guided by the three and a half box technique. Each box had a designated label: save box (items kept that belonged in a different location), display box (itemed kept that belonged in target area), discard/recycle box, and the to-do immediately box (half box; extremely important items). This technique first optimized functional living space, then focused on organizing and distributing possessions to appropriate places. Notably, Gabriela initially focused on one item at a time to comfortably adjust to the sorting and decision making of her personal belongings.

The three and a half box technique was adapted by incorporating a qualitative rating scale. For example, Gabriela was encouraged to classify the objects from the bathroom into three distinctive groups: important, not that important, and of least importance (e.g., empty shampoo bottles, old toothbrushes, and her mother's perfumes). After each session, the therapist collaboratively discarded the items of least importance. The closet involved sorting through lucky articles of clothing (e.g., underwear, socks) and school boxes that were filled with years of collecting "lucky" items (e.g., pens, pencils, erasers, notebooks, barrettes). Prevention of acquiring new items (tickets) and discarding old items was continually addressed throughout therapy.

Gabriela also received 1 hr per week of cognitive rehabilitation through the software program *CogRehab* by Psychological Software Services, Inc. This eight-package software program is comprised of 67 computerized therapeutic tasks that focus on enhancing cognitive functioning skills. Each package is a specific domain including the areas of attentions, executive functioning, visual-spatial, memory, and problem-solving skills. The tasks within each domain range from simple to complex modalities. Furthermore, they are designed as modifiable to fit the specific requirements and needs of the user.

The structure of each therapy session also included brief cognitive therapy prior to initiating exposure and response prevention (ERP) and additional cognitive therapy following the completion of ERP. This approach is justified by its emphasis on activation of relevant cognitive domains as well as habituation, which are considered core mechanisms of change in the broader CBT model for OCD (see, for a discussion, Abramowitz, Whiteside, & Deacon, 2005). Cognitive therapy strategies were used to identify reasons for accumulation of items and to treat mental compulsions. Cognitive distortions were challenged by practicing reframing exercises. Some of these exercises used tangible objects as visual aids for response prevention during the exposures addressing mental rituals. The therapist utilized two tangible photos one negative and one positive portraying Gabriela's violent and nonviolent mental compulsions (i.e., a violent image of her friend and a nonviolent image of her friend). During the exposure, Gabriela would be instructed to look at the negative image, whereas the positive image was hidden until her anxiety level decreased. In the beginning of the exposure process, Gabriela would have the positive image available to look at, as needed, depending upon anxiety level. The positive image was gradually faded.

Family therapy was utilized as a supportive component to address OCD symptoms. These sessions discussed the strategies of performing exposure with response prevention with Gabriela as homework. All family therapy sessions also included review of compliance and progress with between-session homework completion as well as review of progress made home exposures during individual therapy. Homework assigned always included parental support with the continuation of exposure exercises at home that was practiced in therapy to ensure generalizability.

8 Complicating Factors

One complicating factor throughout the evaluation was the way the symptoms were initially presented. When the case was referred, each person involved reported separate symptoms. Consequently, this created complexity during the assessment phase of treatment planning. Much time was spent gathering and sorting through quantitative and anecdotal data to obtain a comprehensive conceptualization of contributing factors to Gabriela's presenting problem. It became evident that her teacher, parents, and herself were focusing on different areas of concern. Each party had a different perspective on the area of primary concern as the focal point for treatment. Gabriela's teacher reported social isolation and refusing the completion of tasks as primary concerns. Gabriela's parents concerns focused on the hoarding behaviors. Gabriela, lacking the insight of the severity with hoarding behaviors, initially focused on discussing the distress caused by her OCD symptoms of intrusive violent images. Research suggests that individuals with both OCD and hoarding symptoms may experience more success from interventions targeting hoarding symptoms (Bloch et al., 2014). This notion supports this treatment intervention's approach of identifying hoarding behavior as the primary presenting problem. Shifting into the intervention process before gathering a thorough understanding of the unique presenting problems could have affected the success of treatment.

9 Follow-Up

At the 87th session, the therapist noticed a significant decrease in clinical symptoms. In addition, Gabriela's parents reported an improvement in Gabriela's social functioning. At this time, a midtest evaluation was performed, by administering the rating scales to measure and assess for change in symptoms severity. With consideration of the improvement in the assessment scores, it was determined that Gabriela was experiencing symptom reduction. Sessions were then reduced to one individual (45-min) therapy session per week. At the 125th session, a re-evaluation of treatment identified the readiness for a maintenance phase. This treatment phase was compromised of one individual therapy session per week for the next month. Then, it transitioned to one session per month for the next 2 months. Finally, one individual therapy session was conducted every 4 months. After the completion of treatment, Gabriela showed immense progress across multiple areas. She no longer exhibited school refusal, did not spend time organizing her ticket collection, and did not hoard her mother's perfume and shampoo bottles. Coincidently feelings of anxiety and dysthymia were alleviated.

10 Treatment Implications of the Case

There is limited literature that examines the clinical presentation of hoarding behaviors in youth as well as comorbidity with OCD. This case study reinforces the importance of examination across the life span as an essential factor in understanding the manifestation of these behaviors. There are important distinctive factors among anxiety-related disorders and within the diagnostic criteria that are important to consider when conceptualizing case presentations. One factor involves the distinctions between characteristics of hoarding and collecting behavior. Hoarding behavior involves a magical thinking association, whereas collecting behavior is purely acquisition. Another factor involves the differences of hoarding behavior within age groups. For example, it is not required for children to exhibit excessive clutter to meet diagnostic criteria compared with the requirement for adults. An additional factor involves the complexity in treating comorbidity. It was necessary to identify how the different symptoms were going to be treated.

The results of this case study are promising as treatments are continually modified as evidence-based modalities to treat youth who present with this unique overlap of symptoms. A comprehensive

treatment approach involving CBT, exposure with response prevention, cognitive rehabilitation, and parental involvement resulted in significant symptom reduction and improved overall quality of life for an 11-year-old girl with comorbid hoarding and OCD disorder. This case highlights the benefit of creatively applying an integrative approach of evidence-based components to meet the unique needs of the child. Directly targeting hoarding and OCD as treatment focus also resulted in the reduction of additional symptoms including separation anxiety and depression. Jumping into intervention before gathering a comprehensive outlook may have affected the focal point of treatment ultimately exacerbating pathology. This emphasizes the assessment and conceptualization phase of treatment as an integral element not to be rushed or overlooked.

11 Recommendations to Clinicians and Students

This case study highlights several factors that can be considered applicable to future treatment. First, this case supports and demonstrates the efficacy of the three and a half intervention approach for compulsive hoarding. This intervention provides structure, organization, and feasibility for sorting through clutter. Second, this case study also demonstrates the effectiveness of continual assessment at a pre-, mid-, and posttreatment level to help guide the course of intervention. Moreover, an integral approach within this case presentation was the implementation of homework. This treatment emphasized the important benefits of supplementing therapy sessions with exposures completed independently without the therapist. The homework involved the child repeating the same exposures conducted from the previous therapy session, with support from her parents. Repeating the same exposures increases the generalizability of OCD symptoms.

Furthermore, this treatment supports the value of developing visual aids for use during exposure therapy. In this case study, visual aids were implemented as a method of animating the child's mental rituals to supplement the efficacy of exposure. This unique tool applied tangibility, physicality, and visibility to a mental ritual that is not typically observable. These features produced and expanded the opportunities for exposure increasing the speed and effectiveness of treatment. Finally, this study demonstrates the consideration of social isolation as a predictive factor for pathological concerns. Social isolation demonstrates an observable change in a child's behavior. In this study, the child was exhibiting social isolation for psychological reasons. This awareness is helpful for schools to consider as an identifying factor for mental health concerns. The PedsQL Inventory can be used as a universal screening tool and/or secondary intervention to identify specific areas of concern. This measure assesses school, social, emotional, and physical functioning. Referrals and recommendations can then be devised to provide appropriate interventions as needed.

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Author Biographies

Tania Borda is the clinical director at Bio Behavioral Institute in Buenos Aires, Argentina. She received her doctorate from the University of Buenos Aires and was a fellow of the National Council of Scientific and Technical Research (CONICET). She did external research rotations at Brookhaven National Laboratory and has presented at national and international conferences. She is the co-author of two Spanish books on BDD. Dr. Borda is an associate professor at the University Católica Argentina and on the board of directors of the Argentina Association of Cognitive Therapy and a member of the International College of Obsessive Compulsive Spectrum Disorders.

Danielle H. Gardini has been with Bio-Behavioral Institute since 2010 first serving as a research assistant and where she is currently a postdoctoral fellow. She received her doctorate in school psychology at Nova Southeastern University. Dr. Gardini specializes in the treatment of anxiety and mood disorders for children, adolescents, and adults. Her dissertation focused on school-based mindfulness interventions for children and adolescents to improve social-emotional learning and academic performance. Dr. Gardini has received advanced training through the Behavior Therapy Institute (BTTI) of the International Obsessive Compulsive Disorder Foundation (IOCDF), as well as, advanced training in Dialectical Behavior Therapy (DBT).

Fugen Neziroglu specializes in the treatment and research of obsessive-compulsive spectrum disorders. She has written numerous books, book chapters, and journal publications, and received the lifetime achievement award for her work in OCD. Dr. Neziroglu is on the scientific advisory board of the International OCD Foundation, and is president of OCDNY.