

# Treatment of Ocd Symptoms of A Middle-Aged Woman Using Cbt and Erp Technique: Case Study

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## Abstract

In the presented case study, obsessive thoughts related to the dirt and contamination spread by “Bindi” (a decorative piece wear by women on the forehead) associated with cleaning and washing compulsions were treated using Cognitive Behavior Therapy (CBT) including Exposure Response Prevention (ERP) technique. Patient was assessed with Y-BOCS rating scale, Beck’s Depression Inventory, Obsessive Beliefs Questionnaire and Behavior Analysis Performa. Assessment report suggested that the severity level of her symptoms was high. Parallel to the assessment sessions, her detailed case history related to the onset of the problem, difficulties faced by her because of the disorder, childhood incidences, family chart, marital issues and medical history were discussed. On the basis of the reported details, her case was formulated according to the Salkovskis inflated sense of responsibility model. After the case formulation, her treatment plan was designed applying “problem focused coping” approach of CBT which involved ERP sessions and restructuring of the cognitive distortions (beliefs, thoughts and attitude). After the completion of the twenty five therapy sessions, patient reported the improved coping with the anxiety provoking thoughts and reduced level of the washing compulsions. Effects of the therapy were checked and found maintained up to two months follow up.

**Keywords:** OCD • CBT • ERP • Salkovskis’s model

## Introduction

Have you ever felt like a sudden urge to hurt somebody? What if such urges continuously appear in your head? What would you do to stop these urges? Would you be able to continue your day to day life normally with such urges? Clinical Psychologists studied the repetitive occurrence of unwelcoming thoughts, urges, doubts and images which create anxiety. They gave it the term “Obsessions”. These obsessions are dreadful, frightening and intolerable to the extent that they might hinder the natural flow of one’s personal, professional and social life. The person who suffers from such anxiety provoking thoughts tries to deal with the distress cause by such ‘obsessions’ by adopting some behavior or activity which temporarily relieve them from the anxiety and the feared consequences. This behavior could be anything like washing hands, cleaning, repeatedly checking the door or repeating some phrase in head. Psychologists called such repetitive behaviors or activities as

“Compulsions”. According to APA (1994), if the presence of obsessions and/or compulsions is time consuming (more than an hour a day), cause major distress, and impair work, social or other important function then the person will be diagnosed with Obsessive Compulsive Disorder (OCD). Recent epidemiological studies suggest that OCD affects between 1.9 to 2.5% of the world population at some point in their lives, creating great difficulties on a professional, academic and social level. OCD affects all cultural and ethnic groups and, unlike many related disorders, males and females are equally affected by this disorder. OCD is one of the most incapacitating of the anxiety disorders having been rated as a leading cause of disability by the World Health Organization (1996). Major cause of the OCD is still unknown; there could be some genetic components responsible for it (DSM-5). Child abuse or any stress-inducing event could be the risk factor involved in the history of OCD patient. Severity of the symptoms related to obsessions and compulsions provides the basis of the diagnosis in OCD which rules out any other drug related or medical causes. Clinical Psychologists use rating scales like Y-BOCS, self-reports and Behavior Analysis Performa to assess the severity level of the symptoms. On the basis of the severity, treatment plan is designed. Treatment of the OCD involves psychotherapy and antidepressants. Psychotherapy such as Cognitive Behavior Therapy (CBT) is an effective psycho-social treatment of OCD. In CBT, “problem focused” approach is used to treat the diagnosed psychological disorder by challenging and changing core beliefs, negative automatic thoughts and cognitive distortions of the patient. CBT involves Exposure Response Prevention (ERP) as a technique to treat OCD in which patient is exposed with the cause of the problem and not allowed to repeat the ritual behavior. ERP has promising results with 63% of OCD patients showing favorable response after following the therapy sessions [1-3].

## Case Report

This is a case of a 31 years old woman, who belongs to a middle socio-economic background, currently living with her in-laws, husband and daughter. Patient was experiencing obsessive thoughts related to the contamination spread by ‘bindi’ along with compulsive behavior of washing and cleaning from last five years. Patient reported that she always tried to check the contact of ‘Bindi’ with anything because that contact makes her incapacitate to control the situation. She took two and three hours (on daily basis) in washing and cleaning her home, scrubbing her daughter, cleaning daughter’s school bag after returning from school, husband’s bag and other usable items, so that she can stop the contamination from spreading everywhere. Patient has the history of facing the interpersonal issues with family members since her childhood. Her father was alcohol dependent and mother was the patient of depression. Financial condition of the family was not good. When the patient was 17 years old, her father died due to kidney failure and mother got hospitalized because of depression. From a very young age, patient had to bear the responsibility of the family by taking tuitions. At first, she developed the fear of contamination at the age of 19, when she was in her graduation’s first year, for that she was taken to the Psychiatrist. She responded well to the medicines and stopped showing all the symptoms. At the age of 25, when the patient got pregnant she again developed the fear of contamination, which made her husband and in laws uncomfortable and family disputes began. Her husband took her to the psychiatrist who referred her for the psychotherapy but she didn’t attend the psychotherapy sessions properly and continuously lived with the obsessions and compulsions up to the present referral where patient was assessed with Y-BOCS rating scale, BDI, EBQ and Behavioral Analysis Performa. On the basis of the assessment, she was diagnosed with OCD having symptoms of obsessions related to the contamination by ‘Bindi’

and washing compulsions. Detailed case history related to the onset of the problem, childhood incidences, family history, marital history, medical history and other relevant information were also collected. The case was formulated according to the Salkovoskis's inflated sense of responsibility model as patient's reported details were signifying the negative interpretations of her responsibility for self and others. After the case formulation, treatment plan was designed which involved sessions of ERP technique along with alteration of cognitive distortions (ideas, beliefs and attitudes) through cognitive restructuring method of CBT.

**Measures**

**Yale-Brown Obsessive Compulsive Scale (YBOCS)**

In cognitive-behavioral studies, Y-BOCS is used to rate the symptoms of OCD. This scale was designed by Goodman et al. (1989) to know the baseline and the recovery rate of the 'severity of obsessions', 'severity of compulsions' and 'resistance to symptoms'. This is a five step Likert scale which clinicians administer through semi-structured interview in which higher score indicate higher disturbances. The excellent psychometric properties of this scale quantify the severity of the obsessions and compulsions as well as provide valuable qualitative information which makes it very useful for both diagnosis of the OCD and the designing of its treatment plan.

**Beck Anxiety Inventory (BAI)**

Aaron T. Beck (1988) developed BAI as a four point Likert scale which consists of 21 items of '0 to 3' scores on each item (Higher score means higher anxiety). If Patient's scores are from 0 to 7 then interpret as 'minimal anxiety', 8 to 15 as 'mild anxiety', 16 to 25 as 'moderate anxiety' and 30 to 63 as 'severe anxiety'. BAI assesses common cognitive and somatic symptoms of anxiety disorder and considered effective in discriminating between the person with or without anxiety disorder. This scale provides valuable clinical information but not used by clinicians for the diagnostic purposes.

**Obsessive Belief Questionnaire (OBQ)**

OBQ is used to assess the beliefs and appraisals of OCD patients which are critical to their pathogenesis of obsessions [4-6]. This scale consists of 87 beliefs statements within six subscales which represent key belief domains of OCD. First subscale is 'Control of thoughts' (14 items), second is 'importance of thoughts' (14 items), third is, responsibility (16 items), fourth is 'intolerance of uncertainty' (13 items), fifth is overestimation of threat (14 items), and sixth is 'perfectionism' (16 items). Response on this measure is the general level of agreement of the respondents with the items on a 7 point rating scale that ranges from (-3) "disagree very much" to (+3) "agree very much". On the respective items summing of the scores is done to calculate the subscale scores.

**Behavior analysis performa**

This study used 'Behavior Analysis Performa' to do the functional analysis of patient's behavior. This Performa collects the details of patient's behavioral excess, deficits and assets, his or her motivational factors behind maintaining and reinforcing ill behaviors, as well as, the medical, cultural and social factors which contributed in the development of the illness.

**Case Formulation**

On the basis of the reported details and the assessment, the case was formulated according to the Salkovoskis model (1985). This model suggests that the patient's main negative interpretation revolves around the idea that his or her actions might have harmful outcomes for self or others. This interpretation of responsibility increases the selective attention and maintains the negative beliefs [7]. Here in this case, patient had to face the disturbed family environment which significantly has a role in the formation of maladaptive schemas related to her negative view of self, world and the future. Patient's beliefs assessment reports signified that her major dysfunctional assumptions were 'if harm is very unlikely, I should try to prevent it at any cost' and 'if I don't act when I foresee danger then I am to blame for any consequences'. Intrusive thought for her was that 'bindi contaminates dirt' and neutralizing action for this intrusive thought

was 'washing and cleaning things'. She paid her keen attention on the thought that 'I should not be get touched with bindi' and misinterpreted and over signified it by avoiding bindi and preventing the contamination. Her safety behavior included avoiding going out, (especially beauty parlors and cosmetic shops), and getting touched with anyone on roads and market places. Result of such avoidance was tiredness, anxiousness, aggressiveness and distressed mood state. The graphical representation of the case formulation is shown in the Appendix 1 in the end of this paper.

**Intervention**

After the case formulation, treatment plan was designed. Patient had dysfunctional assumptions related to her responsibility for self and others. She had obsessions related to the contamination spread by 'Bindi' associated with washing and cleaning compulsions. As she was taken by her husband for the therapy, so it was important to socialize her and her family with the OCD to develop insight for the disorder. After socializing them with OCD, they were taught the basic structure of cognitive behavior model that how patient's thoughts, emotions, physical sensations and behavior all are interrelated and affects each other in a vicious circle.

**Preparation phase of ERP**

In the preparatory phase, patient was introduced with the ERP technique, how does it works and how much her cooperation and will power are required for the success of this technique. After introducing ERP technique to her, a behavioral analysis was done with patient by using down-arrow method to make the list of the situations she use as safety strategies and maintains her negative beliefs.

**Middle phase of ERP**

In the next session, patient was told to imagine her exposure with different situations which she avoids and asked her to rate level of anxiety in all the situations on a scale of 1 to 10. After this imaginary exposure, a hierarchy was made from the least anxiety-provoking event to the high anxiety provoking event. Here is the list of different situations which patient rated on the basis of level of anxiety (Table 1).

Situation	Level of Anxiety (1 to 10)
Watching Bindi hanging on the shop from distance	3
Watching women purchasing and applying Bindi	4
Standing close to someone who has applied Bindi	5
Enter into the shop where Bindi is selling out	6
Touch the Bindi packet only hanging on the wall	7
Purchasing small colourful Bindi	8
Applying a small Bindi	8
Purchasing Red colour Bindi packet	9
Applying Red colour Bindi for 5 minutes	9
Applying Red colour Bindi for 1 hour	10
Applying Red colour Bindi for 4 hours	10

**Table1:** Anxiety levels in different situations. Steps of hierarchy

In this phase, patient was gradually exposed with the least anxiety provoking situation to the highest-anxiety provoking situation. Patient's husband worked as a co-therapist and accompanied her in all the situations and observed her anxiety levels and other behaviors. Patient was asked to rate her anxiety level on a scale of 1 to 10 after every exposure.

In the first step of exposure patient was instructed to go out with the husband in the market area where 'Bindi' was hanging on the walls, she was instructed to watch them from some distance and observe her level of anxiety varying with time. She was strictly instructed for not avoiding the situation and to face the anxiety levels without skipping. In the next session she was asked what she exactly felt when she was watching the bindi packets, she replied that at first sight of bindi she felt disgusted and wanted to go away but she gave self-instructions to her that these are very far and cannot contaminate her so she kept sitting there and with the passage of time her anxiety level also came down.

In the second step of hierarchy she was instructed for sitting at a distance from cosmetics shop and observes the ladies entering and purchasing bindi there, her husband was told to work as co-therapist and checks the anxiety levels and reactions of his wife during the exposure. In the next session, she was again asked for the thoughts and levels of anxiety during the observation, husband reported that at first she shown some anger and was looking very anxious while observing the ladies with bindi but when he reminded her about the nature of therapy, she managed to sit there and sometime later became relaxed.

In the third step of hierarchy patient was instructed to enter into the cosmetic shop and remain stand there for a short while without purchasing anything and to face the levels of anxiety varying with time. In the session she was asked to report the anxiety level. She reported that just when she entered into the shop she was trying to not get touched with anything and felt like she would lose her control and became very anxious but with self-instructions she managed herself to stand there, after sometime anxiety level came down and she felt little relaxed.

In the fourth step, patient was instructed to enter into the cosmetic shop and to purchase some common items other than 'Bindi'. In the next session husband reported that she was attentively noticing the shopkeeper's movements. Though, she purchased some ribbons but denied to touch them and asked him to put them in his bag and told him to give only the fixed amount of ribbon's cost to the shopkeeper so that exchange could not be needed from shopkeeper's contaminated hands. Husband also observed that during the whole exposure, patient was looking very distressed and anxious and was involved in safety strategies and managed to calm down only when he reminded her about the process of therapy. Patient was then asked to report her anxiety level in this step of exposure.

In the fifth step patient was instructed to go into the market and purchase a packet of small colorful bindi and face the anxiety levels. In the next session she was asked to express the anxiety and rate it on a scale of 1 to 10. Patient reported that when she was purchasing the bindi, she felt dreadful and thought that she would take bath after returning home. Somehow, she purchased the packet and gave it to husband to put it in his bag. After returning home, she got involved in her daughter's work but thoughts of washing and bathing were going on in her mind. Later on, she could not get the time for bathing and she instructed herself to bath in the morning, after this thought she felt very relaxed and had this feeling of winning over her obsessions.

In the sixth step patient was instructed to purchase some colorful bindi packets and try to keep them with herself and strictly prevent herself from hand-washing for one hour. In the next session, she reported that this time she was not that much anxious while purchasing bindi packets but after putting them in her bags she was trying to avoid getting touched with her daughter and mother in law because her mother in law would enter into the kitchen and contaminate everything. Meanwhile, her daughter ran towards her and hugged her. Immediately, she became very restless and angry with the daughter and thought about to wash her. However, she felt incapacitated as daughter ran everywhere in the house and touched everything. She got anxious but managed this thought of contamination and decided to not wash anything, After this thought, she felt relaxed.

In the seventh step of hierarchy, patient was instructed to apply small bindi on her forehead and restricted to not wash her hands for at least four hour. In the next session, she reported that she applied the bindi and her husband and her mother-in-law were feeling very happy but she felt anxious and closed her fist for not touching anything till hand-washing. After sometime, in other household works, she forgot about it but suddenly when she realized that she had applied bindi, she immediately washed her hands but even then kept wearing it for whole day.

In the eighth step, patient was instructed to apply red color velvet medium size Bindi and prevent hand washing for minimum two hours. In the next session, she reported that now her level of anxiety has fallen down and now she feels less anxious after applying bindi and managed to not wash her hands for two hours without any much restlessness.

In the ninth step of hierarchy, patient was instructed to apply red color velvet medium size Bindi and prevent hand washing for minimum four hours and try to make herself normal and gradually start touching things in these hours. In the next session, she reported that now she feels capable to face her feelings of disgust with bindi and manage to make her mind for not washing things after getting touched with the bindi. Though, some thoughts of contamination keep coming in between but she immediately remind herself that 'Bindi' can't contaminate anything.

In the tenth step of hierarchy, patient was instructed to apply bindi on her forehead and keep some of them in her bag preventing washing her hands for maximum hours possible. In the next session, she reported that now she feels more capable to conquer over her thoughts of contamination and more determined to not washing and cleaning after such obsessions.

With each ERP session, patient came to realize that the nature of anxiety is that it goes up with the triggering event but with passage of time, automatically comes down. She also developed the insight that she had fear from the thoughts of contamination and with its associated anxiety more than 'Bindi' itself.

#### Booster Sessions

After the ERP sessions, patient was given two booster sessions in which she was taught the ways to deal with the anxiety after the termination of therapy in her day to day life situations. In those sessions, she was asked to imagine her home, her room and herself with Bindi on her forehead and doing household chores like cooking, cleaning the things etc. When patient was asked to express herself during the imagination, she reported that she is feeling more confident now to stick on her thought that bindi can't contaminate, it's her own idea and there is no use of washing hands and other things because of the fear of contamination. Her husband and mother-in-law were also instructed to remind her again and again about the things she learnt during the therapy sessions. After the declaration of patient that she is feeling better now and ready to face the anxiety on her own, therapy sessions were terminated.

#### Follow up

One month later, patient was contacted for the follow up and asked about her coping with the anxiety through telephonic conversation. She reported that thoughts of contamination came in her mind but she is in better condition than previous after taking the ERP sessions.

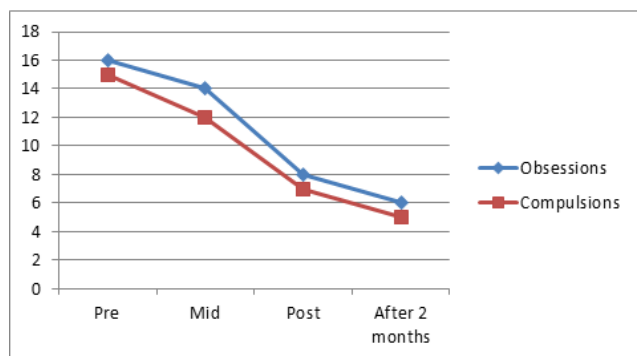
After two months, patient came for the session again with the complaints that sometimes she became weak and washed her hands with the thought of contamination. After washing, she repented on her behavior which lowers down her confidence of conquering over the illness. Then she was instructed that washing hands strengthens the thought of contamination so she should avoid it as much as possible but this doesn't mean that she has not gained anything with the therapy, she was reminded about her previous condition that how much it was unbearable for her to even think about the bindi but now she is applying it on her forehead which shows that only the traces of the illness left, most of it is already recovered. In this way, patient became relaxed and felt more determined to continue with the leanings during the sessions.

## Results

After the termination of the therapy sessions, patient’s obsessive and compulsive symptoms in Table 2 were found reduced on the Y-BOCS symptom checklist (Figure 1).

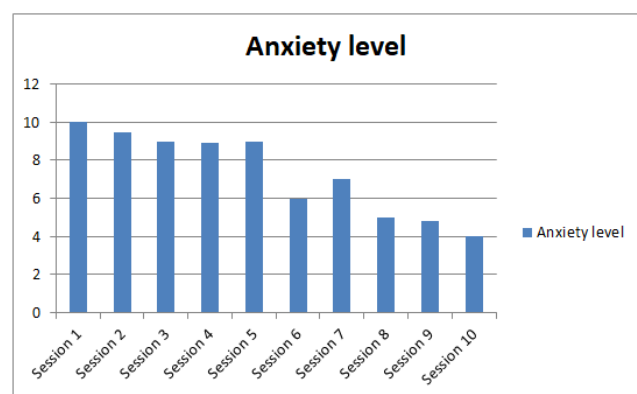
	Obsessions	Compulsions
Pre-intervention	16	15
Post-intervention	6	4.5

**Table2:** Results of Y-BOCS symptom checklist.



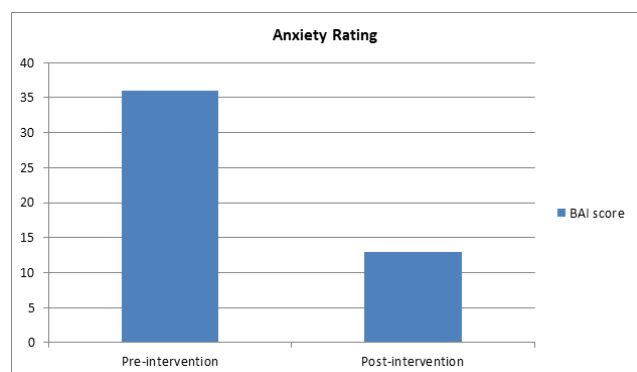
**Figure1:** Y-BOCS Symptom reduction from pre-intervention to the post-intervention.

With the graded exposure sessions, her anxiety level also came down from the rating of 10 in the beginning sessions to the rating of 4 in the endings sessions on a scale of 1 to 10 (Figure 2).



**Figure 2:** Anxiety rating scale of the patient in each session.

Patient’s BAI score was also fallen down from pre-intervention-36 (Extreme level of anxiety) to post intervention-13 (mild level of anxiety) which suggests 36% reduction in the anxiety level of the patient (Figure 3).



**Figure 3:** BAI score in pre-intervention and post-intervention.

## Discussion

Previous research findings considered CBT as the most promising treatment of OCD [8]. CBT emphasize the integration of cognitive-behavioral strategies like discussion techniques (Guided Discovery) and behavioral experiments to formulate the problem and direct the treatment. Therapists try to identify the key distorted beliefs along with patient and allow them to test their beliefs which develop and maintain compulsive behaviors. This case identified the contamination with ‘Bindi’ as the pathological belief which was maintaining the compulsive behaviors of washing and cleaning. Cognitive hypothesis of Salkovskis (1985) proposed that the origin of obsessional thinking lies in normal intrusive ideas, images, thoughts and impulses which a person finds unacceptable, upsetting or unpleasant. The occurrence and content of these intrusive cognitions are negatively interpreted as an indication that the person may be ‘responsible for harm’ or ‘prevent the harm’. Such an interpretation likely followed by the emotional reactions such as anxiety or depression. These emotional reactions lead to discomfort and neutralizing (Compulsive) behaviors like washing, cleaning, checking, avoidance of situations related to the obsessive thought, seeking reassurance and attempts to exclude these thoughts from mind. Present case supported this hypothesis of Salkovskis’s model as intrusive thought of the patient was contamination spread by ‘Bindi’ which negatively interpreted as ‘I can avoid the likely harms by avoiding the contamination spread by Bindi’, such negative interpretation was raising her anxiety levels, making her attentive selective towards the ‘Bindi’, maintaining her compulsive acts and complying her to adopt the safety strategies [9].

Rachman (1983) predicted that behavioral experiments, in which patient is exposed with the feared object, challenge these intrusive thoughts by changing the pattern of thinking and behaving. Hodgson & Rachman (1972) initiated the series of clinical studies on the patients with contamination and predicted that immediate washing reduce the anxiety. In one of their experimental study, they noted similar degree of anxiety reduction when patient was asked not to perform compulsive act for a period of one hour. They termed this phenomenon as ‘spontaneous decay’ which established as the basis of ERP. In addition of it, Foa & Kozak (1986) proposed that exposure techniques activate the network of cognitive fear and patients get new experience which is different from the existing pathological beliefs. This case confirmed this hypothesis as patient initially thought that her exposure with ‘Bindi’ might cause some uncertain consequence with her but prolonged exposures provided her new experience that she could actually manage with her fear and anxiety which resulted in the improved coping with obsessional beliefs about contamination and urges to wash and clean. Her improved coping is evident in the statistically significant reduction of her scores on the standard measures like Y-BOCS symptom checklist, BAI and OBQ [10-12].

The results of this case study adds on the value of CBT (that involves ERP technique) in the treatment of obsessive thinking related to the ‘fear of contamination’ and compulsive behavior of ‘washing and cleaning’. However, there is a need of more such case studies with more precision and effective treatment designs to provide valuable information related to the nature of OCD and its treatment.

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