

Core Beliefs of Obsessive Compulsive Disorder and the effects on Quality of Life

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REVIEW OF LITERATURE

OCD, known as obsessive-compulsive disorder, is defined by obsessions which are hard to ignore, intrusive thoughts, and compulsions, which are routines and behaviors performed to alleviate stress from the obsessions. Common obsessions include those of contamination fear, order and symmetry, and fears of imminent harm. Common examples of compulsions include washing, checking, and ordering or arranging multiple times (Pittenger, 2015). Nearly 30% of the United States population experiences troubling obsessions or compulsions (Pittenger, 2015). One and 40 people, face enough impairment or distress to merit a diagnosis of OCD (Pittenger, 2015).

About two in three patients will benefit significantly from established treatments such as serotonin-reuptake inhibitors, or cognitive-behavioral theory, leaving about one in three patients without meaningful benefit even after treatment (Pittenger, 2015). These treatments use pharmacotherapy as a way to decrease OCD symptoms in patients. However, as stated before, many patients do not respond to these treatments so they must look to a cognitive approach. The most developed cognitive therapy developed is called Cognitive Behavioral Therapy, or CBT. Almost all OCD patients, whether they respond to drugs or not, participate in some form of CBT. Exposure and Response Prevention hits on the behavioral aspect of CBT, where the “exposure” part exposes the patient to images, thoughts, situations or objects that trigger their anxiety and obsessions, and then the “response prevention” section in which the patient has to avoid completing the compulsive behavior caused by the obsessions (Whittal, 2005). The cognitive approach to OCD has become increasingly important as researchers continue to analyze the core beliefs of OCD.

Cognitive theories of OCD (Frost and Steketee, 2002) (Tolin, 2007) suggest that dysfunctional beliefs bring about intrusive thoughts and compulsive behaviors. In 1997 the Obsessive–Compulsive Cognitions Working Group (OCCWG) identified six domains of beliefs thought to be characteristic of OCD patients (Frost and Steketee, 2002)(OCCWG, 1997), and created a self-report measure to assess such beliefs, named the Obsessional Beliefs Questionnaire-87, or OBQ-87 (OCCWG, 2001), which was later shortened to form a 44-item measure (OBQ-44) encompassing three factors: responsibility/threat estimation, perfectionism/certainty, and importance/control of thoughts (OCCWG, 2005). Forty-four obsessional beliefs are rated on a 7-point scale from 1 (disagree very much) to 7 (agree very much).

The Obsessive Compulsive Trait Core Dimensions Questionnaire is a 20-item test designed to test two dimensions of OCD, incompleteness and harm avoidance. The OC-TCDQ uses the idea that OCD symptoms are caused by underlying core beliefs that affect each patients’ response to certain stimuli. Incompleteness is defined by an unsettling sense that a patient’s actions are “not just right” (Summerfeldt, 2004). The incompleteness feeling can be translated into various sensory symptoms along with cognitive. These sensory symptoms include visual, where the appearance of documents or objects may not be right, auditory, usual noises are missing or seem off, tactile, repeatedly tapping or touching things, and “proprioceptive”, where one needs to switch up actions. Cognitively, the feeling may apply to a situation such as not being able to put one’s thoughts in words. An example of a thought that someone may have that comes from the OC-TCDQ is, “I feel I must do things in a “set way”, though I might have difficulty putting that set way into words” (Summerfeldt, 2001). Harm avoidance mainly corresponds to the responsibility/threat estimation factor of OCD (Ecker, 2008). Thoughts that may be considered harm avoidance include: “Even if harm is very unlikely, I feel the need to prevent it at any cost,” or “I get the impression that things are more threatening to me than to other people” (Summerfeldt, 2001).

The Padua Inventory, or PI, (Sanavio, 1988) is another self-report measure used to evaluate the structure of OCD symptoms. The PI was created to measure symptoms associated with intrusive thoughts and obsessional urges. An analysis of the PI using a nonpatient sample (McKay et al, 2004) (Sanavio, 1988) showed four main symptom dimensions: contamination, checking behavior, impaired control over mental activities, and urges and loss of control over motor behavior. The fourth dimension was not previously identified in any subtypes arrangements (McKay et al, 2004). The Padua Inventory Revised is a 39- statement self-report measure of

obsessions and compulsions scored on a five-point scale ranging from 1 “not at all” to 5 “very much” (Burns, 1996). Examples of statements from the report include “I avoid using public toilets because I am afraid of disease and contamination”, “I check letters carefully many times before posting them”, and “I sometimes have an impulse to hurt defenseless children or animals” (Burns, 1996). The PI has been used to assess OCD severity for a number of years, but has been found to be most beneficial when also administering the Yale-Brown Obsessive Compulsive Scale (Anholt et al, 2009).

When researching a mental disorder, it is important to remember that one cannot only look at a broad spectrum, but must understand the lives of each patient. The Quality of Life Enjoyment and Satisfaction Questionnaire Short Form (Q-LES-Q-SF) is a 16-item questionnaire that assesses patients’ quality of life based on a scale from 1, very poor, to 5, very good (Endicott et al, 1993). Examples from the questionnaire include “How satisfied have you been with your physical health, mood, work, household activities, etc.” (Endicott et al, 1993). The questionnaire is not only applied to OCD but also many other depressive symptoms and disorders. Researchers have shown that all characteristics of QOL are significantly affected in individuals with OCD and are associated with OCD severity and depression severity (Eisen et al, 2006). Eisen showed that the correlations between all QOL measures and the YBOCS total score were noteworthy, from 0.40 to 0.77 (Eisen et al, 2006). The results as concluded that patients with a YBOCS score of 20 or higher had significant decrease in QOL when compared to those with YBOCS scores lower than 20, which is an understandable result as a higher YBOCs means more severe OCD (Eisen et al, 2006).

RESEARCH QUESTION AND HYPOTHESIS

The purpose of this study is to examine the whether or not core beliefs of OCD, incompleteness and harm avoidance, can adequately predict the quality of life of patients diagnosed with OCD. Data was compiled that included 30 subjects’ Padua Inventory, OC-TCDQ-SF, and Q-LES-Q-SF scores from the Yale Obsessive Compulsive Disorder Research Clinic and was then tested to see if any correlations exists between the factors, and what effects the factors have on quality of life. The research hypotheses state that OCD severity, harm avoidance, and incompleteness are negatively correlated with quality of life, and harm avoidance will predict the lowest quality of life.

METHODS

Procedures

Participants were recruited via a combination of web advertising, flyers, and word of mouth. All participants provided written informed consent prior to participation. The questionnaires used in the present study are part of a larger battery of self-report questionnaires that all subjects are asked to complete as part of other research projects within the Yale OCD Research Clinic.

Participants

Thirty participants completed questionnaires for this study. A majority of participants were female. A majority of participants were Caucasian/White/Non-Hispanic. Participants diagnosed with OCD and healthy controls did not significantly (all $ps > .05$) differ on any demographic variables.

Materials

The *Obsessive Compulsive Trait Core Dimensions Questionnaire* (OC-TCDQ) is a 20-item self-report questionnaire designed to measure feelings of incompleteness and harm avoidance; traits that are believed to motivate or underlie obsessive-compulsive symptoms.

The Revised *Padua Inventory* (PI-R; Burns, 1996) is a 39 item self-report measure of obsessive-compulsive symptoms. The PI-R uses a five-point Likert-type scale ranging from 1 “not at all” to 5 “very much”. Examples of statements from the PI-R include “I avoid using public toilets because I am afraid of disease and contamination”, “I check letters carefully many times before posting them”, and “I sometimes have an impulse to

hurt defenseless children or animals” (Burns, 1996).

The *Quality of Life Enjoyment and Satisfaction Questionnaire Short Form* (Q-LES-Q-SF) is a 16-item self-report questionnaire that assesses patients’ quality of life. Items use a 1 (‘very poor’) to 5 (‘very good’) Likert-type scale (Endicott et al, 1993). An example from the questionnaire includes “How satisfied have you been with your physical health, mood, work, household activities, etc.” (Endicott et al, 1993).

RESULTS

OCD patients scored significantly higher on measures of OCD severity (Padua Inventory), $F(1, 28) = 58.24, p < .01$, harm avoidance, $F(1, 28) = 25.48, p < .01$, and incompleteness, $F(1, 28) = 68.99, p < .01$. OCD patients reported significantly poorer quality of life, $F(1, 28) = 15.91, p < .01$. See Table 1 for descriptive statistics. Within the entire sample, OCD severity, harm avoidance, and incompleteness were all significantly negatively correlated of quality of life (range $r = -.63$ to $-.78, p < .01$). Among healthy controls, OCD severity and harm avoidance were not significantly correlated with quality of life; incompleteness was marginally ($p = .08$) negatively correlated with quality of life (Figure 1)(Table 2). Among OCD patient, OCD severity and harm avoidance were both significantly negatively correlated with quality of life; incompleteness was marginally ($p = .10$) with quality of life (Figure 2)(Table 2).

Multiple regression was used to test the unique and shared effects of group (OCD vs. HC), OCD severity, harm avoidance, and incompleteness on quality of life. The overall model predicted 62% of variance in quality of life scores, $F(4, 25) = 10.33, p < .01$. Harm avoidance was the only variable that uniquely predicted quality of life, $B = -.80 (SE = .26), p \leq .01, R^2 = .27$ (see Table 3 for regression summary). Two regression analyses were run to separately test the effects of OCD severity, harm avoidance, and incompleteness on quality of life among OCD subjects and HCs. In the HC, the model predicted 30% of variance in quality of life scores, $F(3,8) = 1.2, p = .39$. There were no significant predictors of quality of life among HCs (Table 3). Among OCD subjects, the model predicted 46% of variance in quality of life scores, $F(3, 14) = 3.97, p < .05$. Harm avoidance was the only variable that uniquely predicted quality of life among OCD patients, $B = -.88 (SE = .33), p \leq .05, R^2 = .28$; as harm avoidance scores go up, quality of life decreases. See Table 3 for regression summary.

Table 1.

Descriptive Statistics and between-group difference for Harm Avoidance (HA), Incompleteness (INC), Padua Inventory (PI), Quality of Life (QLES)

		Mean (SD)	F	d
HA	HC	14.17 (4.78)		
	OCD	28.83 (9.24)		
	Total	22.97 (10.59)	25.48**	1.99
INC	HC	15.50 (4.03)		
	OCD	37.33 (8.45)		
	Total	28.60 (12.90)	68.99**	3.30
PI	HC	42.58 (2.61)		
	OCD	82.11 (17.71)		
	Total	66.30 (23.97)	58.24**	3.12
QLES	HC	58.17 (6.56)		
	OCD	42.50 (12.45)		

	Total	48.77 (12.97)	15.91**	1.57
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Note. ** = $p <$

Table 2.

Correlation between Harm Avoidance (HA), Incompleteness (INC), Padua Inventory (PI), and Quality of Life (QLES).

	HA	INC	PI	QLES
HA	-	0.76**	0.02	-0.41
INC	.55*	-	0.34	-.52 [†]
PI	.43 [†]	.47*	-	-0.27
QLES	-.68**	-.40 [†]	-.31	-

Note. Healthy controls ($n = 12$) on the top diagonal and participants diagnosed with OCD ($n = 18$) on the bottom diagonal. All variables were significantly correlated ($r_s > .62, p \leq .01$) within the entire sample ($n = 30$). * = $p \leq .05$, ** = $p \leq .01$, [†] $\leq p < .10$

Table 3.

Summary of regression analyses with entire sample ($n = 30$) and quality of life (QLES) as the dependent variable

Predictor	R ² Δ	Std. β	t
HA	.27	.65	3.07**
INC	.00	.09	.31
PI	.00	.04	.18
Group (OCD vs. HC)	.00	.04	.16

Note: Harm Avoidance (HA), Incompleteness (INC), Padua Inventory (PI), and Quality of Life (QLES). ** $p \leq .01$.

Table 4.

Summary of regression analyses with Healthy Control ($n = 11$) and quality of life (QLES) as the dependent variable

Predictor	R ² Δ	Std. β	t
HA	.30	.084	.17
INC	.00	.65	1.2**
PI	.00	.19	.57

Note: Harm Avoidance (HA), Incompleteness (INC), Padua Inventory (PI), and Quality of Life (QLES). ** $p \leq .01$.

Table 5.

Summary of regression analyses with OCD sample ($n = 18$) and quality of life (QLES) as the dependent variable

Predictor	R ² Δ	Std. β	t
HA	.5	.65	2.7**
INC	.00	.03	.12
PI	.00	.02	.11

Note: Harm Avoidance (HA), Incompleteness (INC), Padua Inventory (PI), and Quality of Life (QLES). ** $p \leq .01$.

DISCUSSION

Quality of life is definitely effected by OCD. OCD severity, harm avoidance, and incompleteness decrease the quality of life for patients, which is expected since a higher severity or OC-TCDQ score means stronger debilitating symptoms and thus impairment in everyday life.

The results of this experiment show that OCD patients score significantly higher on measures of OCD severity, harm avoidance, and incompleteness. Since the OCD group had higher score, the correlations support the hypothesis that severity, harm avoidance, and incompleteness were all significantly negatively correlated to quality of life. But, when analyzing the data, it was found that OCD severity and harm avoidance were more significantly negatively correlated with quality of life.

The fact that one core belief (harm avoidance) had a greater impact on a patient's quality of life was an interesting observation. This observation may be useful as it will allow researchers and doctors to closer evaluate the patient's individual scores and create a treatment plan catered to each individual. Knowing that a patient may have one stronger core belief than another, again will help to focus the treatment on those thoughts.

The second hypothesis was supported by the regression run to test the effects of OCD severity, harm avoidance, and incompleteness on quality of life among OCD subjects and healthy controls. With OCD subjects, the model predicted 46% of variance in quality of scores, and harm avoidance was the only variable that uniquely predicted quality of life. This is significant as it allows the understanding that as harm avoidance scores go up,

quality of will decrease.

It is necessary to truly understand why harm avoidance would cause a worse quality of life than something such as incompleteness. Looking again the OC-TCDQ, questions that are scored for harm avoidance tend to insinuate that one has fears and emotions that are created out of fear of others or objects. For example, comparing “I know I’ve done something right when I get a certain feeling inside” to “Situations or things seem so scary that I wish I could avoid them altogether” (Summerfeldt, 2001) it is clear to see the incompleteness does not hold as much weight as harm avoidance does. Patients actively feel stuck in a perpetual state of fear and anxiety as they believe at any moment a family member could turn on them, or that the stove will start a house fire. These beliefs might make it nearly impossible for someone to go outside and maintain a regular life as they are afraid of something terrible happening. This is of course not to discredit those suffering from mainly incompleteness, as it too can severely decrease quality of life. For example, a regular morning routine which might take a healthy person 1 hour, could take an OCD sufferer 2 plus hours. The data however showed that harm avoidance can predict a lower quality of life through the different assessments.

STUDY LIMITATIONS

There were several factors that limited this research. First, having a much larger data pool would greatly benefit this study. Only 30 subjects’ scores were used in the various statistical analyses. Although there were many more patient scores that could be accessed, not all had a score for each test that was being examined. It might also be beneficial to see CBT treatment plans that may help to understand how each core belief is attacked and understood. Overall, an ideal study would have 100 plus subjects, healthy control and OCD subjects, each with scores for the PI, Q-LES-Q-SF, and OC-TCDQ, which would allow a larger analysis to be done to confirm the results found in this research study.

FUTURE RESEARCH

Research on the core beliefs of OCD is an ever expanding field and allows many new opportunities. It would be interesting to take a closer look into the “incompleteness” and “harm avoidance” fields, as the two may tie into different subtypes, or symptom dimensions, of OCD, including washing/contamination, checking, and symmetry/order. Each core belief may be underlying each subtype, thus allowing doctors to closely analysis each patient’s mindset and create a useful treatment plan. Also, recently researchers have been looking at the relationship between core beliefs and treatment-resistance. As stated in the introduction, about one third of OCD are treatment refractory, meaning they do not respond or receive relief from established treatments. It is possible that different beliefs may generate a different response to treatments which could mean rendering the treatment ineffective. In a similar study it was found that abnormalities in cortical-striatal white matter networks could add to the dysfunctional beliefs in patients with treatment-refractory OCD (Zhongchun et al, 2014). Combining the forces of cognitive therapies, such as ERP, and pharmaceutical drugs, like SSRIs or D-Cycloserine, in a treatment plan has been a field that has offered some interesting results and further research with knowledge of core beliefs may finally create new treatments that will assist the treatment-resistant population.

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