A Cross Cultural Comparison of Cognitive Beliefs Associated with OCD in Nonclinical and Clinical Populations

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Abstract

*Recent research trends have focused on identifying cognitive beliefs that are significantly associated with the development of OCD, in an attempt to homogenous evidence-based therapeutic and preventative efforts. The research at hand aims at identifying how the relationship of these beliefs and OCD is affected by culture as well as symptom severity to identify the generalizability of this data. The research at hand studies the effects of culture and symptom severity on a number of cognitive beliefs shown to be associated with OCD in a cross cultural design between Kuwait and Iran. **Methods:** Arabic and Persian versions of the MOCI, OBQ-44, BDI and OCI were administered, in both Iran (n=167) and Kuwait (n=200) on samples of students chosen through random cluster sampling from Kuwait University and Shiraz University. Additionally, two samples of individuals diagnosed with OCD (n=20) were also chosen from Shiraz and Kuwait mental health facilities. Analysis of variance was conducted with culture and symptoms severity entered as two dependent variables. Statistically significant differences were seen in the three cognitive beliefs categories in non-clinical populations however these differences were not identified in the clinical populations. **Conclusion:** The results indicate that cultural differences are a relevant factor when designing preventative approaches targeting general population and data from one culture cannot be easily generalized to another. Symptom severity levels need to be considered as well. However, these factors are not significantly relevant in clinical populations, meaning cognitive therapy approaches are more generalizable.*

Keywords: *OCD, Cognition, Cross cultural, Anxiety, Measurement/psychometrics*

1. Introduction

Obsessive compulsive disorder is the fourth most common psychiatric diagnosis (Kaplan and sadock, 2003) and is ranked tenth leading cause of disability and distress (World Health Organization, 1996). OCD is associated with prolonged need for mental health services and suicide rates and constitutes a significant mental health problem (Hollander, Greenwald, Neville et all, 1996). Therefore, the etiology of this disorder has been the focus of research for decades and numerous theories have been proposed and investigated which include physiological and neurological theories, neuro-imionological theories, theories derived from brain scan research and PET scan research, Learning theory and Psychoanalytic theories among others (Kaplan and Sadock, 2003).

The present study adopts a cognitive approach to the study of obsessive compulsive disorder and aims at studying the cognitive beliefs associated with the development of OCD. The cognitive model is widely used and supported by research (Taylor, 2002)and proposes that autonomic thoughts occur in normal populations but are misinterpreted by specific individuals which results in significant distress. Misinterpretation causes even more frequent and more resistant thoughts which evolve topersistent obsessions. The individual then resorts to obsessive actions in order to control these resistant obsessive thoughts (Rachman, 1997; OCCWG, 2003). The Cognitive model also presents thatthe presence of specific cognitive beliefs predisposes the individual to the development of obsessions and compulsions. Literature indicates that 19 different cognitive beliefs were studied and for each belief, specific assessment tools were designed and various treatment plans were also implemented, which include inflated responsibility (Salkovskis, 1985; 1989; 2000; Rachman; 1993), thought-action infusion (Rachman, 1993) and perfectionism (Frost and Steketee, 1997) amongst others. However, many of these assessment instruments lacked psychometric data and many of these cognitive beliefs and constructs overlapped or are part of higher order processes and werevery similar (OCCWG, 2005; Wells, 1997).A

group of researchers identified the need to further research these cognitive constructs and identify the constructs that are crucial in the development of OCD and produce a tool that accurately measures them. The OBQ-44 was subsequently made and validity and reliability studies conducted which suggest that the instrument assesses the six core cognitive beliefs that play a major role in the development and exacerbation of OCD symptoms (OCCWD, 1997; OCCWG, 2005).

The present research studies cognitive beliefs in a cross cultural design. There are numerous conceptions of culture in academic psychology. In a very broad definition, culture can be seen as the subjective and objective human-made elements of the environment (Herskovits, 1955; Spering, 2001). Culture influences many aspects of human behavior and has been widely studiedin psychology anda number of studies have studied the numerous effects of culture on psychopathology. Culture effects people's perceptions of their own symptoms as well as the way they report their feelings(Best and Williams, 1997). Moreover, cultural beliefs shared by one culture and transferred from one generation to another, have an effect on the types of stimuli that the individual finds stressful (Sica, Novara, Sanavio, Coradeschi and Dorz; 2002). Moreover, studying cognitive etiology in a cross cultural design allows the investigator to study whether obsessive beliefs are culture-specific and if so to what extent and in what way. This information would enable therapists and mental health practitioners from each culture to adjust their practice in a way to reach more efficient therapeutic models.

The aim of the present study is to compare six belief domain associated with OCD (Responsibility and threat estimation, importance and control of thoughts, perfectionism and the need for certainty) in both clinical and non-clinical populations from the two cultures of Iran and Kuwait.

2. Methodology

Participants

It is difficult to draw a distinctive line between personal characteristics and cultural traits, or identify traits that are purely culture specific or purely individual (Hofstede, 2001) in order to control for such factors in cross cultural designs. Therefore, in the present study samples selected from each culture (Iran and Kuwait) were assumed to be culturally homogeneous since strong dominant attributes such as language, educational system, army, political system, etc are shared by all members of the same culture (Hofstede, 2001).The research sample consists of student populations from Iran and Kuwait. Iranian students were enrolled at the University of Shiraz faculty of Humanities (n=168) and Kuwaiti students were enrolled at the University of Kuwait faculty of Humanities (n=200). Morbid samples were also selected since literature indicates that obsessive compulsive symptoms fall on a continuum of severity from normal populations to populations diagnosed with OCD and the distinction between clinical and non-clinical samples is arbitrary (Gibbs, 1996). These samples were selected from mental health facilities of both Iran (n=20) and Kuwait (n=20). They consisted of individuals with the diagnosis of obsessive compulsive disorder without substance abuse, brain damage or neurological disorder.

Table 1. Descriptive features of Kuwaiti and Iranian samples

	Kuwaiti Student Sample	Kuwaiti Morbid Sample	Iranian Student Sample	Iranian Morbid Sample
Gender: **Male/Female %**	28.5/71.5 %	30/70%	24.5/75.5 %	30/70%
Age: **18-22/ 22-26/ 26-30%**	85.5/11.5/3 %	5/95/0 %	73/23/4 %	78/17/5 %
Mean Depression Score	14.01	16.8	11.21	20.4

Measure

Obsessive Beliefs Questionnaire (OBQ-44): The Obsessive Beliefs Questionnaire was initially made by the obsessive compulsive cognitions working group (1997) in order to facilitate research in the field of cognitive beliefs associated with obsessive compulsive disorder. Theinitial version of the questionnaire contained 87 items drawn from the literature and is made up of 6 highly overlapping factors (OCCWG, 1997). OBQ was later revised to make a shorter version containing 44 questions and three major factors: responsibility/threat estimation, perfectionism/certainty and importance and control of thoughts. (OCCWG, 2001).The internal consistency of the three factors is 0/93, 0/89 and 0/95 consecutively (OCCWG, 2003; 2005).

The questionnaire has been translated into different languages. The Persian version of the questionnaire was made by Shams et al (2004) with and internal consistency of 0/92, a split half reliability 0/94 and a test-retest reliability of 0/82. The Persian OBQ-44 is a valid instrument in the student population used in the research (Shams et al, 2004). The Arabic version of the questionnaire was prepared and utilized in the Kuwaiti population.

Beck Depression Inventory (BDI): the BDI is a 21 item inventory intended to measure the degree of depressive symptoms. The items are rated from 0 to 3. The questionnaire has been found to be valid and reliable in Iran and Kuwait (Kavianiand Mousavi, 2001; Ghareeb, 2000; Al Ansari, 1998; 2006).

Maudsley's Obsessive Compulsive Inventory (MOCI): this inventory is a 30 item inventory intended to measure the severity of obsessive compulsive symptoms. The items are scored either 0 or 1 based on the presence of the symptoms. MOCI has fourfactors of checking, washing, slowness and doubt and is a reliable and valid instrument (Hodgson and Rachman, 1977).

MOCI has been translated to the Persian and Arabic and the translated versions are reliable and valid (Dadfar, 1376; Rezaei, 1380; Ghasemzadeh et al, 2002;Pakravan et al, 1386).

Procedure
Sample was selected from Kuwait University and Shiraz University faculty of humanities. Initially, a list of all majors and all classes taught within those majors were acquired. Then through the process of random cluster sampling, classrooms were selected. The professors of each individual classroom were contacted and a time was arranged for the administration of the assessments. Participation in research was voluntary subsequent to reading the same unified written instructions. The sample chosen from Shiraz University had a more significant drop in size compared to the sample from Kuwait University, which is caused by incomplete questionnaires. The difference between the drops in sample size can be explained by how some professors teaching research methodology, offered extra credit for participation in the sampling procedures in Kuwait University. Two morbid samples were also chosen since literature indicates that obsessive compulsive symptoms fall on a continuum of severity from normal populations to populations diagnosed with OCD (Gibbs, 1996). These samples were selected from mental health facilities of both Iran (n=20) and Kuwait (n=20) which includes private clinics, hospitals and patients introduced by professors working in the university counseling centers. Patients were either referred to researchers by other researchers and therapists or identified subsequent to visiting mental health clinics. These samples consisted of individuals with the diagnosis of obsessive compulsive disorder without substance abuse, brain damage or neurological disorder.

3. Results

Normal Population
Equivalency is considered a pre-requisite for statistical analysis in cross cultural designs as proposed by literature (Berry, Poortinga and Pandey, 1997) which refers to psychometric resemblances between the assessment instruments used in different cultures. Psychometric data of Obsessive Beliefs Questionnaire-

44 indicates resemblances in the factorial structures in both cultures in addition to the resemblances to the original English version. However, there are differences in perfectionist items which did not load on the third factor in the Arabic version of the OBQ-44. Maudsley's obsessive compulsive inventory indicates factorial resemblances across cultures except for washing items were found unsuitable and doubt and checking items loaded on one factor which was named thought control.

The purpose of the study was to investigate if cognitive beliefs were different according to culture (Kuwait and Iran) and severity of symptoms (subclinical and clinical). Data was analyzed through a two variable analysis of variance with culture and symptom severity as dependant variables. Depression was assessed by BDI and controlled since literature indicates a high degree of correlation between obsessive symptoms and depression (Kyrios, Sanavio, Bhar and Liguori, 2001; Pini, Cassano, Simonini, Savino, Russo, Montgomery, 1997). Cognitive beliefs were assessed by OBQ-44 and were the three following domains: responsibility and threat estimation, importance and control of thoughts, and certainty which were entered into the data analysis separately. Symptom severity was assessed usingMaudsley's Obsessive Compulsive Inventory.

Table 2 reports the results of the analysis of the effects of culture and symptom severity on Responsibility and Threat Estimation, Importance and control of Thoughts and perfectionism and Certainty. Results indicate that the effect of culture on responsibility threat estimation (F=57.954, p<.005),Importance and Control of Thoughts (F=6.026, p<0.05), and Perfectionism (F=57.683, p<.005) is statistically significant with higher scores on all cognitive beliefs in Kuwaiti culture. The effects of symptom severity on responsibility and threat estimation (F= 9.690, p<.005), Importance and Control of Thoughts (F=4.508, p<.05) and Perfectionism and Certainty (F=6.023, p<.05) is statistically significant with higher scores on all three cognitive beliefs in the groups with higher obsessive compulsive symptoms. The interaction between symptom Severity and culture is also statistically significant on responsibility and threat estimation (F=10.380, p<.005) as well as Importance control of thoughts (F=3.881, p=.05) indicating that the increase in responsibility and threat estimation and importance and control of thoughts associated with the increase symptoms severity, is statistically different across the two cultures and this increase is higher in Kuwait. However, the interaction effect was not evident on perfectionism and certainty (F=2.290, p< 0.1).

Table 2. Effects of Culture and Symptom Severity on cognitive beliefs of student population

	Responsibility and Threat Estimation		Importance and Control on Thoughts		Perfectionism and Certainty	
	F	P	F	P	F	P
Symptom Severity	9.690	0.002	4.508	0.034	6.023	0.015
Culture	57.954	0.000	6.026	0.015	57.683	0.000
Interaction between Symptom severity and culture	10.380	0.001	3.881	0.050	2.290	0.131

OCD Population
The effects of culture and symptom severity were also studied in samples of individuals diagnosed with Obsessive Compulsive Behavior. The results of the analysis of variance with two dependant variables are reported in table 3. As seen, the effects of culture on the cognitive beliefs of Responsibility and threat estimation, Importance and Control of thought and Perfectionism and Certainty were not statistically significant. This indicates that in clinical populations of individuals diagnosed with OCD, the cognitive beliefs understudy are not significantly different across samples from Iran and Kuwait. This is in contradiction with the data found in non-clinical populations. Moreover, the effects of symptom severity on the three cognitive domains studied is not statistically significant in clinical populations which indicates that individuals with more severe symptoms did not have different cognitive beliefs compared to those with less severe symptoms.

Table 3. Effects of Culture and Symptom Severity on cognitive beliefs of individuals diagnosed with OCD

	Responsibility and Threat Estimation		Importance and Control on thoughts		Perfectionism and Certainty		Total Cognitive Beliefs	
	F	P	F	P	F	P	F	P
Symptoms Severity	0/000	0/995	1/452	0/237	0/359	0/553	0/388	0/538
Culture	0/745	0/394	3/504	0/070	0/144	0/707	1/288	0/265
Interaction between Symptoms severity and culture	0/263	0/612	0/442	0/511	0/005	0/947	0/175	0/679

4. Discussion

Covariance analysis with two variables was conducted in normal populations from two cultures in order to study the effects of symptom severity and culture on cognitive beliefs identified to be core believes in the psychopathology of obsessive compulsive disorder. Results of symptom severity analysis indicate that in both cultures, there is a significant difference in cognitive beliefs (responsibility and threat estimation, importance and control of thoughts and perfectionism and the need for certainty) in groups with high levels of OCD symptoms as opposed to those with low levels of OCD symptoms with an increased level of obsessive beliefs in groups with higher levels of OCD symptoms. A study done in Greece, American and Italian cultures also reports similar findings and indicates significant correlations between cognitive beliefs and obsessive symptoms in normal populations of all three cultures. These findings are in accordance and confirm the findings of the cognitive psychopathology model of OCD and indicate that this model is applicable across different cultures. This model indicates that obsessions occur in normal populations, however the presence of specific cognitive beliefs (responsibility and threat estimation, importance and control of thoughts, and perfectionism and need for certainty) predisposes individuals to interpreting these obsessions and developing clinical obsessions and compulsions (Salkovkis, 1985; 1996; Frost and Stekee, 2002). This indicates the importance of addressing the beliefs understudy in intervention plans targeting various cultures.

However, covariance analysis indicates a significant effect of culture on the three categories of cognitive beliefs assessed in this study which are responsibility and threat estimation, importance of thoughts and thought control as well as perfectionism and the need for certainty. This indicates that culture plays a mediating effect on the level of these beliefs in normal populations. These findings indicate the importance of identifying culture specific cognitive beliefs and the influence of each belief in developing obsessive-compulsive psychopathology in order to better create efficient preventative plans and approaches. Regression analysis was conducted in each culture for the purpose of comparing the correlations of cognitive beliefs ad symptoms in each culture separately. Results indicated that responsibility and threat estimation significantly predicted washing symptoms in Iran. However responsibility and threat estimation as well as importance and control of thoughts predicted checking symptoms in Kuwait. Perfectionism and the need for certainty predicted washing symptoms in Kuwait. In Iran slowness, doubt, were not predicted by any of the cognitive beliefs understudy. In Kuwait slowess is predicted by importance and control of thoughts and doubt is predicted by responsibility and threat estimation.

The level of the three cognitive beliefs assessed in this research, is significantly higher in Kuwait indicating a more stressing need for preventative approaches.

Covariance analysis of cognitive beliefs understudy between clinical populations from Iran and Kuwait did not indicate significant differences in groups with high levels of OCD symptoms compared to groups with lower levels of symptoms. The effects of culture were also not significant. These findings are in contradiction with the cognitive etiological model of OCD. However the very small sample size of the

clinical population is a limitation that may have influenced the results and further investigation is required.

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