

Comparative Study

A Comparative Study of Dysfunctional Belief, Alexithymia, And Shame & Guilt Experience Among People with and without Obsessive-Compulsive Traits

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ABSTRACT

Obsessive-Compulsive Disorder (OCD) is characterised by unwanted repetitive thoughts (obsessions) and the urge to perform repetitive behaviors (compulsions). A study compared dysfunctional beliefs, alexithymia, shame, and guilt between individuals with high obsessive-compulsive tendencies and those without, and examined the correlation among these factors in both groups. The study involved two groups: one with obsessive-compulsive traits (clinical group) and the other without (control group), each consisting of 35 participants. Obsessive-compulsive traits, dysfunctional beliefs, alexithymia, shame, and guilt have been calculated by utilizing the Obsessive-Compulsive Inventory-Revised (OCI-R), Obsessional Belief Questionnaire (OBQ-44), Toronto Alexithymia Scale (TAS-20), and State Shame and Guilt Scale (SSGS) were measured respectively. The study found that individuals with high obsessive-compulsive tendencies score significantly higher in dysfunctional beliefs, alexithymia, guilt, and shame compared to the control group.

Keywords: *OCD, shame, guilt, alexithymia, dysfunctional beliefs*

OCD is a prevalent mental illness that is distinguished by the existence of compulsions (repetitive behaviors or mental actions) and obsessions (persistent and intrusive thoughts), resulting in significant disruption to one's daily functioning (American Psychiatric Association, 2013). OCD is defined by 2 main symptoms: compulsions and obsessions. Obsessions refer to distressing and involuntary thoughts, while compulsions are repetitive actions or rituals that are carried out to inhibit a feared event or alleviate distress. These behaviors are excessive and not logically related to preventing harm or danger. (American Psychiatric Association [APA], 2000). Factor analysis investigations have categorized OC symptoms into several factors, including compulsive checking, compulsive washing, hoarding, compulsive ordering and symmetry, neutralizing rituals, and obsessions with sexual, aggressive, or religious themes. (McKay et al., 2004; Foa et al., 2002).

Obsessions and compulsions in OCD can include: 1. Contamination/washing compulsion; 2. Intrusive thoughts/checking compulsion; 3. Unwanted sexual, religious, or aggressive thoughts; 4. The compulsion to arrange objects in a symmetrical or orderly manner

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(Abramovitch, Abramowitz & Mittelman, 2013). OCD is a disorder that affects the way people think and feel. It involves experiencing distressing thoughts, ideas, mental images, and unwanted impulses that cause anxiety and are hard to get rid of (Ghamarigivi, 2013).

Beliefs in OCD

Multiple belief domains have played a substantial role in the development of theories and/or research on OCD. The evaluation of exaggerated accountability for damage is the fundamental principle of Salkovskis's (1985) OCD cognitive theory. As per his proposition, frequent intrusive thoughts, impulses, and images can lead to disruption when they hold particular importance to the person. This can happen when negative automatic thoughts and feelings of discomfort arise due to the fear of causing harm to oneself or others. Subsequently, individuals engage in compulsive rituals to alleviate the discomfort and feeling of responsibility. Salkovskis and his colleagues (1985) define "inflated responsibility" as the belief that an individual has the ability to cause or prevent negative outcomes that are personally significant. People with OCD tendencies perceive non-clinical intrusive thoughts as proof of danger, this leads to a profound sense of duty to avoid causing "harm to oneself or others. (Hezel and McNally, 2016). Recent research by Hezel and McNally (2016)" supports this idea. According to OCCWG's (1997) suggestions, an association exists among the importance of control & thoughts. Furthermore, studies conducted by Bouvard et al. (2017) and Purdon & Clark (2002) indicate that individuals exhibiting OCD traits generally exhibit greater scores on the control of thoughts than individuals without such traits.

The concept of overestimation of threat, as noted by Moritz & Pohl (2009), is complex and varied. It refers to the tendency of individuals with OCD traits to perceive danger as more likely than it is and to feel particularly vulnerable to negative events. These findings were also noted by the OCCWG in 1997. Studies have shown that individuals suffering from OCD do not exhibit unrealistic optimism, which is the belief that one is more likely to experience positive events than others (Moritz and Jelinek, 2009).

Uncertainty intolerance is a cognitive bias which leads to distress in individuals who exhibit traits of obsessive-compulsive disorder (OCD) when confronted with situations that are unclear or unpredictable. This phenomenon has been documented by OCCWG (1997), Boswell et al. (2013), and Sarawagi et al. (2013). Studies have observed that a lack of tolerance for uncertainty and difficulty making decisions are key cognitive characteristics of OCD (Kozak et al., 1987; Guidano & Liotti, 1983; Carr, 1974;). Perfectionism is a belief that perfect solutions exist, and it comes from a need for certainty. This belief can be perceived as an ineffective approach to evading unfavorable consequences, such as receiving critical feedback from others or relinquishing control. (Frost et al., 2002; Frost and DiBartolo, 2002). Hence, the six factors identified in the Obsessional Belief Questionnaire (OBQ) may not provide a comprehensive assessment of all the cognitive beliefs relevant to OCD. Hezel and McNally (2016) and other researchers (such as Wahl et al., 2011 and Melli et al., 2016) have proposed that there might be other cognitive beliefs that are important, such as fear of becoming insane, depressive thinking style, and rumination. Moreover, this research's primary objective is to enhance understanding regarding the precise correlation between cognitive beliefs and OCD, given the inconclusive nature of previous research on this association.

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Alexithymia and OCD

The construct of Alexithymia refers to a group of emotional and cognitive traits that are typically observed in individuals with psychiatric and psychosomatic disorders. These characteristics can be considered as a personality trait (Sifneos PE, 1996). The multidimensional alexithymia construct consists of 4 distinct features: (a) difficulty in identifying and describing feelings (DIF and DDF), (b) difficulty telling feelings apart from physical sensations, (c) a reduction in imaginative thinking, and (d) concrete as well as poorly introspective thinking (Taylor GJ, Bagby RM, Parker JDA, 1997). It has been suggested that individuals with alexithymia may experience affective dysregulation, which refers to an inability to self-soothe and cope with emotions due to unawareness and understanding of one's own emotions. This can make it difficult for people with OCD traits who also have alexithymic traits to manage their anxiety and engage in effective treatment (Panayiotou G., et al., 2015)

People who have alexithymia have trouble using their emotions as signals in response to internal or external events, and they are unable to modulate their emotions through psychological mechanisms. This is because they have trouble translating their emotions from an experience sensory level to a representational level (van der Velde J, Servaas MN, et al., 2013). Due to this psychological inadequacy, individuals with alexithymia usually exhibit greater levels of depression, anxiety, and psychological distress. Additionally, "functional" somatic symptoms and emotional upheaval are more common in them (De Berardis D, et al., 2007). Twenty to forty percent of individuals with OCD traits may exhibit alexithymia (De Berardis D, et al., 2005).

Shame, Guilt and OCD

Shame and guilt involve reflection and evaluating one's behavior in relation to societal standards. The year 2010. Wolf and colleagues. Shame is an all-encompassing emotion that hinders a person's ability to find resolution through action or restitution. (Teroni & Deonna, 2008). Shame can also result in a sense of moral deficiency and the adoption of maladaptive coping mechanisms such as social isolation. The references cited are Wetterneck et al. (2014) and Weingarden & Renshaw (2015).

However, washing and cleaning rituals are often observed in people with OCD traits. However, these rituals are not unique to OCD and have been a part of human culture for a long time. They may even represent metaphorical associations related to cultural beliefs. For instance, the desire to "wash one's hands in innocence" is a common expression used when one feels guilty or ashamed of their actions and wants to cleanse themselves of moral transgressions. Therefore, the first discussions around the role of guilt in OCD emerged from psychoanalytic theories [Comer, 2001; Lang, 1986; Freud, 1926]. According to this view, the growth of a strict superego as a result of a rigid and punitive upbringing leads to obsessive and compulsive behavior. Through dysfunctional compulsive rituals, people with OCD often suppress morally dubious impulses and balance their hyperbolic conscience. Nevertheless, an increase in latent aggressive tendencies can also offset this excessive mortality. The latter has been shown by recent empirical-cognitive psychological techniques [Moritz et al., 2009; Whiteside and Abramovitz, 2004].

Research suggests that guilt and disgust are important factors in obsessive-compulsive disorder (OCD). It's unclear if individuals with OCD experience more guilt and disgust than those with other anxiety disorders or healthy individuals. The role of these emotions in

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different OCD subtypes and their correlation with symptom severity is still not fully understood. Lewis (1971) was the first to define guilt and shame; Tangney (e.g., Tangney, Wagner, & Gramzow, 1992) elaborated on these concepts later. A sensation of tension, regret, and remorse that results from a specific deed or inaction is called guilt. It includes a cognitive element that assumes accountability for the unfavorable feeling connected to the problematic behavior. This attribution of responsibility is crucial, as it motivates individuals to engage in different behaviors that can make amends for the previous transgression. Essentially, guilt can lead to positive changes in behavior when individuals take responsibility for their actions and work to rectify any harm caused. (Ferguson et al., 1999). After a negative outcome, guilt is often characterized by thoughts of self-blame, while shame is a feeling of worthlessness, exposure, and smallness. (Tangney, Wagner, & Gramzow, 1992). It has a cognitive component where negative outcomes stem from the fear of being exposed as flawed and helpless. (Tangney & Fischer, 1995). Experiencing shame involves intense self-scrutiny, leading to a desire to escape while feeling paralyzed. (Sabini & Silver, 1997). After a negative outcome, a shameful experience may lead one to think "I am a bad person." (Tangney, 1995; Lindsay-Hartz, de-Rivera, & Mascolo, 1995; Lewis, 1974).

In the current research, we aim to extend research on dysfunctional beliefs, alexithymia, shame, and guilt in greater detail in comparison to people without OCD, and people with OCD. It is required to depict that people with having OCD experience more intense feelings of shame and guilt, a lack of awareness and understanding of their own emotions, and a variety of beliefs about the cause as well as effects of anxiety, including the essential to control thoughts, overestimate the threat, uncertainty intolerance, and beliefs referring to one's ability to cope.

REVIEW OF LITERATURE

Multiple cognitive models propose a connection between OCD and maladaptive beliefs (Tallis, 1995; Salkovskis, 1985; McFall and Wollersheim, 1970). Multiple researchers have examined the correlation between these beliefs and OCD (Mantz and Abbott, 2017; Hezel and McNally, 2016; Zetsche et al., 2015; Coles et al., 2015). According to Krech and Crutchfield (1948), belief is a long-lasting framework of perceptions along with the cognitions concerning different aspects of an individual's world. The OCCWG (Obsessive-Compulsive Cognitions Working Group) created the OBQ (Obsessive Beliefs Questionnaire), especially for individuals exhibiting traits of OCD. The questionnaire evaluates six domains of maladaptive beliefs, specifically: (1) exaggerated sense of responsibility, (2) significance attributed to thoughts, (3) regulation of thoughts, (4) overestimation of danger, (5) low tolerance for uncertainty, and (6) pursuit of perfection. Myers et al. (2008).

In a study by Bankier et al. (2001), 234 patients with a range of psychiatric disorders, involving panic disorder, somatoform disorder, OCD, and depression, had their alexithymic characteristics compared. The results showed that while individuals with panic disorder did not use this coping mechanism, patients with OCD tendencies tended to use an operational thinking style to deal with emotional stress.

According to Kang et al. (2012), compared to healthy individuals of the same gender, those with OCD tendencies show higher levels of alexithymia and lower levels of perspective-taking ability. Furthermore, these people also have lower empathic ability when it comes to perspective-taking and have a tendency to perceive ambiguous facial expressions as disgust.

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It has also been found that individuals with OCD traits tend to have alexithymic characteristics that remain stable over time. A study conducted by Bankier et al. (2001) examined 234 patients with various psychiatric disorders, involving panic disorder, somatoform disorder, OCD, and depression. The research aimed to compare the alexithymic characteristics of these patients and found that individuals with OCD are more inclined to manage emotional stress by employing an operational thinking style, in contrast to those with panic disorder.

Studies by Rachman et al. (1995) and Salkovskis et al. (1998) have shown that guilt is thought to be a core emotion in OCD. On the other hand, people who are depressed may exhibit intense self-blame, which can result in self-accusations, feelings of worthlessness, and immobility. Self-blame drives behavior in OCD; these behaviors are typically dysfunctional behaviors taken to an extreme. Salkovskis et al. (1998)'s treatment approach places more emphasis on intrusive thoughts associated with the patient's belief that they are to blame than it does on guilt. Systematic cognitive-behavioral therapy intervention elements address and modify the feeling of responsibility with the goal of minimizing neutralizing reactions like rituals and thoughts.

Numerous unfavorable emotions that may precede, moderate, or result from the symptoms of OCD are also linked to the disorder. According to a study by (Olatunji et al. in 2015), disgust had been associated with inappropriate thoughts as well as concerns about contamination. However, as a study by Belloch et al. (2016) explains, 'Not Just Right Experiences', a form of OCD characterized by uncertainty about the satisfactory completion of a task & compulsive ritual, can also induce feelings of unease and agitation. The moral feelings significance which includes shame and guilt related to the symptoms of OCD had been better understood through recent research.

Thus, several OCD-related beliefs, feelings of shame and guilt, and intrusive thoughts have been explained “in the literature, although to date few studies have investigated these beliefs.

METHODOLOGY

Aim

This research aims to explore a better understanding of dysfunctional beliefs, alexithymia, shame, and guilt in comparison to both those without and with OCD traits. It is important to realize that, in comparison to those without OCD traits, those with OCD traits may experience greater “feelings of shame and guilt, a lack of awareness and understanding of their own emotions, and a range of beliefs about the causes and impacts of anxiety, including the need to control thoughts, an exaggerated sense of threat, an intolerance for uncertainty, and beliefs about” one's own capacity for coping. The study also aims to understand the association between dysfunctional beliefs, alexithymia, shame, and guilt in comparison to both those without and with OCD traits.

Objective

1. To “determine whether there is any significant difference between people with significantly high obsessive-compulsive tendencies, dysfunctional beliefs, alexithymia, shame, and guilt people with high obsessive-compulsive tendencies and in comparison, among people with no significant tendencies of OCD.

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2. To explore the relationship between the variables, dysfunctional belief, alexithymia, shame, and guilt, between people with significantly high obsessive-compulsive tendencies and people with no significant obsessive-compulsive tendencies”.

Hypothesis

- H₀: There is no significant difference in levels of dysfunctional beliefs, alexithymia, shame, and guilt “between people with significantly high obsessive-compulsive tendencies and people with no significant obsessive-compulsive tendencies.
- H₀: There is no significant relationship between dysfunctional beliefs, alexithymia, shame, and guilt in comparison between people with significantly high obsessive-compulsive tendencies and people with no significant obsessive-compulsive tendencies”.

Research Design

The present research utilized a matched pair design to compare the clinical characteristics of individuals having obsessive-compulsive tendencies, with a non-clinical sample (control) group of individuals with no obsessive-compulsive tendencies. The matched pair design was used to ensure the homogeneity of the sample, wherein each pair was matched based on age and gender. Additionally, nine participants were identified as having obsessive-compulsive traits that do not fall under clinical or non-clinical categories, but with a vulnerability to develop such traits. We have considered this sample as sub-clinical data, which was analyzed separately.

Description of the Sample

The research study sample is divided into two groups: a clinical group with obsessive-compulsive tendencies and a control group without such tendencies, each with 35 participants. Data were collected from young adults aged 19 to 38, using a matched pair design to ensure sample homogeneity based on age and gender.

Inclusion Criteria

The inclusion criteria are listed below:

1. People aged 18 to 38 years were included.
2. The study also included only those belonging to middle-class socioeconomic status.
3. People qualifying with minimum educational qualifications of higher secondary level were included.
4. People living in the urban Kolkata metropolitan area were included.

Exclusion Criteria

The exclusion criteria are as follows:

1. Individuals with any diagnosable mental health condition other than OCD were excluded.
2. People with any recent incidence of trauma in the last six months were eliminated.
3. People with any type of chronic physical problem or condition were eliminated.
4. People who regularly use any medication prescribed by their doctor were also excluded.

Procedure

Data has been gathered from the community student population, including students of various schools and colleges in Kolkata. In addition, we have collected data from a random

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population aged between 19-38 to form the control group of non-clinical participants. However, upon analyzing the data, we discovered that many individuals scored close to the cut-off score, indicating that they are susceptible to developing OCD traits in the future. Therefore, we have considered them as a sub-clinical group. After being informed about the study and given a comprehensive rundown of the procedures, every participant consented to take part. Each participant provided written informed consent and their sociodemographic data was collected. The participants answered the questionnaires using paper and pencil, which took between 15 and 25 minutes. The participants were given a self-report assessment for diagnosing OCD traits using the Obsessional Belief Inventory-Revised (OCI-R). The questionnaires comprised the Obsessional Belief Scale, Toronto Alexithymia Scale, and State Shame and Guilt Scale, which were delivered randomly to the participants. The participants have been capable to withdraw from research at any time. After collecting the responses, the two groups, individuals diagnosed with obsessive-compulsive traits and individuals with no obsessive-compulsive traits, were compared.

Description of the Tools Used

- **Informed Consent Form**

The researcher provided all the details about the research. The researcher clarified that the confidentiality of data is going to be maintained and no potential discomfort from participation in this research work is foreseen. It was also made clear by the researcher that participation in the research is completely voluntary. There are no consequences for refusing to answer any questions or for choosing to stop taking part at any moment.

- **Socio-demographic Details**

To collect demographic details and information schedule was used – name, age, gender, sexual orientation, educational qualification, current pursuing course, occupational status, relationship status, marital status, physical/psychiatric illness, any chronic disease or illness, type of residential area, type of family, socio-economic status, any recent episode of psychological trauma, under any medication. According to the inclusion & exclusion criteria, those who will not take are mentioned, so that the researcher can decide which data to exclude from the sample and which data to include.

- **Obsessive-Compulsive Inventory-Revised (OCI-R; Foa, 2002)**

Based on the previous 84-item OCI (Foa et al., 1998), the OCI-R is a new 18-item questionnaire that assesses the severity of OCD symptoms during the previous month. It analyzes OCD symptoms using six criteria—Checking/Doubting, Washing, Obsessing, Mental Neutralizing, Hoarding, and Ordering—and a 5-point Likert scale. OCD sufferers have a mean score of 28.0 out of a possible 72 points. 21 is the suggested cutoff score for likely OCD presence.

- **“Obsessive Beliefs Questionnaire (OBQ-44; Obsessive Compulsive Cognitions Working Group, 2005)**

The 44-item OBQ is a self-report tool used to evaluate OCD-related belief categories. Following an analysis of the OBQ-87 and the retention of the 44 high-loading items”, the OCCWG identified three factors: overestimations of threat along with the responsibility for harm (RT subscale), such as "I must be certain of my decisions," perfectionism and the need for certainty (PC subscale), such as "I must be certain of my decisions," and importance/control of intrusive thoughts (ICT subscale), such as "Having nasty thoughts

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means I am a terrible person." A 7-point Likert scale has been utilized to score each question, "with 1 denoting strong disagreement and 7 denoting strong agreement. Strong internal consistency was discovered by Tolin, Worhunsky, and Maltby (2006), with Cronbach alphas of .90, .93, and .93 for the 3 factors".

- **Toronto Alexithymia Scale Questionnaire (TAS-20; Taylor GJ, Bagby RM, Parker JDA, 1994)**

The TAS-20, a widely used measure for alexithymia, consists of three categories: External difficulty Describing Feelings (DDF), Oriented Thinking (EOT), and Difficulty Identifying Feelings (DIF). Higher numbers on the total score scale, which goes from 20 to 100, indicate more difficulty. A Likert-type scale is used to score each response. Reverse scoring is applied to specific items. The overall score has an internal consistency (Cronbach's Alpha) of $\alpha = .88$. Subscales have internal consistencies of $\alpha = .86$, $\alpha = .80$, and $\alpha = .58$.

- **The State Shame and Guilt Scale (Marschall, D. Saftner, J., & Tangney, J. P. 1994)**

The SSGS is a self-rating scale that measures present feelings of shame along with guilt. The questionnaire contains ten items and has been divided into two subscales: shame and guilt. Each subscale consists of five items. Items indicating shame (1, 3, 5, 7, 9) and guilt (2, 4, 6, 8, 10). The questionnaire items are calculated by utilizing a 5-point Likert scale. The statements on the questionnaire may or may not accurately reflect how an individual is feeling currently. Therefore, the individual is asked to rate each statement based on how he or she is feeling presently.

Statistical Analysis

In comparison to individuals with significantly greater levels of OCD than to those without significant tendencies, the study was designed to investigate if dysfunctional beliefs, alexithymia, shame, and guilt are significantly correlated. For this, the Pearson Product Moment correlation was employed. In order to determine the mean and look for any notable variations in the levels of the aforementioned factors, an independent sample t-test was also performed. Version 21.0 of the Statistical Package for Social Sciences (SPSS) has been utilized to evaluate the study data.

RESULTS

Table 1: A t-test has been performed to calculate the mean and check for any significant differences in levels of dysfunctional beliefs, alexithymia, shame, and guilt between people with significantly high OCD and people with no significant OCD.

Independent t-test						
	GROUP	N	Mean	Std. Deviation	t	Sig. (2-tailed)
OCIR	Clinical Group	35	33.97	6.145	13.675	.0001
	Control Group	35	7.97	4.860		
OBQ1	Clinical Group	35	70.63	6.362	5.967	.0001
	Control Group	35	46.54	7.394		
OBQ2	Clinical Group	35	70.03	6.427	6.898	.0001
	Control Group	35	51.63	6.804		
OBQ3	Clinical Group	35	40.14	4.101	4.509	.0001
	Control Group	35	27.49	8.770		
ALEXY1	Clinical Group	35	15.49	4.611	3.053	.003
	Control Group	35	12.31	4.064"		
ALEXY2	Clinical Group	35	20.40	7.670	4.067	.0001

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		Independent t-test				
	GROUP	N	Mean	Std. Deviation	t	Sig. (2-tailed)
ALEXY3	Control Group	35	14.23	4.666	2.103	.039
	Clinical Group	35	20.89	5.022		
SHAME	Control Group	35	18.46	4.629	2.613	.011
	Clinical Group	35	10.86	4.603		
GUILT	Control Group	35	7.94	4.728	4.533	.0001
	Clinical Group	35	13.66	5.313		
	Control Group	35	8.17	4.709		

- OCI-R - Obsessive-Compulsive Inventory-Revised
- OBQ 1 – Inflated responsibility/ perceived threat of harm
- OBQ 2 - Perfectionism/ intolerance of Uncertainty
- OBQ 3 - Importance of thoughts/ controlling thoughts
- ALEXY 1 - Difficulty Describing Feelings
- ALEXY 2 - Difficulty Identifying Feelings
- ALEXY 3 - Externally-Oriented Thinking

Table 1 summarizes the calculation of the t-test to calculate the mean and check the significant difference in levels of dysfunctional beliefs, alexithymia, shame, and guilt between people with significantly high OCD and people with no significant OCD. Therefore, the table showing the statistically significant results implies significant differences between people with significantly high OCD and the control group with respect to dysfunctional beliefs, alexithymia, shame, and guilt experience. Rejecting the null hypothesis, which claimed that there has been no discernible difference in the levels of dysfunctional beliefs, alexithymia, shame, and guilt between individuals with significantly high OCD and those without significant OCD is the next step.

Table 2: Correlation between dysfunctional beliefs, alexithymia, shame, and guilt in comparison to people with no significant OCD and people with significantly high OCD.

		Correlations								
		OCIR	OBQ1	OBQ2	OBQ3	ALEXY1	ALEXY2	ALEXY3	SHAME	GUILT
OCIR	“Pearson Correlation		.711**	.701**	.589**	.384**	.540**	.244*	.423**	.604**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.030	.000	.000
	N	70	70	70	70	70	70	70	70	70
OBQ1	Pearson Correlation	.711**		.864**	.784**	.421**	.649**	.087	.490**	.605**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.446	.000	.000
	N	70	70	70	70	70	70	70	70	70
OBQ2	Pearson Correlation	.701**	.864**		.724**	.485**	.563**	.122	.391**	.525**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.285	.000	.000
	N	70	70	70	70	70	70	70	70	70
OBQ3	Pearson Correlation	.589**	.784**	.724**		.401**	.677**	.206	.385**	.506**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.068	.000	.000

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		Correlations								
		OCIR	OBQ1	OBQ2	OBQ3	ALEXY1	ALEXY2	ALEXY3	SHAME	GUILT
ALEXY1	N	70	70	70	70	70	70	70	70	70
	Pearson Correlation	.384**	.421**	.485**	.401**		.601**	.420**	.389**	.331**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.003
ALEXY2	N	70	70	70	70	70	70	70	70	70
	Pearson Correlation	.540**	.649**	.563**	.677**	.601**		.260*	.556**	.592**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.021	.000	.000
ALEXY3	N	70	70	70	70	70	70	70	70	70
	Pearson Correlation	.244*	.087	.122	.206	.420**	.260*		.250*	.218
	Sig. (2-tailed)	.030	.446	.285	.068	.000	.021		.026	.054
SHAME	N	70	70	70	70	70	70	70	70	70
	Pearson Correlation	.423**	.490**	.391**	.385**	.389**	.556**	.250*		.769**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.026		.000
GUILT	N	70	70	70	70	70	70	70	70	70
	Pearson Correlation	.604**	.605**	.525**	.506**	.331**	.592**	.218	.769**	
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.000	.054	.000	
	N	70	70	70	70	70	70	70	70	70

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed)”.
 . Correlation is not significant.

- OCI-R - Obsessive-Compulsive Inventory-Revised
- OBQ 1 – Inflated responsibility/ perceived threat of harm
- OBQ 2 - Perfectionism/ intolerance of Uncertainty
- OBQ 3 - Importance of thoughts/ controlling thoughts
- ALEXY 1 - Difficulty Describing Feelings
- ALEXY 2 - Difficulty Identifying Feelings
- ALEXY 3 - Externally-Oriented Thinking

Based on the results presented in Table 2, there is a strong positive correlation between the scores of obsessive-compulsive traits and dysfunctional beliefs. Among the beliefs noted are the significance of thought control, intolerance of uncertainty and perfectionism, exaggerated responsibility, and perceived threat of harm. These beliefs suggest that people with OCD are more likely to have obsessional beliefs. Additionally, the results demonstrate a strong positive correlation between the scores for alexithymia and obsessive-compulsive traits, suggesting that individuals with these traits have an externally oriented way of thinking and struggle to identify and describe their feelings. It was also found that people with significantly high obsessive-compulsive tendencies are likely to experience higher levels of shame and guilt. Therefore, the null hypothesis stating that there is no significant association among dysfunctional beliefs, alexithymia, shame, and guilt when compared among people with significantly high obsessive-compulsive tendencies and people who do not have significant obsessive-compulsive tendencies is rejected.

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Table 3: Descriptive statistics of borderline obsessive-compulsive tendencies

Descriptive Statistics			
	N	Mean	Std. Deviation
OCIR	9	18.44	.726
OBQ1	9	44.89	8.996
OBQ2	9	57.11	6.167
OBQ3	9	27.22	6.952
ALEXY1	9	14.67	4.000
ALEXY2	9	13.33	3.775
ALEXY3	9	20.33	5.937
SHAME	9	6.00	1.323
GUILT	9	7.56	3.877
Valid N (listwise)	9		

- OCI-R - Obsessive-Compulsive Inventory-Revised
- OBQ 1 – Inflated responsibility/ perceived threat of harm
- OBQ 2 - Perfectionism/ intolerance of Uncertainty
- OBQ 3 - Importance of thoughts/ controlling thoughts
- ALEXY 1 - Difficulty Describing Feelings
- ALEXY 2 - Difficulty Identifying Feelings
- ALEXY 3 - Externally-Oriented Thinking

The table above displays the mean and standard deviation of individuals who have exhibited traits of obsessive-compulsive disorder (OCD) and reached the vulnerability area. We have classified this data as borderline, as the cut-off score of OCI-R 21 suggests that scores at or above this level indicate the probable presence of OCD. However, the mean score of OCI-R in the table above is 18.44, which is only marginally close to 21. Therefore, this data does not meet the criteria for an OCD diagnosis. Nevertheless, this population is still vulnerable to developing OCD traits in the future. In comparison, the mean OCI-R score for the clinical group of people with OCD traits is 33.97, which is significantly higher than the borderline group's score of 18.44. This difference between the two groups indicates that those with borderline OCD traits are more vulnerable to developing OCD traits in the future.

DISCUSSION

The research aimed to explore the association among dysfunctional beliefs, alexithymia, shame, and guilt in individuals with and without OCD traits. It was the first of its kind to evaluate this relationship. It sought to understand how these variables are interrelated within the sample of people with significant obsessive-compulsive tendencies as well as those with no significant tendencies. Additionally, the research intended to determine whether there is a substantial variation in the presence of dysfunctional beliefs, alexithymia, shame, and guilt experiences between people with significant obsessive-compulsive tendencies and those without.

Our research findings suggest a strong positive correlation between obsessive-compulsive traits and dysfunctional beliefs, alexithymia, shame, and guilt. In other words, if an individual's scores for obsessive-compulsive traits increase, it indicates a corresponding increase in dysfunctional beliefs, alexithymia, shame, and guilt, and vice versa. Therefore, we reject the null hypothesis that there is no significant relationship between dysfunctional

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beliefs, alexithymia, shame, and guilt experiences among people with significantly high obsessive-compulsive tendencies and those without substantial tendencies.

Previous research has shown that the overestimation of threat is an OCD-specific belief. This conclusion has been supported by a number of studies, including García-Soriano et al. (2014), Moritz and Jelinek (2009), Tolin et al. (2006), and Anholt et al. (2004). For example, García-Soriano et al. (2014) discovered that individuals with OCD traits overestimated threat at higher levels than individuals with eating disorders. Furthermore, obsessive beliefs in OCD and anxiety disorder patients along with the nonclinical controls were evaluated using the OBQ by Tolin et al. (2006). They found that, in contrast to anxious and nonclinical controls, those with OCD traits were more likely to support views about threat assessment.

Therefore, our study adds to the existing literature and confirms that individuals with high levels of obsessive-compulsive traits are more prone to dysfunctional beliefs, alexithymia, shame, and guilt. These outcomes have significant implications for the development of interventions which has been aimed at reducing the severity and frequency of these symptoms in individuals with OCD traits.

To confirm our findings, we conducted a t-test to compare the average levels of dysfunctional beliefs, alexithymia, shame, and guilt between people with significant obsessive-compulsive tendencies and those without. The null hypothesis, which states that there is no significant difference in the levels of dysfunctional beliefs, alexithymia, shame, and guilt between the two groups, is rejected by our results, which indicate a statistically significant difference between them. This confirms earlier theories that those who suffer from OCD also experience guilt (Freud, 1926; Lang, 1986) and other cognitive aspects of the disorder, such as doubt, checking, overestimating risk, dysfunctional beliefs, and assuming responsibility (Salkovskis, 1989; Wells, 2000).

A study conducted by Mavrogiorgou, P., Becker, S., & Juckel, G. in 2024 on 31 OCD patients showed that these patients have maladaptive guilt along with the profile of shame. This profile is characterized by a raised sense of guilt in interpersonal relationships along with a stronger tendency towards self-criticism, as well as an increased punitive sense of guilt. Simultaneously, perfectionism is becoming more and more common, and people are becoming more sensitive to the pain of others. The study indicates that a violation of inner values, a poor self-image, and ongoing self-criticism are associated with OCD patients' propensity for profuse shame.

These earlier studies have also shown that compulsive behaviors are often used by individuals with Hoarding and Checking symptoms as a coping mechanism for unpleasant emotions. A. Nedelisky and M. Steele (2009) and G. Doron and M. Kyrios (2005) suggest that people with hoarding symptoms, who frequently exhibit excessive emotional attachment to inanimate objects, may also struggle with mental representations and emotional awareness of others and themselves. According to a number of studies (D'Olimpio & Mancini, 2014; Gangemi & Mancini, 2017), guilt is also strongly associated with OCD symptoms like contamination concerns, checking behaviors, and NJREs. Guilt can also make these symptoms worse (Mancini & Gangemi, 2015; Chiang & Purdon, 2019). It is unclear, nevertheless, how shame and OCD are related. Further research in this area is imperative, as multiple studies (Lochner et al., 2005; Hezel et al., 2012; Kim et al., 2014; Weingarden et al.,

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2016; Kwak & Lee, 2015; Yoosefi et al., 2016) have demonstrated greater levels of shame in OCD sufferers compared to healthy controls.

The research conducted on obsessive-compulsive traits has identified several factors that can increase the likelihood of dysfunctional beliefs, alexithymia, shame, and guilt experiences in people. However, the study was limited by a small sample size and focused mostly on undiagnosed individuals, which means that the results may not be entirely applicable to individuals diagnosed with OCD. To obtain more effective and generalizable results, future studies should involve larger and more diverse samples of individuals with OCD.

It has been essential to note that the research did not consider individuals who have already reached the vulnerability area of OCD traits. These individuals may not have any such traits yet, but they may develop OCD traits in the future. Therefore, it is suggested that future studies include them to gain a more comprehensive understanding of the association among these factors and the development of OCD traits. With this knowledge, preventative measures could be taken to minimize the likelihood of these individuals developing OCD traits in the future.

CONCLUSION

The present study has provided further evidence that dysfunctional beliefs that are specific to OCD include an inflated sense of responsibility and the perceived threat of harm, uncertainty intolerance and perfectionism, and the belief that controlling one's thoughts is of utmost importance and frequently struggle with describing and identifying their emotions, and are inclined towards an externally oriented thinking style, a condition known as Alexithymia. The research proposed that excessive guilt and shame play a substantial role in the development of OCD traits. Addressing these factors in therapy for OCD patients could improve treatment effectiveness. The findings contribute significantly to our understanding of OCD and may lead to more effective treatments in the future. The study has limitations as it relied on self-report questionnaires, which may introduce bias. Due to time constraints, it was not possible to conduct a community-based study on the entire population, and the smaller sample size hinders the generalization of findings. Additionally, the research did not analyze the sample of individuals at risk of developing OCD; instead, it categorized them as subclinical. In the future, using clinician-rated rating scales instead of self-rating scales can improve assessment accuracy. A community-based sampling would be beneficial for researching vulnerability to OCD. Understanding family relationships, trauma, panic attacks, anxiety, and hyper-religiosity can help develop more effective OCD treatments.

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