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Comparing Early Maladaptive Schemas and Schema Modes of Individuals with High and Low Scores in Scrupulosity and Normal Religious People

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Abstract

Background: Scrupulosity or religious obsession is a form of obsessive-compulsive disorder (OCD) and is recognized to be treatment-resistant. One of the most common treatments for treatment-resistant disorders is schema therapy.

Objectives: This study aimed to compare the early maladaptive schemas and schema modes of individuals with high and low scores in scrupulosity, as well as religious people with no disorder.

Methods: The population of this cross-sectional study consisted of all patients with OCD referred to Iran Psychiatric Hospital and the Clinic of Behavioral Sciences and Mental Health in Tehran, Iran, in 2019. The sample included 75 individuals with high score in scrupulosity, 75 individuals with low score in scrupulosity, and 75 religious people with no disorder. At first, all participants were evaluated with the structured clinical interview for DSM-5 disorders-clinical version (SCID-5-CV). Then, they completed the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), Penn Inventory of Scrupulosity (PIOS), Young Schema Questionnaire-Short Form (YSQ-SF), and Schema Mode Inventory (SMI). Data were analyzed using the one-way analysis of variance (ANOVA) and Kruskal-Wallis test.

Results: Individuals with high scores in scrupulosity were significantly different from normal religious people in the "disconnection and rejection" and "impaired autonomy and performance" schema domains. However, there was no significant difference between individuals with high scores in scrupulosity and those with a low score in any of the schema domains. Also, individuals with a high score in scrupulosity scored higher in almost all schema modes compared to normal religious people. Finally, the "punitive and demanding parent modes" of individuals with a high score in scrupulosity was significantly different from that of individuals with a low score.

Conclusions: According to our results, it is essential to focus on "disconnection and rejection" and "impaired autonomy and performance" schema domains, as well as child and parent modes, especially the dysfunctional parent mode, to treat individuals with a high scrupulosity score. Due to limited literature, further research is needed to confirm our results.

Keywords: Early Maladaptive Schemas, Obsessive Compulsive Disorder, Religious, Schema Modes, Scrupulosity

1. Background

Obsessive-compulsive disorder (OCD) is characterized by intrusive thoughts, obsessive rituals, preoccupations, and compulsions (1). It is a heterogeneous disorder manifesting with various clinical characteristics (2). Scrupulosity is defined as a pathological fear of thinking or behaving against moral and religious beliefs (3, 4). Examples of obsessive religious thoughts of such individuals are fear of committing sins or images of blasphemy and sacrilege. Compulsive behaviors include repeating religious rituals and seeking reassurance from religious people (2, 5). Individuals with a high score in scrupulosity make up one-third to one-fourth of all OCD patients (6, 7). In Iran, 50 - 80% of individuals with OCD experience obsessions with religious themes, which are particularly related to “purity” or “impurity” (8).

Scrupulosity is also described as a treatment-resistant disorder. Reasons such as the religious society viewing scrupulosity symptoms as normal acts of practicing religious rituals, the symptoms being reinforced by that society, the lack of supporting research background on the sub-

ject, and limited knowledge of clinicians in dealing with such cases contribute to poor treatment response and the disorder's treatment-resistant nature (5, 9). Therefore, to achieve better treatment outcomes in patients with this specific type of OCD, more appropriate treatment options need to be identified (8, 10, 11). Early maladaptive schemas (EMSs) are emotional and cognitive self-defeating patterns consisting of memories, emotions, cognitions, and bodily sensations, which have been formed during the early stages of development and repeat themselves throughout life (12).

Several studies have investigated schema therapy, and its related variables in OCD, and most of them have confirmed the presence of EMSs in OCD patients (9, 13-15). Some of these studies have compared schemas of OCD patients with other psychiatric patients and have found the schemas of OCD patients to be different from patients with other psychiatric disorders. In a study by Khosravani, it was shown that OCD patients score higher in almost all schemas compared to patients with schizophrenia and bipolar disorders (16). In another study, Yoosefi et al. (17) compared EMSs of OCD patients with two groups of normal people and patients with anxiety disorders; they found that average scores were higher in all EMSs compared to the control group. Also, researchers investigated 18 different EMSs in OCD compared to chronic pain disorders. The results showed that OCD patients scored higher in four EMSs of abandonment, dependence/incompetence, vulnerability to harm and danger, and insufficient self-control (18). Acquiring knowledge on EMSs in patients who do not respond to treatment is necessary for gaining a deeper understanding of the treatment process in schema therapy. Although the subject is well-researched, there is no study on the schemas of individuals with high score in scrupulosity.

Gross, Stelzer and Jacob (12) presented a schema therapy model based on schema mode. According to this model, the specific symptoms of each individual are formulated differently. For instance, OCD symptoms can, at least in some cases, be classified as an overcompensation mode, such as the Over-Controller mode or Detached Protector mode. The detached protector mode usually hinders the treatment process, while the overcontrolling mode can be activated in exposure and response prevention (ERP) sessions. However, Thiel et al. (9) pointed out that further investigation is needed before approving this treatment model. Currently, research literature is very limited on OCD patients' obsessive modes. As far as the researchers investigated, the only study investigating the schema modes of individuals with low score in scrupulosity patients is a study by Basile et al. (19), which concluded that the severity of OCD symptoms is associated with the punitive parent mode.

Despite the fact that the first step in treating patients with this type of OCD is to identify their specific schema and schema modes, few studies have been conducted on schemas, and specifically schema modes of OCD patients, and there are no studies on individuals with scrupulosity. On the other hand, even though research shows that religion and spirituality have a positive effect on mental health (20-23), the question arises that which schema/schemas and schema modes in individuals with a high scrupulosity score interact with religion in a way that give rise to scrupulosity. Also, because Iran is a religious country, examining this issue in Iranian patients with scrupulosity is of great importance. Accordingly, the present research aimed to investigate whether EMS domains and schema modes of individuals with a high scrupulosity score significantly differ from non-religious obsessive patients and normal religious individuals. Also, in case of detecting a difference, what schemas or schema modes in individuals with a high scrupulosity score tend to be more severe as compared to those of the two other groups. To date, no study has compared individuals with a high score in scrupulosity, those with a low score, and normal religious people. The results of this study can provide invaluable information for clinicians on treating individuals with high score in scrupulosity and lay the groundwork for further studies in this field.

2. Objectives

This study aimed to compare the EMSs and schema modes of individuals with a high score in scrupulosity, those with a low scrupulosity score, and religious people with no disorder in Iran.

3. Methods

The sample of current cross-sectional study included 225 participants who were selected through convenience sampling method. The statistical population included all individuals with a high score in scrupulosity and those with a low score referred to psychiatric hospitals and clinics in Tehran, Iran, in 2019. Meanwhile, a group of religious people with no psychiatric disorders were considered. To assign patients into two groups, five different treatment centers were randomly selected. After making the necessary arrangements, the clinical psychologists met the patients who were diagnosed with OCD by a psychiatrist in the treatment centers. The inclusion criteria for both groups were being diagnosed with OCD by a psychiatrist, being in the age range of 18 - 65 years, and not having a

chronic physical illness. The exclusion criteria were having psychotic disorders and substance abuse.

Also, the normal religious group was chosen from the patients' companions and employees of the Iran University of Medical Science through convenience sampling. These individuals were matched with the clinical sample in terms of demographic characteristics and other personal and clinical information. After explaining the study goals to all participants, a written informed consent was obtained.

After sampling, structured clinical interview for DSM-5 disorders-clinical edition (SCID-5-CV) was administered by a professional clinical psychologist. After confirming the OCD diagnosis by a psychiatrist and through clinical interview, the participants were asked to fill out the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and were divided into religious individuals and those with a low score in scrupulosity. Therefore, based on three items used for psychiatric diagnosis, namely the SCID, Y-BOCS, and the Penn Inventory of Scrupulosity (PIOS), individuals with a high score in scrupulosity were distinguished from those with a low score. Finally, the Young Schema Questionnaire-Short Form (YSQ-SF) and Schema Mode Inventory (SMI) were distributed among both groups. After completion, every questionnaire was examined by the researcher so that no questions were left unanswered. All incomplete questionnaires were returned to the participants to be revised.

In the present study, the following scales were used:

1. Demographic Characteristics Questionnaire: This researcher-made questionnaire includes age, sex, marital status, employment status, educational status, previous history, duration of OCD, and history of psychological disorders (clinical and personality disorders) and received treatments.

2. Structured clinical interview for DSM-5 disorders-clinical edition (SCID-5-CV): This tool is a semi-structured clinical and diagnostic interview developed by First et al. The validity and reliability of this instrument have been evaluated and confirmed. Kapa criterion for all diagnoses except anxiety disorder was higher than 0.4, indicating moderate agreement. However, in anxiety disorders, the kappa was 0.34, indicating an average agreement between the two reports of the psychiatrist and the SCID interviewer (24). The sensitivity of all diagnoses is higher than 0.80 (25).

3. Yale-Brown Obsessive-Compulsive Scale (Y-BOCS): This is a clinical scale devised by Goodman et al. (1989) used to rate the severity of obsessive thoughts and behaviors. The self-report checklist includes 16 subscales which are rated on a 5-point Likert scale. The questionnaire reports three scores: severity of obsessions (0 - 20), severity of compulsions (0 - 20), and a total score (0 - 20) (26). The reliability of this questionnaire has been reported as 0.85 to 0.93 and the internal consistency of Cronbach's alpha has been reported to be 0.69 to 0.91 (26, 27). The reliability of the instrument in Iran was 0.98, internal consistency was 0.89, and test-retest reliability with a two-week interval was 0.84. The diagnostic validity of the instrument for severity and type of obsession has been reported to be 0.64 and 0.59, respectively (28).

4. Penn Inventory of Scrupulosity (PIOS): The PIOS was devised by Abramowitz et al. (29) and includes 19 self-report items to evaluate scrupulosity. PIOS includes two subscales, including fear of committing sins and fear of being punished by God. Participants are being evaluated on their religious dependence, as well as the degree to which they support their faith on a scale of 1 to 5. Abramowitz et al. reported the internal consistency of the questionnaire as 0.93. Factorial analysis of the test indicated that 15 items significantly correlated with OCD. In a study, Ramezani Farani (30) applied the test on 30 students and reported the internal consistency as 0.82 and a very good test-retest reliability.

5. Questionnaire of Practicing Religious Traditions (Mabad Scale): This scale consists of 25 items designed by Golzari (31) and evaluates practicing Islamic beliefs. Every item of the questionnaire includes five choices which are rated from 0 to 4. Test-retest reliability was 76%, split-half reliability was 91%, and Cronbach's alpha was 94%. In addition, concurrent validity of the questionnaire was investigated through comparing the results obtained from religious and non-religious people (31).

6. Young Schema Questionnaire-Short Form (YSQ-SF): YSQ-SF is a 75-item self-report questionnaire designed by Young (1990) that investigates 15 EMSs (emotional deprivation, abandonment/instability, mistrust/abuse, social isolation/alienation, defectiveness/shame, failure, dependence/ incompetence, vulnerability to harm or illness, enmeshment/undeveloped self, subjugation, self-sacrifice, emotional inhibition, unrelenting standards/hypercriticalness, entitlement/grandiosity, insufficient self-control/self-discipline). The items are scored on a 6-point Likert scale (32, 33). Khosravani et al. (34) investigated the psychometric properties of the questionnaire in an Iranian population and, based on the obtained Cronbach's alpha, reported the internal reliability as satisfying and discriminant validity as acceptable. Also, in another study, by using Cronbach's alpha coefficient, the internal consistency for 17 questionnaire items was 62 - 90% (35).

7. Schema Mode Inventory (SMI): SMI is designed by Young (36) and includes 124 items to investigate 14 types of schema modes (vulnerable child mode, angry child mode, enraged child mode, impulsive child mode,

undisciplined child mode, happy child mode, compliant surrender mode, detached protector mode, self -soother mode, self-aggrandizer mode, bully and attack mode, punitive parent mode, demanding parent mode, healthy adult mode). Lobbestael et al. (36) reported the inventory to have high internal consistency, adequate test-retest reliability, and satisfying construct validity. The reliability of the inventory was also tested in an Iranian population. Cronbach's alpha correlation coefficients were 0.97, 0.92, 0.8, 0.81, and 0.56 for the first through fifth subscales, respectively (37).

Finally, data analysis using descriptive statistics (description of demographic data, mean and standard deviation of variables) and inferential statistics (one-way ANOVA and Kruskal-Wallis tests) were performed.

4. Results

In this study, data obtained from 225 participants were analyzed. Table 1 presents the demographic characteristics of the participants. All three groups were equal in terms of gender, education, and marital status. The participants' age range was 20 - 61 years, with an average of 35.18 and standard deviation of 10.45. As illustrated by the chi-square of 1.603 and P-value of 0.449, there was no significant difference between the three groups in terms of age.

After checking the prerequisites (normal distribution of data, independency of groups, and equality of group variances), to investigate group differences regarding the two variables of schema domains and schema modes, one-way ANOVA was performed. As illustrated in Table 2, using the F-test and the significance level of two domains of disconnection/rejection ($F = 5.25$, $P \geq 0.007$) and impaired autonomy/performance ($F = 4.52$, $P \geq 0.14$), the assumption of mean difference between the groups was confirmed, which is indicative of group differences in the schemas mentioned above. Also, the results of Tukey's post-hoc test (Table 3) and average scores (Table 2) in considering the domain of disconnection/rejection indicated a significant difference between the normal religious group and individuals with a high score in scrupulosity, as well as the normal religious group and individuals with a low score in scrupulosity. However, individuals with a high score in scrupulosity and those with a low score were not significantly different in this domain. Generally speaking, the groups with high and low scores in scrupulosity scored higher as compared to the normal religious group. Regarding the autonomy/impaired performance, the only significant difference was detected between the normal religious group and the individuals with a high score in scrupulosity. In contrast, the differences between the normal religious group and those with a low score in scrupulosity, as well as the individuals with a low score in scrupulosity and those with a high score in scrupulosity, were not significant. Similarly, there were no significant differences between the groups in terms of the three other schema domains of other-directedness ($F = 0.436$, $P \geq 0.648$), overvigilance, and inhibition ($F = 2.47$, $P \geq 0.092$), and impaired limits ($F = 1.06$, $P \geq 0.352$).

In evaluating the schema mode domains, based on F-test and the significance levels of modes, the mean difference assumption was accepted, indicating differences between the groups. In two modes of vulnerable child ($F = 14.53$, $P \geq 0.001$) and dysfunctional coping mode ($F = 10.38$, $P \geq 0.001$), individuals with high and low scores in scrupulosity scored higher compared to the normal religious group. In two modes of happy child ($F = 4.43$, $P \geq 0.015$) and healthy adult ($F = 5.07$, $P \geq 0.019$), the normal religious group scored higher compared to the two other groups. Also, regarding these two modes, there were no significant differences between the individuals with high and low scores in scrupulosity. In the punitive and demanding parent mode ($F = 13.97$, $P \geq 0.001$), the individuals with a high score in scrupulosity had the highest score, and those with a low score in scrupulosity and normal religious group ranked second and third, respectively.

This study aimed to compare the EMSs and schema modes of individuals with high and low scores in scrupulosity, as well as religious people with no disorder. Due to the non-normal distribution of data, Kruskal-Wallis test was used. As Table 4 illustrates, except for emotional deprivation and social isolation in the "disconnection and rejection" schema domains, individuals with a high score in scrupulosity scored higher as compared to normal religious people in three schemas of abandonment/instability ($P < 0.001$), mistrust/abuse ($P < 0.049$), and defectiveness/shame ($P < 0.027$). In the "abandonment/instability" schema domains, individuals with high and low scores in scrupulosity also scored higher as compared to normal religious individuals in such schemas as failure ($P < 0.015$), dependence/incompetence ($P < 0.008$), and vulnerability to harm or illness ($P < 0.023$) except for the schema of enmeshment/undeveloped self ($P < 0.303$). Also, emotional inhibition ($P < 0.039$) was higher in the individuals with a high score in scrupulosity compared to the normal group.

We also investigated which schema mode was more severe in individuals with a high score in scrupulosity as compared to normal religious people and non-religious obsessive patients. Kruskal-Wallis test was performed due to the non-normal distribution of data. As indicated in Table 5, considering the significance level in different domains of schema mode, except for indifferent self-soothing mode ($P < 0.777$), individuals with a high score in scrupulosity in other modes had higher scores compared to nor-

Table 1. Descriptive Data, Demographic Characteristics of the Participants

Variable	Groups			Kruskal-Wallis	
	Individuals with a High Score in Scrupulosity	Individuals with a Low Score in Scrupulosity	Normal Religious Group	Chi-Square	Sig.
Sex				0.359	0.836
Female	51	55	47		
Male	24	20	28		
Degree				0.56	0.756
High school	18	14	21		
Bachelor	23	44	40		
Master and PhD	34	17	14		
Marital status				0.02	0.99
Single	39	47	44		
Married	36	28	31		
Age				1.603	0.449
Min	20	20	22		
Max	61	52	60		
Mean	36	33	37		
SD	10	10	11		

Tables 2. Results of One-Way ANOVA Test for EMSs and Schema Mode

Variables and Schema Domains	Mean (SD)			F	P
	Individuals with a High Score in Scrupulosity	Individuals with a Low Score in Scrupulosity	Normal Religious Group		
Schemas					
Disconnection and rejection	84.72 (27.45)	84.15 (28.31)	63.36 (24.9)	5.25	0.007
Impaired autonomy and performance	60.07 (22)	52.37 (24.36)	42.11 (17.46)	4.52	0.014
Other-Directedness	34.15 (9.28)	34 (11.23)	31.85 (9.06)	0.436	0.648
Overvigilance/Inhibition	40.76 (11.07)	37.6 (10.7)	33.85 (11.55)	2.47	0.092
Impaired limits	34.32 (7)	34.79 (8.86)	31.81 (7.71)	1.06	0.352
Schema modes					
Vulnerable child mode	146.34 (22.85)	136.77 (34.7)	105.18 (27.06)	14.53	0.001
Happy child mode	33.88 (5.16)	34.21 (5.41)	37.5 (3.75)	4.43	0.015
Punitive and demanding parent mode	73.46 (16.24)	61.91 (15.21)	51.88 (12.05)	13.97	0.001
Healthy adult mode	27.68 (4.91)	30.6 (6.49)	39.92 (6.91)	5.07	0.019
Dysfunctional coping mode	128.43 (26.8)	118.82 (22.19)	98.55 (22.65)	10.38	0.001

Table 3. Multiple Comparison of Tukey's Post-Hoc Test in Three Groups [a]

Variables and Domains and Modes	Mean Difference (Sig)		
	Individuals with a High Score in Scrupulosity* Individuals with a Low Score in Scrupulosity	Individuals with a High Score in Scrupulosity* Normal Religious Groups	Individuals with a Low Score in Scrupulosity*Normal Religious Groups
Shema domains			
Disconnection and rejection	-0.565 (0.997)	-21.358 (0.016)	-20.79 (0.02)
Impaired autonomy performance and	-7.701 (0.416)	-17.957 (0.01)	-10.25 (0.208)
Other-Directedness	-0.152 (0.998)	-2.306 (0.685)	-2.15 (0.718)
Overvigilance/Inhibition	-3.163 (0.576)	-6.914 (0.075)	-3.751 (0.455)
Impaired limits	-0.0473 (0.976)	- 2.512 (0.495)	-2.986 (0.372)
Schema modes			
Vulnerable child mode	-9.574 (0.467)	-41.162 (0.001)	-31.588 (0.001)
Happy child mode	0.333 (0.968)	3.624 (0.024)	3.291 (0.045)
Punitive and demanding parent mode	-11.554 (0.018)	-21.58 (0.001)	-10.026 (0.043)
Healthy adult mode	-0.082 (0.999)	2.243 (0.034)	2.325 (0.048)
Dysfunctional parent mode	-9.617 (0.336)	-29.881 (0.001)	-20.264 (0.010)

[a] The average difference between the two groups (significance level).

Table 4. Summary of Kruskal-Wallis Test Results on Schemas

Schemas	Mean Rank			Chi-Square	P
	Individuals with a High Score in Scrupulosity	Individuals with a Low Score in Scrupulosity	Religious Normal Groups		
Emotional deprivation	42.60	42.26	30.94	4.662	0.097
Abandonment/instability	42.22	49.18	24.65	16.863	0.001
Mistrust/abuse	40.16	45.28	30.38	6.050	0.049
Social isolation/alienation	46.42	37.46	31.88	5.632	0.06
Defectiveness/shame	46.28	39.68	29.88	7.188	0.027
Failure	48.90	34.42	32.42	8.416	0.015
dependence/ incompetence	49	36.66	30.17	9.630	0.008
Vulnerability to harm or illness	45.84	40.72	29.31	7.571	0.023
Enmeshment/Undeveloped Self	42.46	39.98	33.27	2.388	0.303
Subjugation	43.60	39.92	32.23	3.560	0.169
Self-sacrifice	36.20	39.52	39.73	0.408	0.816
Emotional Inhibition	46.94	37.54	31.31	6.487	0.039
Unrelenting Standards/Hypercriticalness	40.10	40.72	34.83	1.108	0.575
Entitlement/Grandiosity	36.76	43.54	35.33	2.008	0.366
Insufficient Self-control/Self-discipline	41.88	40.08	33.73	1.936	0.380

mal religious group and individuals with a low score in scrupulosity. As it was expected, the scores of normal religious people were higher in the contented child mode ($P < 0.02$) and the healthy adult mode ($P < 0.031$).

5. Discussion

The present research aimed to compare the EMSs and schema modes in individuals with high and low scores in scrupulosity and normal religious people. As mentioned in the findings, individuals with a high score in scrupulosity were significantly different from normal religious people in schemas related to domains of disconnection/rejection and autonomy/impaired performance, whereas no significant difference was found between these individuals and those with a low score in scrupulosity in any of the schema domains. Individuals with a low score in scrupulosity were different from normal religious people in only one domain of disconnection/rejection; however, the detected difference between them and normal religious people in autonomy/impaired performance was not significant. Moreover, individuals with a high score in scrupulosity and those with a low score were not significantly different in any of the domains and schemas.

OCD is highly prevalent and has a chronic and progressive course, which causes serious impairments in functioning of patients. Due to the limitations in identifying cognitive variables, inefficiency of common treatments, and the need for novel evidence-backed treatments in treating OCD, identifying these variables is of great importance. Also, considering the cultural and social contexts, identifying and employing effective components of schema-based treatments for OCD, and examining the efficacy of evidence-based approaches can play a significant role in the treatment of such patients. This is the first study in Iran conducted on patients diagnosed with OCD. To date, no studies have compared the EMSs and schema modes of individuals with high and low scores in scrupulosity and normal religious people.

The obtained results were somewhat in line with other studies including (13, 38, 39), in which OCD patients were compared with panic disorder, pain disorder, eating disorder patients, and controls, respectively. In all the mentioned studies, OCD patients scored higher in the "disconnection and rejection" schema domain compared to the other groups. Although studies mentioned different sets of schemas, the dependence/incompetence, failure, and defectiveness/shame schemas of OCD patients scored higher in all studies. The reason for this inconsistency could be attributed to different characteristics of samples in different studies.

The results of another study showed a significant difference between clinical groups with OCD and the normal control groups in five EMS domains of abandonment/rejection, impaired performance, impaired limitations, other-directedness, and hypervigilance and inhibition (40), which were in line with the present research.

To explain the finding that individuals with a high score in scrupulosity scored higher in schemas of disconnection/rejection domain) abandonment, defectiveness and shame, and mistrust abuse, Young's (12) theory seems relevant. According to Young's theory, patients with schemas in this domain are unable to form secure attachments with others. It seems that when individuals with a high score in scrupulosity have unwanted normal intrusive thoughts, they consider them as inner deficits and as major flaws. This leads to the activation of their defectiveness/shame schema, which gives rise to an inner sense of being incomplete and flawed in the face of God's orders. On the other hand, their abandonment schema leads to the fear of being abandoned by God as a source of attachment, which leads to obsessive behaviors.

In this study, individuals with high and low scores in scrupulosity were significantly different from the normal religious group in the "disconnection and rejection" schema domains. In contrast, there was a significant difference only between individuals with a high score in scrupulosity and normal religious people in the "impaired autonomy and performance" schema domain. In addition, except for the schema of enmeshment/undeveloped self, the differences between the other three schemas of this domain (dependence/incompetence, vulnerability to harm and illness, and failure) were only significant in normal religious people and individuals with a high score in scrupulosity. Thus, it can be concluded that this domain is the most significant one regarding the schema differences of the two studied groups. The findings by Kim et al. (2014) were consistent with this results (13). Their study indicated that among the five components of OCD, sexual/religious was the only aspect related to the "impaired autonomy and performance" schema domain, namely vulnerability to harm and illness and enmeshment. According to Young, the "impaired autonomy and performance" schema domain is related to autonomy and independent performance. Autonomy and independent performance needs of patients with schemas in this domain have not been satisfied. The caregivers of this group have usually harmed their children's self-confidence, which has later led them to lack proper skills to solve problems and manage themselves in adulthood (12). This view is indicative of the type of child rearing and strict environment patients with scrupulosity experienced as children (41).

It seems that due to their high levels of incompe-

Table 5. Summary of Kruskal-Wallis Test Results on Schema Modes

Schema Modes	Mean Rank			Chi-Square	P
	Individuals with a High Score in Scrupulosity	Individuals with a Low Score in Scrupulosity Groups	Religious Normal Groups		
Vulnerable child	51.68	41.82	22.63	22.968	0.001
Angry child mode	50.66	42.46	23	21.247	0.001
Enraged child mode	49.74	41.08	25.21	16.272	0.001
Impulsive child mode	46.04	41.78	28.1	9.293	0.010
Undisciplined child mode	44.78	43.22	27.92	9.156	0.010
Happy child mode	32.9	33.92	48.29	7.827	0.020
Compliant surrender mode	46.6	39.46	29.79	7.498	0.024
Detached protector mode	50.68	39.98	25.37	16.972	0.001
Self -soother mode	41	37.74	36.83	0.506	0.777
Self-aggrandizer mode	42.5	47.08	26.4	12.449	0.002
Bully and attack mode	48.88	41.14	25.98	14.276	0.001
punitive parent mode	55.02	36.22	24.81	24.304	0.001
Demanding parent mode	48.42	40.52	27.02	12.306	0.002
Healthy adult mode	29.26	37.4	43.63	2.398	0.031

tence/dependence schema, individuals with a high score in scrupulosity feel less capable in the face of interfering thoughts and, as a way of escaping anxiety-provoking thoughts of indecision, seek solace in asking clergymen and authorities for reassurance.

On the other hand, individuals with a high score in scrupulosity have a failure schema which makes them underestimate themselves in confronting obsessive thoughts and behaviors and lose hope for success (42). Individuals with a high score in scrupulosity consider every interfering thought as important and a telltale sign of a sin, making them more sensitive to those interfering thoughts. From a schema point of view, intrusive thoughts with a religious theme lead to the activation of the patients' vulnerability schema. This activation may cause the patients to think that they deserve to be punished by God because of having committed a sin and that something bad will happen to them in the future as a form of punishment.

The results of this study can be explained using Gross, Stelzer, and Jacob's model (8). In this model, the vulnerable child mode and punitive parent mode are dominant in OCD patients. Also, OCD symptoms can be considered as over-controlling/perfectionist overcompensation modes or detached protector modes. To interpret the findings of the present research based on the mentioned model, it seems that punitive and demanding parent modes of these patients lead them to have an intense sense of guilt and to imagine committing mistakes that are unforgivable. According to these findings, the punitive and demanding parent mode of individuals with a high score in scrupulosity is significantly different from OCD patients, which might confirm that these patients impose unrelenting standards on themselves and are hypervigilant about religious and moral sins (43). Therefore, when experiencing intrusive thoughts, their parent modes are activated, which starts blaming and labeling them as sinners. Followed by this activation, the vulnerable child mode (guilty, helpless, imperfect, etc.) is also activated. The detached protector or over-controlling and perfectionist modes of individuals with a high score in scrupulosity are activated, which lead them to perform religious rituals, say prayers repeatedly, and seek reassurance from religious people in order to suppress their sense of anxiety and guilt.

In this study, besides the modes mentioned in Gross, Stelzer, and Jacob's model (2012), individuals with a high score in scrupulosity scored high in the following modes: vulnerable child mode, demanding parent mode, detached protector mode, and perfectionist/over-controller mode. Based on Young's (2006) view, modes indicate our state and not our traits. Since psychological states are less stable characteristics (12), the detailed analysis on each of them cannot be provided. Accordingly, elevated scores on all modes somewhat explain the patients' treatment resistance. The activation of controlling or detached protector modes might impede the progress of ERP sessions (8). The other possibility is that due to the activation of angry or enraged child mode during the treatment session,

the patient might show anger when having to do ERP, the way that the therapist is suggesting. Undisciplined child mode can also be activated, in which case the patient refuses to complete the homework assignments. Finally, the lower scores of happy child mode and healthy adult mode indicate that these patients experience less content and joy as compared to normal religious people because their happy child mode is not being activated. Their healthy adult mode is also not activated, so these patients cannot react to obsessive thoughts without engaging in obsessive behaviors, as normal adults would do.

One of the limitations of the present study is not having a random sample and using self-report measures. In addition, the patients may not have answered accurately due to not having understood the questions and avoiding a sincere report on items related to deeper schemas or vulnerable child modes because of their overcompensation coping style. Among other limitations of the study, no control over interfering variables such as the effect of taking medications and receiving psychotherapy can be mentioned. Finally, the lack of conclusive literature on individuals with a high score in scrupulosity limited our data analysis. We suggest that future researchers investigate schemas of individuals with a high score in scrupulosity in participants with different degrees of religious beliefs. Also, comparing the schemas of individuals with a high score in scrupulosity and those of other treatment-resistant clinical groups seems to be a fruitful line of research. Needless to say, examining the EMSs and schema modes of individuals with a high score in scrupulosity can lead to considerable advances in the psychotherapy of such patients.

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Footnotes

Authors' Contribution: Study concept and design, S. S. and A. R. F.; Acquisition of data, S. S., S. M., and B. B.; Analysis and interpretation of data, H. Y. Z.; Drafting of the manuscript, S. S. and A. R. F.; Critical revision of the manuscript for important intellectual content, S. S. and S. M.; Statistical analysis, H. Y. Z.; Administrative, technical, and material support, S. S., A. R. F., S. M., and B. B.; Study supervision, A. R. F.

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