Introduction

The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) classified obsessive-compulsive disorder (OCD) under the category: anxiety disorders. More recently, in the fifth edition of the DSM [1], however, OCD becomes the first item in a separate category under the name: Obsessive-Compulsive and Related Disorders. It includes OCD, body dysmorphic disorder, hoarding disorder, trichotillomania, excoriation, substance / medication – induced obsessive-compulsive and related disorders.

OCD is characterized by the presence of obsessions and / or compulsions. Obsessions are recurrent and persistent thoughts, urges, or images that are experienced as intrusive and unwanted, whereas compulsions are repetitive behaviors or mental acts that an individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly (p. 235) [1]. In earlier surveys, the prevalence of OCD in the general population was 0.5% [2], but more recent surveys estimated the 12 – month
prevalence of OCD in the United States as 1.2 %, with a similar prevalence internationally (1.1% - 1.8 %) [1]. In Egypt, a study in 1991 showed an incidence of OCD at 2.3 % [3].

On the other hand, a number of research studies indicated the high incidence of obsession (about 80 %) in the general non-clinical population as well as the similarity between normal and pathological obsessions [4-6]. Furthermore, the form and content of the obsessions did not differ between normal’s and OCD patients. Nevertheless, obsessions of patients occur more frequently, last longer, are more intense, disrupt their lives, arouse more discomfort and resistance, and are difficult to dismiss. The same results applied well to compulsions [4]. Therefore, it seems suitable to consider normal and abnormal obsessions and compulsions (OC) on the basis of the quantitative and dimensional approach.

Egypt, as a developing country, like the rest of the Arab countries, are in great need of psychological tests and questionnaires. In 1992, Abdel-Khalek [7] developed the Arabic Scale of Obsession Compulsion (ASOC), and in 1998, he developed an equivalent English version of this scale [8]. Several studies were published using this English version [9-16], as well as the Arabic form. Moreover, a Spanish form of the scale is available [17].

Twenty-six years have passed since the publication of the Arabic form of the ASOC. Furthermore, its author found some aspects to be improved as follows: (a) the first version consists of many items (32), and a short form is badly needed to avoid the participant’s boredom and carelessness, and to save his or her time, (b) some items are long statements and it is preferable to use short ones, (c) the response alternatives were dichotomous (Yes/No), and the Likert format has psychometric advantages, and (d) the old scale contained 28 % negative items scored “No” for OC (e.g. I do not like strict discipline and too much accuracy). Some authors stated that negatively worded items often turn out to be harder to understand or more complicated to answer than positively worded items [18]. Other authors concluded that negatively worded items impair response accuracy [19], so there is a need to depend only on positively worded items. The aim of the present research was to develop a revised version of the ASOC as a trait scale to be used in research in the general population, and to estimate its psychometric properties.

Material and Methods

Participants

A convenience sample of 150 undergraduates enrolled in different faculties in University of Alexandria, Egypt took part in this study (74 men; 76 women). Their ages ranged from 17 to 25 years (M age= 20.95, SD= 2.01). They were non-paid volunteers, and neither disturbed clinical cases nor diagnosed institutionalized patients, but, rather were presumably healthy individuals. That is, they were not selected from hospitals or clinics. However, no psychiatric assessment was conducted to support that these participants had no mental illness.

Psychometric Scales

The Arabic Scale of Obsession-Compulsion (ASOC)

Construction of the revised scale: The 32 items of the original ASOC were shortened and the negative wording changed to positive to avoid the problem of the double negative when the participant answered these items. Five new items were added. The 37 statements were brief and written in standard, modern, and simple Arabic. A sample of 150 undergraduates responded to the 37 items based on a 5-point Likert scale. Then, the corrected item-reset-of-test score correlations (i.e., the item-remainder correlations) were computed. All the correlations were statistically significant. Because the aim was to develop a 20 item scale, the items with highest correlations with the remainder were retained.

Response alternatives: Each item of the ASOC is answered on a 4-point Likert-type scale as follows: 1 (No), 2 (Some), 3 (Much), and 4 (Always). The total score could range from 20 to 80, with higher scores indicating higher OC. The ASOC was intended to be used as a trait and not a state scale, inasmuch as the instructions refer to the term “in general”.

Response set: Because of the psychometric problems in the negatively worded items, and many persons face difficulty in responding to them, particularly with double negative, it was decided to use only the positively worded statements. To control acquiescence response bias and other response sets, to some extent, five filler items were randomly added with a normal, positive, and non-OC content without considering them in the total score. Examples of the filler items are as follows: “I am happy with my life style”, “I feel optimistic about the future”, and “I am satisfied with myself”.

Scoring: The ASOC consists of 25 items but five items are fillers and must be excluded from the computation of the total score (Items number: 1, 5, 12, 17, and 20). The remain 20 items are positive indicators of OC. The algebraic sum of the participant’s scores on the 20 items represents his or her total score on the ASOC.

The MMPI Psychasthenia Scale

The Minnesota Multiphase Personality Inventory (MMPI) Psychasthenia Scale [20] was used to test the concurrent validity of the ASOC.

The SCL-90-R Obsessive-Compulsive Scale

The Symptom Check List-90-revised (SCL-90-R) [21] OC subscale was administered to estimate the validity of the ASOC.

Obsessive-Compulsive Inventory

The OCI [22] was used also to estimate the concurrent validity of the ASOC.
Procedure

The four scales were administered anonymously in Arabic to participants in group sessions of small groups in their classrooms, during regular university hours. The time of administration ranged from 15 to 30 minutes. Participants provided verbal agreement to offer themselves as subjects after the objectives of the study were briefly outlined. Assurances were made that anonymity would be maintained. Graduates studying for Master’s Degree in Psychology carried out the administration of the scales.

Results

Reliability

The corrected item-total correlations of the 20 ASOC items ranged between 0.26 and 0.71. cronbach’s alphas were 0.882 (men), 0.910 (women), and 0.897 (total sample), indicating high internal consistency.

Concurrent Validity

The Pearson product-moment correlation coefficients were computed between the four afore-mentioned OC scales. Reference to Table 1 shows that all the correlations are statistically significant and positive. The correlations between the ASOC and the other scales ranged between .759 and .885, indicating concurrent validity of the ASOC.

The Factorial Validity of the ASOC

The correlation matrix of the last-mentioned four OC scales were subjected to a principal component analysis. The Kaiser criterion of Eigen value ≥ 1.0, and the scree test were followed to determine the number of factors to be retained [23]. Both criteria defined one high-loaded factor, accounted for a high percentage of the explained variance (82.1%), and labeled Obsession-compulsion. The loading of the ASOC unto this factor was .948, indicating its high factorial validity (Table 1) and (Figure 1).

Table 1: Pearson correlation coefficients, the extracted first factor, and the communalities ($h^2$).

<table>
<thead>
<tr>
<th>Scales</th>
<th>Correlations*</th>
<th>Factor 1</th>
<th>$h^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ASOC</td>
<td>MMPI</td>
<td>SCL</td>
</tr>
<tr>
<td>1. ASOC</td>
<td>-</td>
<td>0.948</td>
<td>0.898</td>
</tr>
<tr>
<td>2. MMPI</td>
<td>0.759</td>
<td>-</td>
<td>0.871</td>
</tr>
<tr>
<td>3. SCL-90-R</td>
<td>0.783</td>
<td>0.741</td>
<td>-</td>
</tr>
<tr>
<td>4. OCI</td>
<td>0.858</td>
<td>0.67</td>
<td>0.728</td>
</tr>
<tr>
<td>Eign value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% variance</td>
<td></td>
<td></td>
<td>3.285</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82.133</td>
<td></td>
</tr>
</tbody>
</table>

Preliminary Descriptive Statistics

Mean (M) and standard deviation (SD) were computed for men and women separately. Then, the t-test for the difference between the mean scores of men and women was computed. Fore men, M = 51.32, SD = 14.09, and women, M = 49.95, SD = 16.15 (t= .814, n.s.).

The English version of the ASOC

The Arabic form of the ASOC was translated into English by a competent psychologist. This translation was revised and edited by the present researcher. Then, a back translation [24, 25] of the scale items from English into Arabic was performed as a check on the adequacy of the Arabic into English translation, and this preliminary English translation was given to an Arab specialist competent in both languages to translate them back into Arabic. Then, the original Arabic form was compared with the back translation form for similarity. Few corrections were carried out. Two American Professors edited the English version (see the Appendix).

Discussion

Recent studies indicated that the prevalence rates of OCD are higher than that of earlier estimations, i.e., more than the double prevalence rates [1, 2]. Following a similar pattern, empirical studies found that OC symptoms are prevalent among the non-clinical population [4-6]. For these reasons and others, the researches on OCD and CD using clinical cases and participants from the general non-clinical population have burgeoned. However, the vast majority of these studies on this endeavor carried out mainly in the Western countries. Researches on the third world, including the Arab countries, are scarce and there is an ample need to carry out studies using samples from these under-studied and under-represented countries.

Measurement and assessment in this field are very important. The Arabic Scale of Obsession-Compulsion (ASOC) has three forms: Arabic, English, and Spanish. The Arabic form was published since 26 years and some improvements seem mandatory. The present study successfully fulfilled its objective to construct and validate the revised ASOC.
The revised ASOC has specific ameliorations. That is, it becomes shorter (20 items plus five fillers vis-a-vis 32 items in the original form). Some authors studied the length of personality inventory and concluded that the short form was more favorably evaluated [26]. Burisch [27] maintained that short scales were as valid on the average as long scales in three studies. He added [28] that shortening a scale beyond some point can actually weaken its validity. In a similar vein, the items (statements) of the revised ASOC become shorter, so it takes less time to administer compared to the original scale. A reduction of administration time could be considered as an advantage to enhancing the cost – effectiveness of the revised scale, particularly in research projects with loaded test batteries.

Another advantage of the revised ASOC is not using the negatively worded items. Many participants face difficulties in responding to these items, especially when using the double negatives. Moreover, the psychological meaning of the negatively worded items are, ipso facto, not the exact meaning of the opposite of the positively worded items, e.g., “I am depressed” is not the contrary of “I am happy”. Baumeister et al. [29] wrote a paper entitled: “Bad is stronger than good”. They stated that items describing negative emotions tend to evoke much stronger responses than items describing positive emotions. People tend to under-estimate the frequency of positive effect, but not negative effect. They concluded that bad emotions generally produce more cognitive processing and have other effects on behavior that are stronger than positive emotions. To solve the problem of the negatively worded items, and to control partially for the response set, all the items of the ASOC become positive indicators to OC, and five filler items referring to mental health were randomly added to the scale as distracters. Furthermore, the revised ASOC has good psychometric characteristics.

Regarding the reliability, the alphas were 0.88 and 0.91 for men and women, respectively, indicating high internal consistency. References of psychometric [30,31] suggested that reliabilities approaching 0.70 or higher are acceptable for research. The present results are higher than that limit. As for the concurrent and factorial validity, the ASOC has high and very high validities, respectively.

Conclusion

The revised ASOC has many advantages, i.e., brevity of scale, short and simple statements, no use of negatively worded items, use of fillers as distracters, avoidance of double negatives, and use of multiple response alternatives. Moreover, the revised ASOC has good internal consistency, high concurrent validity, and very high factorial validity, as well as the availability of two equivalent Arabic and English forms.

Limitations

Despite the good psychometric properties of the ASOC, the scale is in need of computing the test-retest reliability, carrying out exploratory and confirmatory factor analysis, assessing its associations with Big Five personality factors, and determination of normative values for a large sample and in different ages. Further, the English version of the ASOC merits investigation using an English-speaking sample. These points are subjects for further investigation.

Acknowledgement

I would like to thank Dr. Jimmy Beshai, Ph. D. and Mrs. Suzan Adel for their assistance in the back-translation of the scale. Many thanks to Professor David Lester, Richard Stockton University, and Professor Robert Niemeyer, University of Memphis, for their editing the English version of the scale. I thank also Master students for their help in the administration of the scale: Yosra Kamal, Yomna Kamal, Suzan Adel, Shereen Alkiofy, and Mohammad Anwar.

Appendix: The ASOC

Age: Sex: Male Female (put a circle)

Instructions

Please read each of the following statements carefully, and determine how much it describes your feelings and behavior. Indicate how it applies to you in general, by circling one of the following words in front of each statement: No, Some, Much and Always.

References


