

VALIDATION AND STANDARDIZATION OF THE QUESTIONNAIRE FOR EVALUATION OF PARAPHILIC DISORDERS

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Abstract: *Aim, methods and Outcomes.* Paraphilic disorders and human sexuality were simultaneously born. These human behaviours raised the interest of forensic physicians and psychologists, who tried to explain their etiology and identify a cure. Creation and standardization of an instrument for evaluation and testing of the sexual psychopathology of people in Romania is very useful in addition to the psychical examination performed by psychiatric forensic commissions. The groups of pre-participants (clinical/non-clinical) have been selected from prisons and outside the prison. The group of inmates consisted of N210 participants, with an average age of $m=37$ years and $SD=10.231$; females % and 50% males with $SD = 10.231$; education $m= 11.67$ years of study and $SD=1.634$; % females and 50% males with $SD=0.501$. The group outside the prison consisted of N210 participants, with an average age of $m= 35$ years and $SD = 9.430$; education $m= 12.01$ years of study and $SD=1.941$; % females and 50% males with $SD=0.501$.

Results. The scores of Cronbach's Alpha reliability coefficients for the 164 items were 0.891. The results of Cronbach's Alpha reliability coefficients of 24 scales of the Questionnaire were $m = 832.55$. In order to estimate the accuracy of the scales of Questionnaire we used the split-half method obtaining a score of 0.793 for the first half of scales and 0.809 for the second half of scales. In addition, we used the method of experts group obtaining a score of inter-rater agreement (Kappa coefficient) of Sig. 0.000. The eigenvalues of the questionnaire revolved around the 11 points of the set of components observed on the scree plot.

Clinical implications and Conclusion. The Questionnaire for Evaluation of Paraphilic Disorders (CETP) is clinically reliable in what concerns the differentiation in clinic - non-clinic of the persons assessed comparing with existing questionnaires. This questionnaire can clinically index the paraphilic disorder, paraphilic comorbidity as well as other related sexual pathology such as addictions or deviant sexual behaviour. The results revealed that the instrument has a good reliability and criterion, content and concept validity regarding the paraphilic disorders.

Key words: domestic violence, personality, psychiatric morbidity, forensic medicine.

INTRODUCTION

Paraphilic disorder refers to sexual behaviour triggered by one or several elements producing sexual arousal that weigh against the individual and other persons, causing psychical and physical distress [1]. Paraphilic disorders are indexed by DSM 5 [2] in a total number of eight disorders: voyeurism, exhibitionism, frotteurism, sexual masochism, sexual sadism, pedophilia, fetishism și transvestism [3]. Specific paraphilic disorders are: scatology by phone, necrophily, necrophilia, zoophilia, coprophilia, klysmaphilia, urolagnia, hebephilia and rape. Furthermore, other 150 non-specific paraphilic disorders exist, i.e. hebephilia,

etc. [4].

This research is essential for a better understanding from psychopathological perspective of the social and individual sexual expression. Although many questionnaires, scales, inventory lists, interviewing programs etc., had existed in the past, designed to measure a multitude of conditions and traits connected with sexuality, attitudes and behaviours, variations and deviations, only few were sufficiently utilized for confirming the reliability and validity of evaluation and testing of males and females' sexual deviance [5].

The paraphilic disorder evaluation questionnaire (CETP) has 20 scales for Frotteurism

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(Fr), Voyeurism (V), Exhibitionism (Ex), Public masturbation (Pm), Sexual Sadism (S), Sexual (Ma), Fetishism (Fe), Transvestic Fetishism (Tf), Pedophilia (P), Hebophilia (H), Rape (R), Uropilia (U), Clinic Comorbidity (Cc), Klysmaphilia (K), Coprophilia (C), Necrophilia (N), Scatology by phone (Ts), Zoophilia (Z), Social Desirability (Y), Denial (N) out of which (Y, N) two scales are not validated, one regarding comorbidity (Cc) and 17 scales regarding specific and non-specific paraphilic disorders.

The formula for inventory items (CETP) was written according to the specialty literature regarding specific and non-specific disorders [6], in order to differentiate one sexual deviance from another paraphilic disorders as well as other sexual psychopathologic morbidities and/or comorbidities [7].

MATERIAL AND METHODS

Participants

Preliminary results for the clinic sample

Participants from penitentiary were volunteers with criminal records for sexual crimes and other related crimes and/or with deviant sexual history. From N300 only N200 were selected. The selection criteria were gender (50% female F=100; 50% male F=100), age (average age = m 37.08 and SD=10.231), education (m= 11.67 grades and SD=1.634). Table 1 shows the descriptive results for the penitentiary/clinic sample.

Preliminary results for the non-clinic sample

The participants attending this study were

volunteers outside the penitentiary, with a clear police record and without deviant sexual history. From N300 only N200 were selected. The selection criteria were gender (50% females F=100; 50% males F=100), age (average age = m 35.00 and SD=9.430), educational level (m= 12.01 grades and SD=1.941). Table 2 shows the descriptive results regarding the non-penitentiary/non-clinic sample.

Procedure

Selection criteria for penitentiary/clinic group

The participants involved in this research had to meet the following conditions: age between 18-90, have a police record of sexual crime or any other crime associated with the sexual crime, equal number of males and females in the Group (P), have graduated at least 8 grades and up to university studies, originate from several localities from Romania.

Selection criteria for non-penitentiary/non-clinic group

The participants involved in this research had to meet the following conditions: age between 18-90, have not committed any sexual crime or any other crime associated with the sexual crime, equal number of males and females in the Group (NP), have graduated at least 8 grades and up to university studies, originate from several localities from Romania.

Endeavours to form the penitentiary/clinic group

Notifications requesting the approval of the research were sent to ANP (National Prison Administration). National Prison Administration

Table 1. Descriptive results for the clinic sample

	Descriptive Statistics Clinic		
	N	Mean	Std. Deviation
Age	210	37.08	10.231
Studies	210	11.67	1.634
Sex	210	1.50	.501
Valid N (listwise)	210		

Table 2. Descriptive results regarding Non-clinic sample

	Descriptive Statistics Non-clinic		
	N	Mean	Std. Deviation
Age	210	35.00	9.430
Studies	210	12.01	1.941
Sex	210	1.50	.500
Valid N (listwise)	210		

Table 3. Cronbach's Alpha coefficients for the whole questionnaire

Cronbach's Alpha	Reliability Statistics	
		N of Items
	.891	164

suggested several prisons in the country. Initially, the group consisted of N300 out of which N200 remained. The participants were informed about this study and according to their consent, each of them filled in the evaluation and underwent testing. Participants were assisted in filling in the questionnaires and provided with necessary support and information.

Endeavours to form the non-penitentiary/non-clinic group

Notifications requesting the approval of the research were sent to several universities in the country. Initially, the group consisted of N300 out of which N200 remained. The participants were informed about this study and depending on their consent, each of them filled in the measurement tool. The participants were assisted in filling in the questionnaires and provided with necessary support and information.

Processing the data obtained from the 2 groups

The participants filled in two sets of questionnaires (N 300 X 2). The gross results were manually introduced in databases and after their interpretation and manual delimitation, from the test samples, the gross scales of the evaluation were identified and used to create a databases for the SPSS.

From the total number of 6 questionnaires (N 300 X 2) made available to the participants, only 400 were validated after testing (N400 X 2). After Data collection, 400 questionnaires were manually introduced in the databases of the SPSS 25.0 program. Processing of statistical data was made using IBM SPSS Statistics Subscription, Forecasting & Decision Trees.

RESULTS

Cronbach's Alpha coefficients for the 164 items for the whole Questionnaire

The results in the Table 3 reveal a good internal reliability of the whole questionnaire containing 164 items. The score of 0.891 of Cronbach's Alpha coefficients represents the measure in which the items compounding the testing instrument (ETP) are internally preserved and coherent for the sample of examinees.

Cronbach's Alpha coefficients for the 20 scales of the Questionnaire

The results in Table 4 reveal a good internal reliability of the 20 scales of the CETP Questionnaire. The score of 0.975 of Cronbach's Alpha coefficients

Table 4. Cronbach's Alpha coefficients for the 20 scales of the Questionnaire

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Item	N of Scales
.975	.975	20

Table 5. Inter-scale consistency of the 20 scales in Questionnaire

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Fr	34.81	3.525	.770	.891
V	34.91	3.155	.873	.850
Ex	34.77	3.482	.794	.871
Pm	34.79	3.636	.735	.803
S	34.87	3.351	.964	.975
Ma	34.77	3.416	.849	.859
Fe	34.86	3.144	.676	.834
Tf	34.77	3.433	.759	.863
P	35.27	3.321	.843	.816
H	34.96	3.416	.746	.805
R	35.33	3.724	.766	.773
U	34.77	3.382	.756	.855
Cc	35.15	3.089	.787	.872
K	34.77	3.442	.842	.665
C	34.77	3.342	.794	.748
N	34.76	3.523	.760	.875
Ts	34.81	3.342	.800	.758
Z	34.77	3.562	.744	.784
Y	35.38	3.141	.860	.880
Neg	34.96	3.235	.870	.874

Table 6. Split-half method for assessing the consistency of the Questionnaire results

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.793
		N of Items	10 ^a
	Part 2	Value	.809
		N of Items	10 ^b
Total N of Items			20
Correlation Between Forms			.726
Spearman-Brown Coefficient	Equal Length		.791
	Unequal Length		.791
Guttman Split-Half Coefficient			.791

a. The items are: Fr. V. Ex. Pm. S. Ma. Fe. Tf. P. H. b. The items are: R. U. Cc. K. C. N. Ts. Z. Y. Neg.

Table 7. Symmetrical measurement of the assessment of evaluators involved in research

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.177	.060	7.158	.000
N of Valid Cases		1471			

a. Not assuming the null hypothesis. b. Using the asymptotic standard error assuming the null hypothesis.

represents the measure in which the items compounding the scale of (CETP) Questionnaire are internally preserved and coherent for the sample of examinees.

Cronbach's Alpha coefficients for the 20 scales of the Questionnaire

From the total number of items from the questionnaire scales we registered a low score of 0.665 at the K scale, but after the correction we obtained a score of 0.842 at adjusted Cronbach's Alpha, meaning that no other items should be removed from the questionnaire. In conclusion, we have a good correlation between the items of the scale items and items of the whole Questionnaire (Table 5).

Split-half method for assessing the reliability of the scales of Questionnaire

Results obtained using the split-half statistical method for the items of the scale (Fr, V, Ex, Pm, S,

Ma, Fe, Tf, P, H.) as well as for the other part of the items of the scales (R, U, Cc, K, C, N, Ts, Z, Y, Neg.) of the Questionnaire are 0.793 respectively 0.809 at Cronbach's Alpha. We have also observed that on alpha coefficients and on split-half method, the result reveal a unique measurement. Therefore, we have a good correlation between the scores obtained on the first half of items included in the questionnaire those obtained based on the second half of items of the questionnaire. In order to maintain the initial length of the Questionnaire, this correlation was solved using statistic adjustment (Table 6).

Inter-rater agreement (Kappa coefficient)

When applying this method to the experts involved in qualitative rating of the Questionnaire items, the score resulted was 0.177 and one Sig. 0.000. This value shows a good level of agreement between the experts involved in the recorded assessments. Moreover, these data reveal that the experts' assessments of the information obtained based on the open questions regarding the items of questionnaire, the answers and its interpretation are qualitative quantified. Table 7 shows the results obtained by using statistical method and Kappa calculus method.

The eigenvalues of the Questionnaire are seen bellow in a descending curve, ranking the eigenvalues from the highest to the lowest. According to the screen test, "the elbow" of the graph where the eigenvalues seem to level out, identify the factors or components in the left side of this point, which preserve as well the results obtained (Fig. 1).

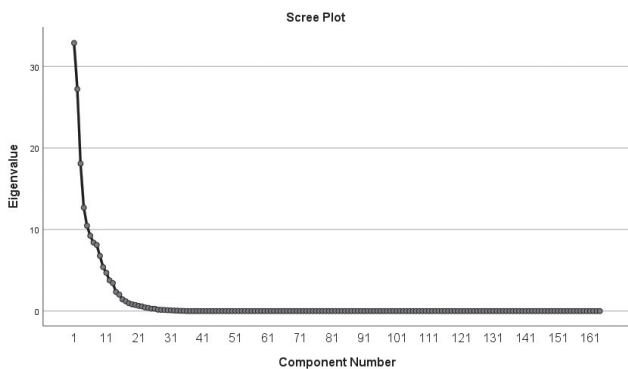


Figure 1. Linear diagram of the eigenvalues of the factors in the Questionnaire.

Correlations between the Questionnaire of Evaluation of Paraphilic Disorders (CETS) and other similar scales

In the Table 8 we can observe a very good result regarding the fidelity of 0.88 for the whole Questionnaire and on the test-retest the correlations were 0.91. Table 8 reveals the results obtained when comparing our Questionnaire with other similar evaluation instruments and tests.

Statistical significance when measuring sampling adequacy

We have also used the statistical method which was a Kaiser-Meyer-Olkin (KMO) measurement of sampling adequacy showing the variance proportion of the 2 groups involved in research and which might be caused by basic factors. The high values (KMO = 0.939, Sig. = 0.000, Chi-Square = 12781.147) usually show that analysis of factors might be useful for our

suggested data. Therefore, since we have a very good value of 0.939, the results of analysis of factors have statistical significance for sampling adequacy from the perspective of preparing and standardization of Questionnaire. Table 9 shows the accuracy of data expressed and expected by us.

Results obtained at clinic/non-clinic differentiation for the Questionnaire

The results mentioned bellow prove the reliability of differentiation between the group of inmates charged with sexual offences and the group outside prison without sexual offences or paraphilic disorders. We obtained the score F=790.001 and Sig.=0.000. Thus, the data from the Table 10 prove that in one assessment, the test can make the differentiation from the clinic/non-clinic perspective of the person undergoing testing.

Table 8. Comparisons of Fidelity Coefficients for the CETS and Other Similar Scales

Scale/Questionnaire	Cronbach's Alpha	Test-retest Correlation
Questionnaire for Evaluation of Paraphilic Disorders (CETS)	.89	.91
The Child Sexual Abuse Scale (CSAS)	.81	.84
Sexual Socialization Instrument (SSI)	.78	.85
Rape Supportive Attitude Scale (RSAS)	.91	.91
The Sexual Risk Behaviour Beliefs and Self-Efficacy	.96	.97
Cross-Gender Fetishism Scale	.95	.95
Multidimensional Measure of Comfort with Sexuality	.93	.93
Hurlbert Index of Sexual Assertiveness (HISA)	.85	.86
Sexual Coercion Scale (SCS)	.67	.70
Compulsive Sexual Behaviour Inventory (CSBI)	.86	.93
Double Standard Scale (DSS)	.72	.80

Table 9. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.939
Bartlett's Test of Sphericity	Approx. Chi-Square	12781.147
	df	36
	Sig.....	.000

Table 9. ANOVA

Clinical/Nonclinical	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	798.989	2	199.747	790.001	.000
Within Groups	201.011	795	.253		
Total	1000.000	799			

DISCUSSION

In this Article, the results of the research reveal the correlation between the theoretical approaches regarding paraphilic psycho-pathological behaviour and reliability of clinical/non-clinical differentiation of the CETP Questionnaire.

The preliminary data show the descriptive and statistical homogeneity on age, gender and education between the two groups. There is no doubt that the females sample regarding the homogeneity of sexual offences did not sufficiently meet the eligibility criteria comparing with the males from the same clinical sample. We took into consideration the offences associated with a deviant sexual behaviour for the female group in order to meet the eligibility criteria, without influencing the variables proposed for these researches.

The eligibility criteria were significantly underlined with ANOVA statistical method for clinical/non-clinical samples. Moreover, we obtained very good results in what concerns the differentiation of the groups involved in research. We considered all data from the specialty literature in order to foreclose any aberration or risk factors which might occur when using the variables proposed in this research [9].

The results obtained on Cronbach's Alpha coefficients of the 164 items of the whole Questionnaire are significant. The importance of these data outlines the reliability of the items proposed in the Questionnaire and provides the guarantee of consistency which this instrument of evaluation and testing of paraphilic disorders has to generate measurements in psycho-pathological domain. In addition, we asked ourselves if this Questionnaire has a constant of measurement or consistency for all variables of the test, and we observed that this Questionnaire has a good reliability of the answers of the participants in evaluation [10]. In order to assess the reliability of items and scales of the Questionnaire we used the statistical constancy method for Cronbach's Alpha coefficients and for the 20 scales of the Questionnaire. We found out that the items have a good constancy on scales. The statistical methods used were processed using programs especially designed for this domain, thus preventing any calculus error that might have occurred in our research [11].

In what concern the results obtained using the split-half method for assessing the reliability of the scales of Questionnaire, we observed a good correlation between the scores registered based on the first half

of the items and those based on the second half of the items included in the Questionnaire. In order to maintain the initial length of the Questionnaire, this correlation was solved using statistic adjustment. The specialty literature [12] reveals this validity with the purpose of providing supplementary data which might verify the reliability of constancy in a Questionnaire.

In addition, we used the Kappa method for the experts involved in qualitative rating of the items in order to identify the qualitative agreements (correlations) expressed by the experts in what concern the estimations recorded. Moreover, these data reveal that the assessment made by experts of the information resulted from the open questions related to the items of Questionnaire, the answers and the interpretation of the Questionnaire are qualitative quantified [13].

Other correlations between the Questionnaire for Evaluation of Paraphilic Disorders (CETS) and other similar scales had been suggested in order to compare the results obtained to test-retest correlations. After making a comparison with other Questionnaires, we found out that there is a good correlation which is similar to following tests: The Child Sexual Abuse Scale (CSAS), The Sexual Risk Behaviour Beliefs and Self-Efficacy, Cross-Gender Fetishism Scale and Compulsive Sexual Behaviour Inventory-CSBI [14].

There is a high statistical significance for adequacy of sampling, which suggests that the samples involved in our research for validating the Questionnaire have a good level of adequacy. As a result, the results of analysis of the factors, which reach a very good value of 0,939 have a statistical significance for the adequacy of samples in what concern the preparation and standardization of Questionnaire [15].

The results reported to clinic/non-clinic differentiation are significant which led us to the conclusion that the Questionnaire can differentiate a person with sexual paraphilic disorder from other person without paraphilic disorder [16].

In conclusion, the Questionnaire for Evaluation of Paraphilic Disorders meets all criteria for assessment and testing of sexual psychopathology. It has a good inter-item reliability, both of the whole Questionnaire and of the scales in the Questionnaire. In addition, this Questionnaire reveals a good inter-rater correlation and is in agreement with other similar scales related to the evaluation of paraphilic disorders / deviant sexual behaviours.

Furthermore, the Questionnaire has significant results for differentiation of clinical *versus* non-clinical groups and reported high scores to sampling adequacy

in preparation, validation and standardization of the Questionnaire.

This Questionnaire can be used in written form or in electronic form. It comprises 164 questions, and has dichotomic answers. Depending on the prevalent answers, a general profile and/or a scale based profile can be made. The evaluation test is provided with test attending guidelines, a user's guide for specialists and the licence to use. It is made in Romanian language and can be used with the previous approval of the authors.

Conflict of interest

The authors declare that they have no conflict of interest.

Financial disclosure

No financial support was received while the work was being organized. This study was conducted only in Moldova, Northeast of Romania. To gain more data in this regard it is necessary that the questionnaire to be distributed in other areas of the country.

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