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Bahrain Schizophrenia Screening Scale (BSSS): A New Self-Rating Questionnaire

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ABSTRACT

The Bahrain Schizophrenia Screening Scale (BSSS) was designed as a self-rating scale to screen possible schizophrenic patients in the community. Testing the scale on a sample of normal population, schizophrenic patients, and a control group of affective disorders patients showed that the scale has a 99% sensitivity and 92.5% specificity.

INTRODUCTION

In the course of a major project to study the genetics of schizophrenia in Bahrain, a serious problem emerged when it was found that the research team would have to interview a population of over 1200 to assess the prevalence of schizophrenic illness in families of selected sixty schizophrenic patients. We, therefore, required a method of screening these relatives effectively and economically. Ideally the screening instrument should be either self-rating or easily administered by health auxiliaries who have limited psychiatric training, similar to the work done for first stage psychiatric screening in the World Health Organization (WHO) collaborative study (Harding *et al.* 1983 a and b)

Manchanda and Hirsch (1986) reviewed five leading psychiatric journals over a period of three years to find out which method of assessment is more likely to be used for schizophrenia research. Only four scales were found to be applicable to both acute and chronic conditions. The four scales were the Brief Psychiatric Rating Scale (BPRS), the Comprehensive Psychopathological Rating Scale (CPRS), the Inpatient Multidimential Psychiatric Scale (IMPS), and the Present State Examination (PSE).

However, none of the above scales seemed suitable for the purpose of our study. The BPRS (Overall and Gorham, 1962) is an unstructured instrument for rating 11 items based mainly on verbal reports and 5 items based on an observed behaviour. Although its reliability is acceptable, it requires psychiatric interview that lasts about 18-20 minutes.

The CPRS (Asberg *et al.* 1978), the IMPS (Lorr and Klett, 1967) and the PSE (Wing *et al.* 1974) are either too long, require special training or have been used only for inpatient populations. The same is true of the Schedule for Affective Disorder and Schizophrenia (SADS) (Endicott, 1978), which, despite the advantage of having a special lifetime version (SADS-L) suitable for subjects with no current episode of illness, is a very comprehensive structured interview that takes 1.5 - 2 hours to complete.

The aim of this paper is to describe the construction of a new simple scale that can be self rating and easily administered by health auxiliaries to an illiterate and less educated population, and also has an acceptable degree of sensitivity and specificity for screening possible schizophrenic subjects from those who are either normal or suffering from some other psychiatric conditions.

METHODOLOGY

The Bahrain Schizophrenia Screening Scale (BSSS) was designed as a direct self rating adaptation of the Schizophrenia Change Scale (Montgomery, 1978) with some modification. Item 2 of Montgomery's scale, "lack of appropriate

emotions", was dropped as its definition fitted into an objective feature that is difficult to evaluate by a self - rating tool. Items 5 and 6, "depersonalization and perplexity" were grouped together into one item. Three extra items "previous psychiatric treatment, persecution, and grandiose and manic features", were added to the Montgomery scale as it was felt necessary to include them to screen possible psychiatric patients. The end result was a 9 - item new scale. Each item was planned to be rated on a four - point severity scale, similar to the Montgomery scale, ranging between 0 for No or normal experience, up to 3 for severe or definite abnormal experience (Appendix II).

The 60 questions of the General Health Questionnaire, 'G.HQ.', (Goldberg and Blackwell, 1970) and the 140 PSE (Wing *et al.* 1974) questions went through a process of condensation to reach a final of 38 questions that would answer our 9 - item new scale. The BSSS 38 questions were phrased in a simple language with a straight "YES' or "NO" answer (Appendix Ia). The questions of the Arabic version of the BSSS were extracted from the approved translations of the G.H.Q. (Al-Haddad and Abdel-Mawgoud, 1986) (Appendix Ib).

The BSSS was then tested on a sample of 60 normal population, 20 patients who received the DSM -III-R diagnosis of schizophrenic illness, and a control group of 20 patients who were diagnosed as having affective psychosis according to the DSM-III-R criteria (American) Psychiatric Association, 1987). The normal population was selected to represent both sexes, all age groups, different levels of education, as well as different social classes. The scale was administered as self rating for educated subjects and with the help of a social worker for the illiterate population. Each individual response was scored by the first author using the BSSS scoring sheet (Appendix II). The data was then analysed to determine the level of sensitivity and specificity of the new scale.

RESULTS AND ANALYSIS

The three groups of subjects (60 normal, 20 schizophrenics, and 20 control group of affective disorders) were found to be matched for both age and sex. The mean age for the schizophrenic group was 28, compared to 30 for the normal and 35.1 for the affective disorders groups. The U-statistics and univariate F-ratio showed that both age and sex were not significant at the 0.05 level.

Descriptive and Nonparametric Statistics:

Table 1 shows the mean score as well as the standard deviation for the 9 items (A through to I) for normal, schizophrenic, affective and non-normal (schizophrenic + affective) groups. Several nonparametric tests were conducted to determine whether each two of the four groups are different from one another in relation to each of the 9 items. Using Mann-Whitney and Kolmogorov-Smirnov tests (Daniel, 1978 and Conover, 1980), all items except for item I (grandiose and manic features) differ significantly between normal and schizophrenic groups. Only five items (psychiatric history, depressed mood, inability to feel, depersonalization and perplexity, and persecutary feelings) were found to discriminate between normal and affective disorders groups. For normal vs non-normal groups both the median test and Kruskal-Wallis tests showed all items to be significantly different except for item I.

Descriminant Analysis :

Having found a clear difference among the four groups, the next stage was to perform a discriminant analysis. Fisher's linear discriminant functions of a subset of the 9 items that maximize group differences were calculated (Bennett and Bowers, 1976; Morrison, 1976; Klecka, 1980; Stevens, 1986). The SPSS package was used to estimate the classification function using the 9 items.

TABLE I

Means and Standard Deviation of the Scores of Various Items

Symptoms	Normal		Schizophrenia		Affective		Non-Normal	
	mean	S.D.	mean	S.D.	mean	S.D.	mean	S.D.
A- Psychiatric History	0.05	0.29	3.00	0	2.60	0.50	2.80	0.41
B- Depressed mood	0.25	0.73	1.85	1.31	2.65	0.81	2.25	1.15
C- Inability to feel	0.15	0.48	1.80	1.20	2.10	1.25	1.95	1.22
D- Depersonalization	0.22	0.61	1.40	1.27	1.15	1.14	1.28	1.20
and Perplexity.								
E- Feeling controlled	0.08	0.33	1.85	1.18	0.85	1.31	1.35	1.33
F- Thought disturbance	0.33	0.84	1.95	1.10	0.80	1.24	1.37	1.29
G- Auditory Hallucina-								
tions	0.05	0.29	1.75	1.29	0.35	0.93	1.05	1.32
H- Persecution								
I- Grandiose and manic	0.05	0.22	2.40	0.68	0.60	0.82	1.50	1.18
features	0.30	0.65	1.00	1.17	0.65	0.67	0.83	0.96
Number of Subjects	60		20		20		40	

TABLE II

Coefficients of Discriminant Functions for Normal and Non-Normal

Symptoms	Normal	Non-Normal	Normal Vs Non-Normal
A- Psychiatric History	0.497	26.072	- 25.575
B- Depressed mood	0.271	3.971	- 3.700
C- Inability to feel	0.110	2.184	- 2.074
D- Depersonalization and Perplexity.	0.133	- 1.406	1.539
E- Feeling controlled	0.057	1.699	- 1.462
Constant	- 0.764	- 44.041	43.277

TABLE III

Contingency Table for Classification of Cases into Normal and Non-Normal Groups

Actual Group	Predicted Group	
	Normal	Non - Normal
Normal	59	1
Non-Normal	0	40

TABLE IV

Coefficients of Descriminant Functions for Schizophrenic and Affective Groups

Symptoms	Schizophrenic	Affective	Schizophrenic Vs Affective
A- Psychiatric History	27.810	22.520	5.290
C- Inability to feel	- 1.406	- 0.208	- 1.198
F- Thought disturbance	3.040	1.951	1.089
H- Persecution	5.010	1.583	3.427
Constant	- 50.119	- 31.007	- 19.112

TABLE V

Contingency Table for Schizophrenic Vs Affective Groups

Actual Group	Predicted Group	
	Schizophrenic	Affective
Schizophrenic	20	0
Affective	3	17

A convenient strategy for achieving the purpose of the new scale is to first classify cases into normal and non-normal, and secondly to classify the non-normal group into schizophrenia and affective disorders. Fitting the 2 descriminant functions for each of the two groups in the first stage showed that only 5 items were significantly descriminating between normal and non-normal (table 2). In the second stage, 4 items were found significantly descriminating between schizophrenia and affective disorders (table 4). The descriminant function shown in column 4 in table 2 or table 4 may be used for classifying cases into one of the two groups depending on whether the score is negative (for normal in table 2 and affective in table 4) or positive (for non-normal in table 2 and schizophrenics in table 4).

As a result of the large case / item ratio (100 / 5 = 20), the coefficients for the descriminant functions estimated and presented in table 2 are stable and can be used for prediction. Applying these descriminant functions in column 4 of table 2 to all 100 cases, we were able to correctly predict all 40 non-normal cases and 59 of the 60 normal cases (table 3). Similarly, applying the discriminant functions in column 4 of table 4 to all 40 non-normal cases, we were able to correctly predict all 20 schizophrenics and 17 of the 20 affective disorders cases (table 5).

DISCUSSION

Rating scales have much to offer in psychiatry. They are generally easy for patients and observers to understand and use; they have a very wide range for applications; and they are quick and easy to score. The validity of self-recording is an area of obvious concern. A number of studies have compared self-recording with other measures of the same behaviour and generally the results support the validity of self-recording (Peck and Dean, 1988).

Our new scale is a modified adaptation of Montgomery's Schizophrenia Change Scale, which is an objective scale for rating possible schizophrenic patients and has been used successfully in several studies (Montgomery *et al.* 1978). The idea of constructing a self-rating scale that matches an objective scale has been validated by Carroll and his colleagues in their Carroll Rating Scale, which is a self-rating adaptation to the well-known Hamilton Rating Scale for Depression (Carroll *et al.* 1981; Smouse *et al.* 1981; Feinberg *et al.* 1981). In fact, the questions used in our new scale are drawn from two of the most commonly used psychiatric questionnaires, the General Health Questionnaire (GHQ) and the Present State Examination (PSE) (Peck and Dean, 1988).

Our results that all BSSS 9 items, except for grandiose and manic features, are highly specific in screening possible schizophrenic patients. Of our sample of 100 cases, only one normal case was misclassified into the non-normal group. This 99% sensitivity of the BSSS is of great value in screening possible psychiatric patients, specially since the 1% error is a false positive rather than false negative case.

Among the non-normal group, all 20 schizophrenic patients were correctly classified, with 3 of the 20 affective disorder control group misclassified as being schizophrenic. This gives the BSSS a 92.5 % specificity, with the error being false positive rather than false negative.

In spite of the failure of item I (grandiose and manic features) to show any discriminating ability, it was decided by the authors to keep it, since this may only apply to our sample and may prove different in other validation studies.

These findings suggest that our new 38 questions, easily administered and scored, self-rating questionnaire has a 99% sensitivity and 92.5 % specificity. This can be of great economical value if it is used as a screening tool, specially if these figures are replicated by other cen-

tres and the scale is validated against other tools on larger samples of normal and psychiatric patients.

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REFERENCES

Abdel-Mawgoub, M. (1986) *The English / Arabic Version of Present State Examination: An Arabic translation of the Full Version of the 9th Edition of PSE.* Bahrain: Psychiatric Hospital, Ministry of Health.

Al-Haddad, M.K. and Abdel-Mawgoud, M. (1986) *An Arabic Translation of the Full Version of General Health Questionnaire (GHQ).* Bahrain: Psychiatric Hospital, Ministry of Health.

American Psychiatric Association (1987) *Diagnostic and Statistical Manual of Mental Disorders. 3th edition, Revised (DSM-III-R)* Washington, DC: American Psychiatric Association.

Asberg, M., Perris, C., Schalling, D. and Sedvall, G. (1987) The CPRS: Development and Applications of a Psychiatric Rating Scale. *Acta Psychiat. Scandinavica* (Suppl.) 271.

Bennett, S. and Bowers, D. (1976) *An Introduction to Mulivariate Techniques for Social and Behavioural Sciences.* New York: John Wiley.

Carroll, B.J., Feinberg, M. Smouse, P.E., Rawson, S.G. and Grenden, J.F. (1981) The Carroll Rating Scale for Depression. I. Development, Reliability and Validation. *Brit. J. Psychiat.,* **138:** 194-200.

Conover, W.J. (1980) *Practical Nonparametric statistics.* Second Edition. New York: John Wiley.

Daniel,W.W. (1978) *Applied Nonparametric Statistics.* Boston, M.A.: Houghton Miffin co.

Endicott,J. (1978) A diagnostic interview: The Schedule for Affective Disorder and Schizophrenia. *Arch. Gen. Psychiat.* **35:** 837.

Feinberg, M., Carroll, B.J., Smouse, P.E. and Rawson, S.G. (1981) The Carroll Rating Scale for Depression III: Comparison with other rating instruments. *Brit. J. Psychiat.* **138:** 205-209.

Goldberg, D.P. and Blackwell, B. (1970) Psychiatric Illness in General Practice: A Detailed Study Using New Methods of Case Identification. *Brit. Med. J.* **II:** 439-443.

Harding, T.W., Climent, C.E. Diop, M.P., Giel, R., Ibrahim, H.H.A., Srinivasa Murphy, R., Suleiman, M.A. and Wig, N.N. (1983a) The WHO Collaborative Study on Strategies for Extending Mental Health Care. II: The Development of New Research Methods. *Amer. J. Psychiat.* **140:** 1474-1480.

Harding, T.W., Bunsnello, E.D, Climent, C.E., Diop, M.P., EL-Hakim, A., Giel, R., Ibrahim, H.H.A., Ladrigo Ignacio, L. and Wig, N.N. (1983b) The WHO collaborative study on strategies for extending mental health care, III, evaluative design and illustrative results. *Am. J. Psychiat.* **140:** 1481-1485.

Klecka, W.R. (1980) *Discriminant Analysis.* Beverly Hills, CA: Sage publications.

Lorr, M. and Klett, C.J. (1967) *Inpatient Multidimensional Psychiatric Scale: IMPS (revised manual).* Palo Alto, California: Consulting Psychologist Press.

Manchanda, R. and Hirsch, S.R. (1986) Psychopharmacological Research in Schizophrenia 1. Review of Rating Scales. *The Psychopharmacology and Treatment of Schizophrenia.* (eds. P.B. Bradley and S.R. Hirsch). New York Oxford: Oxford University Press.

Montgomery, S.A. *et al.* (1978) *The Schizophrenia Change Scale.*

Morrison, D.F. (1976) *Multivariate Statistical Methods.* Second edition. New York: Mc Graw-Hill Book Co.

Overall,J.E. and Gorham, D.R. (1962) The Brief Psychiatric Rating Scale. *Psychol. Report.* **10:** 799-812.

Peck, D.F. and Dean, C. (1988) *Companion to Psychiatric Studies.* Chapter 13, fourth edition.

Snouse, S.E., Feinberg, M., Carroll, B.J., Park, M.H. and Rawson, S.G. (1981) The Carroll rating scale for depression. II. factor analysis of the feature profile. *Brit. J. Psychiat.*, **138:** 201-204.

Stevens, J. (1986) *Applied Multivariate Statistics for the Social Sciences*. Hillsdale, NJ; Lawrence Erlbaum Associates Publishers.

Wing, J.K., Cooper, J.E. and Sartorius, N. (1974). *The measurement and classification of Psychiatric Symptoms*. Cambridge: Cambridge University Press.

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ABSTRAIT

L'échelle Criblant de la Schizophrénie du Bahrain: Un Questionnaire Nouvel de Se Semoncer

Le BSSS été désiré comme une échelle de se semoncer pour cribler les patients schizophrènes possibles dans la communité. En applicant l'échelle sur un échantillion de la population normale, patients schizophrènes, et en plus un groupe des patients des désordres affectives, on a montré que l'échelle a 99% de sensitivité et 92,5% de spécificité.

الموجز

مقياس بحرينى لمسح الفصام
(استبار ذاتى جديد ومتدرج)

يتعرض هذا البحث للمقياس البحرينى الذى تم تصميمه كمقياس ذاتى متدرج لمسح حالات الفصام المحتملة فى المجتمع الأوسع. ولأختبار ذلك المقياس، تم تطبيقه على عينة من الأشخاص العاديين، ومجموعة من مرضى الفصام، ومجموعة ثالثة كعينة ضابطة من الذين يعانون من اضطرابات وجدانية. وأظهرت النتائج أن درجة حساسية المقياس ٩٩ ٪ وأن درجة خصوصيته ٩٢,٥٪.

Appendix I A

Bahrain Schizophrenia Screening Scale (BSSS)

Name / Initials	Study No	Sex	Age	Date
		M / F		Day Month Year

Please answer ALL the questions by Yes or No.

1- Have you been feeling perfectly well and in a good health?	Yes	No
2- Have you been attending for treatment any person who is not medically qualified (e.g. lay therapist, faith healer, acupuncture, .. etc.) ?	Yes	No
3- Have you ever seen a doctor for your nerves ?	Yes	No
4- Have you ever received in - patient psychiatric treatment ?	Yes	No
5- Do you ever get the feeling of being depressed and unhappy ?	Yes	No
6- If you become depressed, is it always due to problems or a loss ?	Yes	No
7- Have you ever had long spells of depression for apparent reason?	Yes	No
8- Have you ever had long spells of severe depression ?	Yes	No
9- Have you been able to enjoy your usual activities ?	Yes	No
10- Have you lost interest in your activities, your appearance or work ?	Yes	No
11- Have you been able to feel the warmth and affection of those close to you ?	Yes	No
12 Have you had the experience of being emotionally paralysed and unable to feel happiness, anger or grief?		
13- Do you feel that your appearance is normal ?	Yes	No
14- Do you ever get the feeling that something odd is going on which you cannot explain?	Yes	No
15- Have you yourself felt unreal or not in the rea world?		
16- have you ever been convinced that your appearance has changed or that any part of you is not yours ?	Yes	No
17- Do you feel in full control of your thoughts or actions ?	Yes	No
18- Do you get the feeling that you are influenced by others or circumstances in making your decisions ?	Yes	No
19- Do you sometimes feel that someone of an external force is trying to control you?	Yes	No
20- Do you feel continuously controlled in your actions, feelings or impulses ?	Yes	No

21- Have you ever had the feeling that there is any interference with your thoughts ? Yes No

22- Do you ever experience thoughts stopping quite unexpectedly so that there is non left in your mind, even if they were flowing freely ? Yes No

23- Do you ever get the experience of thoughts put into head which you know are not your own ? Yes No

24- Have you ever had the experience of your thoughts being taking out of your head, as if someone or an external force were removing them ? Yes No

25- Have ever had the experience that someone can read your thoughts ? Yes No

26- Have you ever experienced your thoughts being broadcasted on radio of TV ? Yes No

Please answer ALL the questions by Yes or No

27- Have you ever heard noises in your head or your name being called when there is no one about and nothing to explain it ? Yes No

28 Have you ever had the experience of hearing more than one voice talking about you when no one was around ? Yes No

29- Are these voices threatening and unpleasant ? Yes No

30- Do you hear these voices through your ears ? Yes No

31- Have you ever had the feeling that people seem to drop hints about you, follow you, check up or follow your movements ? Yes No

32- Have you ever had the feeling that things were specially arranged for you, as if there is an experiment to test you or there is reference to you in newspapers or T.V. Yes No

33- Have you ever got the feeling that someone or an organization (Mafia, CID, etc.) are deliberately trying to harm you or kill you ? Yes No

34- Have you ever had the feeling that something like electricity, x Rays or radio waves are affecting your thoughts or actions ? Yes No

35- Have you had the feeling of being very happy and on top of the world for no reason ? Yes No

36- Have you ever felt particularly full of energy and exciting ideas and things seem to go too slow for you ? Yes No

37- Do you get the feeling that you have special powers or abilities which no one else has ? Yes No

38- Have you ever felt that you are a very prominent person (King, Prince, prophet,.. etc.) ? Yes No

(Do not mark in this area/ For official use only)

A----------	B----------	C ----------
D ----------	E ----------	F ----------
G ----------	H ----------	I ----------

Total ------

Appendix II

Bahrain Schizophrenia Screening Scale (BSSS)
Scoring sheet

A) Psychiatric treatment (Q: 1-4)
0: No Previous Psychiatric treatment.
1: Psychiatric treatment from non - medical personal.
2: Out - patient psychiatric treatment.
3: In - patient psychiatric treatment. ☐☐

B) Depressed mood (Q: 5-8)
O: No or occasional sadness may occur in circumstances.
1: Feeling depressed for no reason.
2: Long spells of depression for no reason.
3: Long spells of severe depression for no reason. ☐☐

C) Inability to feel (Q: 9-12)
0: Normal interest in the surroundings and others
1: Reduced ability to enjoy usual interests.
2: Loss of interest in the surroundings.
Loss of feelings for others.
3: The experience of being emotionally paralyzed. ☐☐

D) Depersonalization and perplexity (Q: 13-16)
0: No perplexity or experience of change.
1: Feeling of change of oneself.
2: Feeling puzzled and perplexed. ☐☐
3: Delusion of change in oneself.

E) Feeling controlled (Q: 17-20)
0: No or ordinary influence by social cirumstances.
1: Vague or unconvincing report of being unnaturally influenced from without. ☐☐
2: Occasional but clear experience of being controlled from without.
3: Continuous or total feeling of being controlled from without.

F) Thought disturbance (Q: 21-26)
0: No thought disturbance.
1: Occasional or vague report of thought block.
2: Occasional but clear thought block and / or feeling of thoughts being read. ☐☐
3: Thought insertion, withdrawal and / or broadcast.

G) Voices (Q:27-30)
0: No
1: Noises of voices calling subject's name.
2: 3 rd person hallucinations.
3: Frequent and disabling 3rd person hallucinations. ☐☐

H) Persecutary feelings (Q: 31-34)
0: No.
1: Vague ideas of reference or persecution.
2: Persecutary D., D. misinterpretation, D. reference.
3: Delusional explanation e.g.x-ray, electricity,... etc. ☐☐

I) Grandiose and manic features (Q: 35-38)
0: No.
1: Elated mood or idiomotor pressure.
2: Grandiose identity or ability (**Mood Congruous**).
3: Grandiose identity or ability (**Mood Incongruous**). ☐☐

Appendix (B

استمارة استقصاء

الأسم : فى بحث : العمر : النوع : ذكر / أنثى

برجاء الإجابة على جميع الأسئلة وذلك بوضع دائرة حول نعم أو لا ..... وشكرا.

١- هل تشعر أنك بصحة جيدة وفى كامل العافية	نعم	لا
٢- هل سبق أن تلقيت علاجا لأعصابك من شخص غير طبيب (مطوع، شيخ، ممنوم مغناطيسى ..)	نعم	لا
٣- هل سبق أن ترددت على طبيب للأعصاب	نعم	لا
٤- هل سبق أن عولجت بمستشفى للأعصاب كمريض داخلى (منوم)	نعم	لا
٥- هل تشعر أن مزاجك طبيعى ويمكنك التجاوب مع من حولك	نعم	لا
٦- اذا شعرت بالاكتئاب هل يكون ذلك غالبا نتيجة ظروف اجتماعية أو فقد شيئا عزيزا عليك	نعم	لا
٧- هل أنتابك فترات طويلة من الحزن الشديد بدون سبب واضح.	نعم	لا
٨- هل أنتابك حالة من الاكتئاب الشديد فقدت فيها الشعور بالسعادة حتى فى المناسبات السارة	نعم	لا
٩- هل تشعر أنك قادر على الأستمتاع بنشاطاتك العادية	نعم	لا
١٠- هل فقدت الأهتمام بأنشطتك العادية مظهرك أو عملك	نعم	لا
١١- هل تشعر أنك قادر على مبادلة الآخرين مشاعرهم	نعم	لا
١٢- هل تشعر أحيانا بفقدان كامل لعاطفتك ومشاعرك حتى لأقرب الناس إليك.	نعم	
١٣- هل تشعر أن مظهرك طبيعى	نعم	
١٤- هل تشعر أحيانا بأن شيئا غريبا ومحيرا يحدث من حولك ولا تستطيع تفسيره.	نعم	
١٥- هل تشعر بأن هناك تغييرا فى نفسك كما لو أصبحت غير حقيقى أو لست فى عالم الأحياء	نعم	
١٦- هل مرت بك فترات أصبحت فيها متأكدا من أن مظهرك تغيرا أو جزءا من جسدك لا ينتمى إليك.	نعم	
١٧- هل تشعر أنك فى كامل السيطرة على أفكارك وأعمالك.	نعم	
١٨- هل تشعر أنك تتأثر بالآخرين والظروف الإجتماعية فى إتخاذ قرارتك.	نعم	
١٩- هل تشعر أحيانا أن شخصا ما أو قوة خارجية تسيطر عليك حتى ضد إرادتك.	نعم	

٢٠- هل تشعر دائما أن شخصا ما أو قوة خارجية تسيطر على أحاسيسك، نزعاتك أو إرادتك. نعم لا

٢١- هل تشعر إن هناك تشويش أو تدخيل فى أفكارك نعم لا

٢٢- فى الوقت الذى تكون فيه أفكارك سلسة ومتتابعة هل يحدث وأن تشعر أنها تتوقف فجأة بحيث لا يبقى شئيا فى عقلك. نعم لا

٢٣- هل تشعر أحيانا أن هناك أفكار توضع فى رأسك وأن تعلم أنها ليست أفكارك. نعم لا

٢٤- هل تشعر أحيانا أنها أفكارك تسحب من رأسك كما لو كانت شخصا ما أو قوة تنتزعها منك. نعم لا

٢٥- هل يستطيع الآخرين معرفة (قراءة) أفكارك حتى لو لم ترغب فى ذلك. نعم لا

٢٦- هل سبق وسمعت أفكارك تذاع بالراديو أو التليفزيون نعم لا

٢٧- هل سبق وسمعت ضوضاء أو صوتا ينادى عليك ولا تجد ما يفسر هذه الأصوات. نعم لا

٢٨- هل سبق وسمعت أفكارك تعاد وتتكرر بصوت عال لدرجة أن أحد بجوارك يمكنه سماعه. نعم لا

٢٩ هل تسمع أحيانا أصواتا لأكثر من شخص يتحدثون عنك ولا يجدون أحد بجوارك. نعم لا

٣٠- هل تسمع هذه الأصوات [illegible] تصيبك أو تؤثر على [illegible] نعم لا

[illegible] نعم لا

[illegible] نعم لا

[illegible] نعم لا

٣٤- هل تشعر أن هناك شيئا مثل كهرباء، أشعة [illegible] تؤثر على تفكيرك أو سلوكك. نعم لا

٣٥- هل تشعر أحيانا إنك سعيد جدا درجة غير طبيعية وبدون سبب. نعم لا

٣٦- هل تشعر إنك ممتأ بالطاقة والأفكار المثيرة وإن إيقاع الحياة بطيء جدا. نعم لا

٣٧- هل تشعر إن لديك قدرات خاصة أو مواهب لا يملكها غيرك من الناس. نعم لا

٣٨- هل تشعر إنك إنسان ذو منزلة خاصة مثل ملك أو أمير، رئيس دولة أو رسول. نعم لا