Psychometric Evaluation of Alexithymia

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In this study, the validity of three self-report tests measuring alexithymia was under testing. Two groups of psychosomatic patients were used: a dermatological and a peptic ulcer group. The peptic ulcer group was found to be relatively more alexithymic than the dermatological group. None of the three tests was found to be valid to measure alexithymia. The results were discussed in the light of the current difficulty that faces researchers in the field of alexithymia, and suggestions for future research were proposed.

(Egypt.J. Psychiat.,1993, 16: 77-84).

Introduction

The term alexithymia was introduced by Peter Sifneos in 1972. It was originally described as a major factor in the predisposition to psychosomatic illness (Sifneos et al., 1977) and later on in relation to somatization (Shipko, 1982).

The essential features in alexithymia are difficulty in recognizing and describing emotions, difficulty in distinguishing between feelings and bodily sensations, impoverished fantasy life, preoccupation with external events and a cognitive style that is concrete and reality based (Taylor, 1984; Faryna et al., 1986; Taylor et al., 1988; Bagby et al., 1988).

The concept was met with widespread acceptance particularly among workers in psychosomatic medicine. Yet, a major defect remained. Due to the multifaceted nature of alexithymia, no single tool was successful in measuring it. Peter sifneos designed the Beth Israel Questionnaire (BIQ) for assessing alexithymia (Sifneos, 1973). It was an observer-rated questionnaire and seemed to have a good face validity (Ahrens and Deffner, 1986), and satisfactory internal consistency (Taylor et al., 1988). Interrater reliability is high provided that the interviewer and the raters have adequate experience and knowledge about the alexithymia concept (Rodrigo et al., 1989; Taylor et al., 1990). It is still the most widely used instrument to measure alexithymia (Taylor, 1984; Paulson, 1985; Ahrens and Deffner, 1986). However, that last prerequisite has limited its usefulness as a tool in research.

A number of self-report questionnaires were designed to overcome that difficulty. The first was the Schalling Sifneos Personality Scale SSPS (Apfel and Sifneos, 1985; Fava et al., 1980). The SSPS was criticized for the lack of adequate validity and internal consistency (Bagby et al., 1986; Taylor et al., 1990). Hashem (1987) stated that the test relied on language and psychological report. Since both were deficient in alexithymics, it was concluded that the severely alexithymic could not give a proper answer to the given statements.

The second self-rated questionnaire

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was the Minnesota Multiphasic Personality Inventory - Alexithymia Scale (MMPI - A). It was designed by Kleiger and Kinsman (1980) and they claimed positive correlation with BIQ. This positive correlation was not replicated by Federman and Mohns (1984) or by Demers-Desrosiers et al. (1983).

The third test was the Toronto Alexithymia Scale (TAS) designed by Taylor et al. (1985). It was claimed that TAS was the most psychometrically sound and theoretically relevant self-report measure of alexithymia (Rodrigo et al., 1989; Zeiltin et al., 1989; Bagby et al., 1990).

This work aimed at studying the validity of different self-report questionnaires measuring alexithymia in the Egyptian culture.

Subjects and Method

Two groups of Egyptian psychosomatic patients were studied. The first group comprised psychosomatic dermatological patients (Group A), and the second consisted of psychosomatic peptic ulcer patients (Group B).

In the two groups, both sexes were included and the age ranged from 18 - 60 years. In both instances the sample was a consecutive one.

General exclusion criteria were past or present history of epilepsy, addiction, organic brain syndromes, mental subnormality, psychotic and neurotic disorders.

In the psychosomatic dermatology group, the patients were referred from the Dermatology Out-patient clinic, Kasr El-Aini Hospital. All patients were assessed by a senior staff in the Dermatology Department. A skin disorder was considered psychosomatic if it fell under one of the categories specified by Rook et al. (1985) using the classification adopted by Koblenzer (1987). These categories included:

1. Conditions with strictly psychological aetiology; e.g., dermatitis artefacta.

2. Conditions in which strong psychogenic factors are imputed; e.g. alopecia areata.

3. Conditions whose course is often affected by stress; e.g., psoriasis.

The psychosomatic peptic ulcer cases were selected from Upper G.I.T Endoscopy Unit in El-Agouza Hospital. Peptic ulcer was documented by gastroscopy performed by a senior staff from the Endoscopy Department in Kasr El-Aini Hospital. Excluded were cases of malignant ulcer and peptic ulcer caused by drug intake.

All cases were subjected to a general physical examination and psychiatric assessment using a semistructured interview.

Cases included in the study were assessed for alexithymia using the following psychometric tools:

1. Beth Israel Questionnaire (BIQ)

A tape recorded semistructured interview was conducted. The interview lasted for 15 - 25 minutes. The recorded tape was then rated independently by three senior psychiatry staff members from Kasr El-Aini Hospital and the questionnaire was answered by the three raters. The final score on each item was the one agreed upon by at least two raters, or the middle score if the three scores belonged to the same category. Scoring was repeated if a great discrepancy was observed between the three raters without knowing the previous rating.

2. Toronto Alexithymia Scale (TAS)

The original English version by Taylor et al. (1985) was translated to Arabic.

3. Schalling Sifneos Personality Scale (SSPS)

The version already translated to Arabic by Hashem (1987) was used.

4. Minnesota Multiphasic Personality Inventory - Alexithymia Scale (MMPI - A)

The items adopted by Kleiger and Kinsman (1980) were obtained from the Arabic version of the whole MMPI.

Statistical Analysis

As appropriate, the Student t test for comparing means of different samples, the Chi Square test, and the Pearson product-moment correlation coefficient were used (Surwillo, 1980).

Results

The psychosomatic dermatology group (group A) comprised 50 patients while the psychosomatic peptic ulcer group (group B) contained 25 patients. In group (A) 52% of patients had alopecia while in group (B) most patients (80%) had duodenal peptic ulcer (tables 1 and 2).

Table (3) shows that males represented 66% of group (A) and 92% of group (B). The difference was statistically significant ($X^2 = 5.956$, df = 1, $p < 0.01$).

Table (4) shows that the mean age in group (A) was 28.54 (± 10.27) years, whereas it was 39.88 (± 11.16) years in group (B). The difference was statistically significant ($t = \pm 4.185$, df = 73, $p < 0.001$).

Table (5) shows that 52 % of group (A) were married compared to 88% in group (B). The difference was statistically significant ($X^2 = 9.374$, df = 1, $p < 0.01$).

Table (6) shows that illiterates constituted 32% of group (A) and 8% of group (B). Those who completed primary education constituted 20% and 32% respectively. No statistically significant difference was found between the two groups regarding the educational level ($X^2 = 7.687$, df = 5, $P > 0.10$).

To ensure adequate inter-rater reliability of the ratings on BIQ, the Pearson product-moment correlation was computed between each pair of raters. Table (7) shows that all correlations were significant ($p < 0.001$). The correlation coefficients lied between + 0.539 and + 0.682 which were considered to be substantial correlation according to the classification adopted by Surwillo (1980).

Tables 8 - 10 demonstrate the results of different psychometric tools measuring alexithymia in the two groups as well as in the total study sample. It is noted that on the BIQ, group (A) was significantly less alexithymic than group (B). The mean scores were 3.20 (± 1.47) and 4.08 (± 1.21) respectively ($t = 2.714$, df = 73, $p < 0.01$) On the TAS, MMPI - A and SSPS, the two groups did not differ statistically ($p > 0.10$).

As shown in table (10), there was a great discrepancy between the results obtained on the four psychometric tools. For example, 57.3% of the total sample were found to be non-alexithymic on the BIQ. The corresponding figures on the TAS, MMPI - A and SSPS were 17.3%, 17.3% and 76% respectively. Furthermore, the Pearson product - moment correlation coefficient between the results on BIQ on one side and the TAS, MMPI - A and SSPS on the other side were + 0.18, - 0.085 and + 0.048 respectively (table 11). None of these coefficients reached statistical significance ($p > 0.10$).

Table 1
Distribution of Diagnoses among the Psychosomatic Dermatology Group.

Diagnosis	No	%
Alopecia	26	52.0
Lichen simplex chronicus	6	12.0
Neurotic excoriation	2	4.0
Dermatitis artifacta	3	6.0
Psoriasis	12	24.0
Alopecia & lichen	1	2.0
Total	50	100

Table 2
Distribution of Diagnoses among the Psychosomatic Peptic Ulcer Group

Diagnosis	No	%
Duodenal ulcer	20	80.0
Gastric ulcer	3	12.0
Both	2	8.0
Total	25	100

Table 3
Sex Distribution among both Groups of Psychosomatic Patients

Sex	Group A		Group B	
	No	%	No	%
Male	33	66.0	23	92.0
Female	17	34.0	2	8.0
Total	50	100	25	100

$p < 0.01$

Table 4
Mean age (in years) among Both Psychosomatic Groups

	Group A	Group B
Mean age	28.54	39.88
S.D.	± 10.27	± 11.16
N	50	25

$p < 0.001$

Table 5
Distribution of Marital Status among both Groups of Psychosomatic Patients

Marital status	Group A		Group B	
	No	%	No	%
Single	14	28.0	1	4.0
Engaged	5	10.0	2	8.0
Married	26	52.0	22	88.0
Widow(er)	2	4.0	-	-
Divorced	3	6.0	-	-
Total	50	100	25	100

$p < 0.01$

Table 6
Distribution of Educational Level Attained by the Two Psychosomatic Groups

Educational level	Group A		Group B	
	No	%	No	%
Illiterate	16	32.0	2	8.0
Can read and write	1	2.0	-	-
Primary	10	20.0	8	32.0
Preparatory	7	14.0	5	20.0
Secondary	13	26.0	6	24.0
University	3	6.0	4	16.0
Total	50	100	25	100

$p > 0.10$

Table 7
Correlation Coefficients between the Three Raters on the BIQ

	Rater 1	Rater 2
Rater 2	+ 0.682	-
Rater 3	+ 0.539	+ 0.566

$p < 0.001$

Table 8
Results of Different Tests Measuring Alexthymia in the Dermatology Psychosomatic Group

	BIQ		TAS		MMPI-A		SSPS	
	N	%	N	%	N	%	N	%
Non - Alexithymic	35	70	11	22	10	20	35	70
Borderline	10	20	11	22	30	60	4	8
Alexithymic	5	10	28	56	10	20	11	22
Total	50	100	50	100	50	100	50	100
Mean ± S.D.	3.20 ± 1.47		73.26 ± 10.99		10.65 ± 3.60		54.25 ± 6.27	

Table 9
Results of Different Tests Measuring Alexithymia in the Psychosomatic Peptic Ulcer Group

	BIQ		TAS		MMPI-A		SSPS	
	N	%	N	%	N	%	N	%
Non - Alexithymic	8	32	2	8	3	12	22	88
Borderline	14	56	8	32	20	80	2	8
Alexithymic	3	12	15	60	2	8	1	44
Total	25	100	25	100	25	100	25	100
Mean ± S.D.	4.08 ± 1.21		74.44 ± 4.64		10.48 ± 2.74		55.20 ± 4.15	

Table 10
Results of Different Tests Measuring Alexithymia in the total Psychosomatic Study Sample

	BIQ		TAS		MMPI-A		SSPS	
	N	%	N	%	N	%	N	%
Non - Alexithymic	43	57.3	13	17.3	13	17.3	57	76.0
Borderline	24	32.0	19	25.3	50	66.7	6	8.0
Alexithymic	8	10.7	43	57.3	12	16.0	12	16.0
Total	75	100	75	100	75	100	75	100
Mean ± S.D.	3.49 ± 1.45		73.65 ± 10.51		10.60 ± 3.31		54.54 ± 2.63	

Table 11
Correlation Coefficient between BIQ and the Other Three Tests Measuring Alexithymia in the Total Psychosomatic Study Sample

	TAS	MMPI - A	SSPS
BIQ	+ 0.18	- 0.085	+ 0.048

$p > 0.10$

Discussion

This study was an attempt to test the validity of three self-report questionnaires to measure alexithymia mainly to facilitate further research in the field. The BIQ was used as the reference test since it was clinically based and covered all the aspects of alexithymia. It had good validity and reliability provided that the interviewer and the rater had adequate knowledge and experience with the concept of alexithymia (Rodrigo et al., 1989; Taylor et al., 1990). In the present study, with the substantial inter-rater correlation that was ensured, testing the validity of TAS, MMPI - A and SSPS could be done with great confidence by comparing their results with the results on BIQ.

The study was conducted on two groups of psychosomatic patients. The peptic ulcer group comprised more married patients than the dermatology group. No difference was observed between the two groups regarding the educational level.

The peptic ulcer group was found to be significantly more alexithymic than the dermatology group. This might be attributed to sociodemographic differences between the two groups. A second possibility was that peptic ulcer was always considered as one of the classical psychosomatic disorders since the time of Alexander (1950). Whereas, the dermatology group was formed of a variety of skin disorders with varying degree of psychological contribution in their aetiology.

Unfortunately, none of the three psychometric tests correlated significantly with BIQ in our Egyptian sample. This conclusion was in accordance with previous reports that did not find positive correlation between BIQ and two tests: MMPI - A and SSPS (e.g., Federman and Mohns, 1984; Taylor, 1990). The lack of positive correlation between BIQ and TAS was not reported before. In fact, TAS was considered as the best test to measure alexithymia (Rodrigo et al., 1989; Zeiltin et al., 1989; Bagby et al., 1990).

It seems that it is an error to rely on the patient's ability to report on his own emotional life and phantasy when he is basically incapable of doing so. It would be expected that the alexithymic individual would find it difficult not only to describe his emotions but also to understand questions and statements about his emotions. This by itself would render any self-report questionnaire on alexithymia invalid, particularly for the severely alexithymic individuals.

It is to our opinion that research in the field should rely mostly on projective tests to overcome the verbal difficulties of the patients. Further research is needed to verify this point of view.

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L'Evaluation Psychométrique de L' Aléxithymée

Dans cette étude, la validité de 3 "self-report" tests mesurants l'aléxithymée a été vérifié.

Deux groupes de malades psychosomatiques ont participé: un groupe dermatologique et un autre ayant des ulcères gastroduodénal.

Le dernier groupe a été trouvé d'avoir relativement plus d'aléxithymée que le premier. Les trois tests ne sont pas trouvés valables pour mesurer l'aléxithymée. On a discuté les resultats en tenant compte des difficultés courantes que les chercheurs rencontrent dans le domaine de l'aléxithymée. On a aussi proposé des suggestions pour les recherches futures.

تقييم القياس النفسى للألكسيثيميا

فى هذا البحث تم اختبار ثلاثة اختبارات لقياس الألكسيثيميا. تكونت عينة البحث من مجموعتين من المرضى النفسجسمانيين: المجموعة الأولى مكونة من مرضى بأمراض جلدية نفسجسمية والمجموعة الثانية مكونة من مرضى بقرحة المعدة والاثنى عشر.

أظهرت النتائج زيادة فى الألكسيثيميا لدى المرضى بالقرحة مقارنة بالمرضى المصابين بأمراض جلدية كما أظهر البحث عدم صدق أى من الاختبارات موضع الدراسة لقياس الألكسيثيميا ونوقشت النتائج فى ضوء الصعوبات الحالية التى تواجه الباحثين فى دراسة الألكسيثيميا كما تم وضع مقترحات تتعلق بالبحث العلمى المستقبلى فى هذا المجال.