The Arabic Version of DSQ-40 I-A Study of Ego Defenses in Medical Students

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In this work, the Arabic Version of Defense Style Questionnaire-40, a selfrating questionnaire for the assessment of ego defenses is presented. The ego defenses used by a random sample of 64 medical students were studied. The lowest scores were obtained on more pathological defenses (projection, passive aggression, displacement, dissociation and denial); while the highest scores were obtained on items measuring mature defenses (anticipation, altruism, suppression and rationalization). Cluster analysis classified the subjects into two groups with the first (N = 21) using more immature defenses than the second (N = 43,67%). The defense style used by females was significantly different from that of the males, with the former using more suppression, somatization, reaction formation, and less acting out, denial, dissociation and rationalization than the latter. The implication of the results for research in psychotherapy are discussed.

(Egypt.J. Psychiat.,1996, 19:129 -136).

Introduction

The fact that human beings unconsciously use mechanisms that distort their perceptin of self or reality was recognized long before psychoanalysis. Insights into the hidden motives for human behaviour are found in poetry, proverbs (Rakhawy, 1993), and more elaborately in philosophy. Recently, Chapman and Chapman-Santana (1995) have dSantana (1995) have drawn attention to Nietzsche's penetrating psychological insights that paralleled mechanisms which Freud was to formulate a decade or more later. Descriptions of repression (called by Nietzsche oblivion), sublimation and projection are so elaborate in his writings. However, Freud incorporated those processes, that were to be called defense mechanisms, into his theory on the nature of human psyche and mental illness. Defense mechanisms were described by Freud in 1894. He observed not only that affect could be "dislocated or transposed" from ideas (by the unconscious mechanisms that he would later call dissociation, repression, and isolation), but also that affect could be "reattached" to other ideas (by the mechanism of displacement). The earlier formulations of psychoanalysis lacked differentiation of defenses. With the elaboration of the structural theory, the role of the ego became more stressed. According to Vaillant (1988), it took Freud 40 years to outline most of the defenses of which we speak today.

He identified five of their important properties:

1- Defenses are major means of managing instinct and affect.

2- Defenses are unconscious.

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3- Defenses are discrete from one another.

4- Although often the hallmarks of major psychiatric syndromes, defenses are reversible

5- Defenses can be adaptive as well as pathological.

A systematic and comprehensive study of defenses used by the ego was presented by Anna Freud (1966) in her classical monograph "The Ego and mechanisms of defense", where she maintained that everyone, normal or neurotic, uses a characteristic repertoire of defense mechanisms but to varying degrees.

The current view on defense mechanisms places them within the framework of stress and coping (DSM IV, 1994).

In spite of the great advance in understanding vicissitudes of unconscious adaptation offered by ego-psychologists (e.g., Hartmann, Kris, and Menninger), every one of these investigators presented a different nomenclature and schema for assessment of defenses. The last two decades, howecer, have witnessed the development of interview based assessments of ego defenses that achieved satisfactory levels of reliability (Vaillant, 1971). A significant advance in this field was the development of a questionnaire-based method of defense style assessment by Bond and coworkers (1983). Since defense mechanisms are conceptualized as unconscious processes, procedures that are based on objective assessment by expert observers should be much more congruent with the logic of the matter than procedures based on self ratings (Holzer et al, 1933). Nevertheless, the instrument developed by Bond et al. (1983), the Defense Style Questionnaire, has been tested for reliability and validity and has undergone a number of refinements (Akkerman et al., 1992). An attempt to validate the DSQ has compared it with raters' judgement and the results supported the validity of the instrument (Bond et al., 1989).

There exists no tool in Arabic language that would assess defense mechanisms. In this work, we present the Arabic version of the Defense Style Questionnaire 40 (DSQ 40) (Andrews et al., 1993). The responses of a random group of medical students are analyzed.

Subjects and Method

A random sample of 64 medical students, Faculty of Medicine, El-Menyia University (35 males, 29 females, mean age : 19, S.D: 0.75) responded to the Arabic version of DSQ-40. They were chosen randomly. History of psychiatric illness was excluded.

The Defense Style Questionnaire 40 (DSQ 40) (Andrews et al., 1993):

The DSQ 40 was derived from the 72-item DSM-III-R-labeled Defense Style Questionnaire (Bond, 1986). The basic assumption underlying the self rating method of defense mechanism assessment is that habitual use of any particuiar defense will leave tracks in an individual's belief or attitude system and that endorsement of certain attitudes or beliefs can be taken as an indicator of the habitual use of that defense.

The DSQ-40 can yield both 20 individual scores and three higher order factor scores, namely mature, immature and neurotic factors. Each defense mechanism is represented by two statements to which the subject responds by matching his degree of agreement or disagreement on a 9 point scale, ranging from extreme negative response to maximal agreement with the attitude being tested.

The Arabic version of DSQ-40:

The DSQ-40 was translated into Arabic by the author. Simple language was used, while colloquial Arabic was

avoided as much as possible. In a few cases where the original questions were inappropriate for the culture or too elaborate, a modification, in congruence with the original definition of the defense mechanism involved, was sought. In the preparatory phase, the questionnaire was presented to a group of people with different education and social levels. The respondents commented on the understandability of the items. A group of psychiatric patients also responded to the questionnaire to assess their understanding of the items, as well as the scale. Some formulations were modified on the basis of those discussions and negative statements were excluded, as they tended to confuse the subjects.

Analysis of data:

Responses of 64 subjects were subjected to statistical analysis using SPSS (1993). Means and standard deviations for each of the 40 items, each of the 20 defenses, and the 3 hypothetical factors were obtained.

Comparison between males and females was made using ANOVA.

Previous studies on defense mechanisms concentrated on classifying defenses rather than subjects. However, the differences among normal subjects were not investigated. As different defense styles are used by normal people, an attempt was made to classify the respondents into groups, according to the defense style they tend to use. Cluster analysis method was used.

Results

Table 1 shows the mean and standard deviation of scores on each of the 40 items. The results are presented in ascending order. It can be noticed that the lowest scores were those on projection, passive aggression, displacement, dissociation and denial; while the highest scores were obtained on items measuring anticipation, altuism, suppression and rationalization.

In table 2, the means and standard deviations on the 20 defense items are presented in comparison with the normative data of Andrews et al. (1993). However, the present sample scored slightly more on some of the immature defenses. It should be noted that the normative data of Andrews et al. (1993) were obtained from a community sample, and consequently the mean age was higher.

In table 3, results of cluster analysis are demonstrated. Two clusters were identified. The first included 21 subjects

Table 1

Mean and Standard Deviation for Each of the 40 Items (2 for each ego defense) Presented in Ascending Order

Defense mechanism	Mean	standard deviation
projection 1	2.27	1.77
passive aggression	2.67	2.46
displacement 2	2.95	2.23
dissociation 1	3.22	2.31
denial 2	3.52	2.39
somatization	3.78	2.79
projection 2	3.78	2.24
devaluation 2	3.89	2.92
denial 1	4.03	2.82
devaluation 1	4.22	2.49
isol. affect 2	4.30	2.83
displacement	4.42	2.56
acting out 2	4.52	2.82
acting out 1	4.62	2.68
autist fantasy 2	4.73	2.77
reaction formation 1	4.80	2.66
idealization 2	4.83	2.32
autist fantasy 1	4.89	2.75
passive aggression 2	4.89	2.69
isol. affect 1	4.95	2.72
splitting 1	5.03	2.90
suppression	5.06	2.43
somatization 2	5.08	2.81
humor	5.16	2.75
undoing 1	5.19	2.41
dissociation 2	5.25	2.50
idealization	5.41	2.83
sublimation 1	5.47	2.81
splitting 2	5.52	2.53
anticipation 2	5.97	2.20
humor 2	5.97	2.44
rationalization 2	6.08	2.19
sublimation 2	6.13	2.29
reaction formation 2	6.22	2.26
undoing 2	6.40	2.17
suppression 2	6.67	2.23
altruism 1	6.86	2.20
rationalization 1	6.98	1.90
altruism 2	7.45	1.77
anticipation 1	7.61	1.58

The questionnaire is available on request).
Examples of the items are presented in appendix I.

(33%), while 43 subjects (68%) fell in the second cluster. The two groups did not differ in the use of mature defenses. Members of the first group use more immature defenses (projection, pasive aggression, acting out, isolation of affect, devaluation, denial, displacement and splitting) than members of the second group. They also tend to use more idealization than those who fell in the second cluster.

Differences between females and males are shown in table 4. Differences in defense style were detected on all the three factors. Statistically significant differences between the two groups were detected on suppression, somatization, reaction formation and a tendency towards significance was found on the pseudoaltruism item, with the females using those defenses more than males. On the other hand, male subjects tend to use generally more immature defenses (P 0.06), and in particular more acting out, denial, dissociation and rationalization, where statistically significant differences between the two groups were found.

Table 2
Means and Standard Deviations of the 20 Defenses and Factor Scores as Compared with Andrews et al's Normative Data

Defense mechanism	Present study	Andrews et al. (1993)
Mature factor	6.04 (0.92)	5.76 (1.15)
Sublimation	5.80 (1.82)	5.45 (1.82)
Humour	5.56 (1.86)	6.44 (1.77)
Anticipation	6.79 (1.37)	5.72 (1.79)
Suppression	5.87 (1.74)	5.50 (1.81)
Immature factor	4.42 (0.92)	3.54 (0.95)
Projection	3.02 (1.62)	3.34 (1.63)
Passive aggression	3.78 (2.02)	3.20 (1.80)
Acting out	4.55 (2.36)	4.70 (2.03)
Isolation	4.68 (2.14)	4.08 (2.18)
Devaluation	3.99 (1.89)	3.06 (1.57)
Autistic fantasy	4.81 (2.57)	3.36 (2.25)
Denial	3.78 (1.99)	2.88 (1.57)
Displacement	3.71 (1.69)	3.48 (1.88)
Dissociation	4.23 (1.94)	2.85 (1.74)
Splitting	5.25 (1.96)	3.78 (1.91)
Rationalization	6.51 (1.30)	5.57 (1.25)
Somatization	4.42 (2.33)	3.05 (2.02)
Neurotic factor	5.90 (1.07)	4.32 (1.28)
Undoing	5.81 (1.80)	4.32 (1.28)
pseudoaltruism	7.16 (1.55)	4.26 (1.96)
Idealization	5.12 (1.96)	5.14 (1.86)
Reaction formation	5.51 (1.70)	3.64 (2.13)

Table 3
Differences Between the two Groups Classified by Cluster Analysis

Defense mechanism	cluster 1 Number=21	ANOVA P Value
Immature factor		
Projection	4.04	.001
Passive aggression	5.57	.000
Acting out	5.90	.001
Isolation	6.09	.000
Devaluation	4.83	.003
Autistic fantasy	7.28	.000
Denial	4.57	.03
Splitting	6.04	.02
Neurotic factor		
Idealization	5.73	.03

Discussion

Ego defenses are unconscious mechanisms the primary function of which is to anticipate and ward off anxiety by distorting normal perception, motivation, memory, thinking or action (mcKeachie et al, 1976, Vaillant, 1988). Therefore, they are used in every day life by normal as well as psychiatrically impaired persons to variable extent. The implications of objective assessment of defense mechanisms in psychiatric practice is obvious.

In this work, the defense styles in normal medical students were studied using a new instrument. As expected in normal subjects, the least scores were obtained on projection, passive aggression, displacement, dissociation and denial. These mechanisms are known to reflect psychopathology; while the highest scores were obtained on items measuring anticipation, altruism, suppression, which are considered mature defenses. This lends indirect support to the validity of the Arabic version of the D this study are generally in accordance with those of Andrews et al. (1993). However, our sample comprised young adults and, hence, more immature defenses were used. Cultural differences might also play a role in this difference. As discussed later, the present tool seems to be sensitive to differences in up-bringing patterns.

The three-factor model proposed by Andrews et al. (1993) was followed. However, this might not be the only way of classifying defense mechanisms. The inclusion of pseudoaltuism, which is more related to immaturity, in the neurotic defenses, and somatization in the immature factor seems inappropriate. In fact, Vailant (1988) offered a four-factor model including psychotic, immature, neurotic and mature defenses.

On the other hand, cluster analysis method classifies individuals rather than variables, as is the case in factor analysis. In this study, two groups were identified, with one using more immature defenses than the other. Whether this could predict psychopathology needs special investigation. However, it could be assumed that the group using more immature defenses might express more neurotic symptoms or at least traits.

The most interesting finding in this study is the fact that female subjects differed significantly from males in the defense style they use. Andrews et al. (1993) found no gender differences. In the present study, female subjects were shown to use more reaction formation than their male counterparts. The correlation between reaction formation and unrealistic altruism, which was also higher in females, was stressed by Nemiah (1980). Reaction formation against aggression leads to a behaviour characterized by excessive concern for other people (especially those toward whom there is underlying aggression), by a marked, unrealistic altruism, and by an undue tolerance of unpleasantness in other people. Those two defenses also grouped together in one factor in Bond et al's study (1983). According to the authors, they reflect the need to perceive oneself as being kind, helpful to others, and never angry.

Table 4
Comparison Between Females and Males on Defense Items

Defense mechanism	females n = 29	males n = 35	F value	P value
Mature factor				
Sublimation	6.41 (1.51)	5.41 (1.8)	5.60	0.02*
Immature factor	4.15 (0.88)	4.62 (0.92)	3.59	0.06
Acting out	4.00 (2.29)	5.01 (2.35)	2.88	0.09
Acting out 2	3.64 (2.93)	5.23 (2.52)	5.23	0.02*
Denial	2.98 (1.79)	4.45 (1.92)	9.75	0.002*
Denial 1	2.45 (1.68)	4.4 (3.54)	12.5	0.001*
Dissociation	3.58 (1.78)	4.77 (1.91)	6.45	0.01*
Dissociation 1	2.55 (2.09)	3.77 (1035)	4.69	0.03*
Dissociation 2	4.62 (2.38)	5.77 (2.5)	3.49	0.06
Rationalization	6.00 (1.27)	6.91 (1.19)	8.32	0.01*
Somatization	5.06 (2.4)	3.86 (2.14)	4.39	0.04*
Somatization 1	4.79 (2.9)	2.9 (2.39)	7.94	0.01*
Neurotic factor				
Reaction formation 1	5.44 (2.62)	4.25 (2.6)	3.31	0.07
Altruism	7.53 (1.35)	6.84 (1.65)	3.26	0.08

This is characteristic of the martyr types and' do-gooders'. This is in congruence with our finding that the females use more suppression which is the volitional exclusion of thoughts and feelings from conscious awareness (Nemiah, 1988). Aggressive tendencies and negative emotions are not accepted as a part of the self image. Bond et al. (1983) describe persons who use this style to be involved in stable, but not necesarily healthy (and often masochistic) relationships. This pattern of behavior is reinforced in our culture. It seems to describe the ideal mother in our society. Another mechanism used by females more than males is somatization. This is in accordance with results of research on a clinical level that showed more prevalence of somatoform disorders in females (Nemiah, 1980). Wahl (1963) has suggested that hypochondriac symptoms (used usually in the sense of somatization) protect one from guilt over destructive wishes to others seeing one self as being damaged, weakened and punished. On a symptom level, somatization is seen as playing primarily a defensive role in the psychic economy. It represents protective substitutive activity that prevents the person from experiencing the pain of directly facing a dangerously low self-esteem.

On the other hand, male subjects tend to use more acting out, denial, and rationalization. The latter two, along with projection, are classified in the DSM-IV (1994) in one level of defensive functioning, the disavowal level. This level is characterized by keeping unpleasant or unacceptable stressors, impulses, ideas, affect or responsibility out of awareness, with or without a misattribution to external causes. Though the two styles used by females and males aim at improving self image, this very image is expected according to social norms, to be different in both sexes. All cultures associate men and women with different sets of characteristic features and with different sets of behaviour expectations (Eckes, 1994). Males are expected to be self confident, assertive; their behaviour is always justified, while females are expected to be devoted, self sacrificing, with a high degree of self control.

Whether such gender differences reflect cultural characteristics in this country, or only a subculture in Upper Egypt needs further investigation. Nevertheless, our findings indirectly support the validity of the DSQ-40. This is the first time to show its sensitivity to gender differences which, in turn, reflects sociocultural factors.

To conclude, preliminary data on the Arabic version of the DSQ 40 support the validity of the instrument.. It seems to be a comprehensive, easy to administer tool for the assessment of defense mechanisms. Such a tool is of primary importance in the assessment and follow-up of psychiatric patients, especially in a psychotherapeutic context.

References

Akkerman K., Carr V., Lewin T. (1992) Changes in ego defenses with recovery from depression. *J. Nerv. & Ment. Dis.*, 180: 634-638.

American Psychiatric Association (1994) Diagnostic and Statistical manual of mental Disorders, ed 4 (DSM IV).

Andrews G., Singh M., Bond M. (1993) The Defense Style Questionnaire. *J. Nerv. & ment. Dis.*, **181**: 246-254.

Bond M., Gardner T., Christian J., (1983). Empirical study of self-rated defense styles. *Arch. Gen. Psychiat.*, **40**: 333-338.

Bond M. (1986) Defense style questionnaire. In GE Vaillant (Ed), Empirical studies of ego mechanism of defense.

Washington DC: *Am. Psychiat.* Press, Inc.

Bond M., Perry J.C, Gautier M., Goldenberg M., Oppenheimer J., Simand J. (1989) Validating the self-report of defense styles. *J. Pers. Disord.*, **3**: 101-112.

Chapman A.H., Chapman-Santana M (1995) The influence of Nietzshe on Freud's ideas. *Brit. J. Psychiat.*, **166**: 251-253.

Eckes T, (1994) Features of men, features of women: Assessing stereotypic beliefs about gender subtypes. *Brit. J. Social Psycol.*, **33**: 107-123.

Freud A. (1966) The ego and the mechanisms of defense international Universities Press. New York.

Holzer M., Aeschelmann D., Schwilk C., Kachele H. (1933) Defense mechanisms and linguistic styles. New Trends in *Exper. & Clin. Psychiat.*, **9**: 15-22.

McKeachie W.J., Doyle C.L., Moffet M.M. (1976) Psychology. Addison-Wesley Publishing Company, Inc. Reading pp 403-415.

Nemiah J.C. (1980) Somatoform disorders. In: Kaplan H., Freedman A.M. & Sadock B.J. (eds), Comprehensive textbook of Psychiatry, Wlliams & Wilkins, Baltimore. Statistical Package for Social Sciences (SPSS) (1993) SPSS Inc.

Rakhawy Y. (1993) Reality and ojbect relations through Bahrainian and Egyptian proverbs. *Arabic J. Psychiat.***3**: 109-143.

SPSS (2993) Statistical package for social sciences. release 6.0 SPSS inc.

Vaillant G.E. (1971) Theoretical hierarchy of adaptive ego mechnisms : A 30 year follow-up of men selected for psychological health. Arch. Gen. Psychiat., **24**: 107-118.

Vaillant G. (1988) Defense mechanisms. In Nicholi E.M. Jr. (ed), The New Harvard Guide to Psychiatry. Belknap Press of Harvard univ., Cambridge.

Wahl C.W. (1963) Unconscious forces in the psychodynamics of the hypochondriacal patient. *Psychosomatics*, **4**: 9-13.

La version Arab de "DSQ-40" une étude des défenses de l'égo chez les étudiants médicaux

Dans ce travail, on a présenté la version Arab des défenses de l'égo "DSQ-40" pour l'évaluation de ces défenses. Les défenses de ces défenses. Les défenses de l'égo utilisés par 64 étudiants médicaux ont été étudié. Les implications des résultats sur le recherche de psychotherapy ont été discutées.

النسخة العربية لاستبار الوظائف الدفاعية

١- دراسة لوظائف الأنا الدفاعية لدى طلبة الطب

قامت الباحثة بترجمة وإعداد استبار الوظائف الدفاعية النفسية - ٤٠ الذى يشتمل على عشرين وظيفة مقسمة إلى ثلاثة عوامل (دفاعات ناضجة - غير ناضجة وعصابية). وفى هذه الدراسة تم تحليل استجابات أربعة وستين طالبا بكلية الطب.

وقد أشارت نتائج التحليل الإحصائى إلى وجود مجموعتين من الطلبة تستخدم إحداها الدفاعات غير الناضجة والعصابية بدرجة أعلى من الأخرى، كما أظهر الاختبار تباعدا بين الأساليب التى تستخدمها الإناث وتلك التى يلجأ إليها الذكور، حيث تزيد درجة الكبت والجسدنة وتكوين رد الفعل العكسى فى الإناث عنها فى الذكور، بينما تزيد درجة الإنكار والتبرير لدى الذكور.

وتناقش الدراسة النتائج والدلالات فى ضوء أبحاث العلاج النفسى.