

# Evaluation of Consistency of Psychiatric Diagnoses following the Use of DMP-I

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## ABSTRACT

The present study was carried out to evaluate the degree of consistency of the psychiatric diagnoses in an Egyptian centre after the introduction of DMP-I. The material was gathered from the cards of the patients consulting this centre (Kasr El-Aini Hospital) through out the year 1977.

Comparison between the distribution of the diagnostic categories (a) during the odd months and even months for both males and females, (b) during the odd months and even months for males only, (c) during the odd months and even months for females only, and (d) during the first 6 months and the second 6 months of the year.

The result of these comparisons showed that the introduction of DMP-I resulted in a relatively high degree of internal consistency of psychiatric diagnoses in the studied centre.

## INTRODUCTION

Psychiatric nosology has been the field for national and international researches to obtain a common unified psychiatric classification. Spitzer et al. (1976), discussing the reliability of psychiatric nosology, stated that "a nosology is reliable to the extent that the rules for categorization are so clear that users of the system diagnose patients in the same way."

Kendell (1975) mentioned that diagnosis is an imperfect business, particularly where mental illness is concerned. Several studies have shown that if two psychiatrists interview and diagnose non-organic patients independently of one another under ordinary working conditions, they are likely to make the same diagnosis only 30-40 per cent of the time and

even when both are experienced and share the same orientation agreement is rarely better than 60 per cent.

In Egypt, the Diagnostic Manual of Psychiatric Disorders (DMP-I 1975), derived mainly from ICD-8 and DSM-II, has been adopted. The aim of the present study is to evaluate the degree of consistency of the psychiatric diagnoses in an Egyptian centre (Kasr El Aini Hospital) after the introduction of the DMP-I.

## **MATERIAL AND METHOD**

The material of the present study was gathered from the out-patient cards of all psychiatric patients consulting Kasr El-Aini outpatient psychiatric clinic throughout the year 1977. The diagnostic discipline followed in this year was the DMP-I. Weekly meetings with a senior consultant were regularly held and discussions were free about the mode of application of this manual as well as the problems encountered the week before.

Occasionally, some outpatient cards were checked. One category of the DMP-I was discussed theoretically and an attempt to clarify the possible difficulties expected was offered. This was especially stressed in the first half of the year of study. The main task of diagnosis was made by senior and junior residents, supervised by a senior psychiatrist whose job was to aid in solving diagnostic problems mainly by request and occasionally as a check. The residents recorded the diagnosis along with the main relevant symptomatology in the outpatient card allotted for each patient.

A copy of the DMP-I was available in each diagnostic room and the code number was put down along side the diagnosis whenever possible.

The available collected cards for the year 1977 were gathered and were listed according to the corresponding diagnostic category of DMP-I

nomenclature month by month. Table (1) shows the arrangement of the acquired diagnostic categories differentiated according to the type of cards into the total number of the available cards; cards having no data, cards having the term "undiagnosed," number of total cards valid for analysis, number of missed cards, and the total number of cards from files in each.

In a trial to evaluate consistency of the available diagnostic categories, we compared the odd months with the even months (Total, females and males). A step further was carried out searching for better orientation about the consistency of our diagnostic categories. This was the correlation between the first six months of 1977 with the second six months of the same year.

## RESULTS

Table (2) shows the distribution of the diagnostic categories during the odd months (1, 3, 5, 7, 9, 11) and even months (2, 4, 6, 8, 10, 12) for both males and females. The total number of each diagnostic category during odd months is compared with the total number of the same diagnostic category during even months (in number and percent).

In this comparison only six categories, out of 16, (05, 06, 09, 10, 14 and 16) showed statistical significance. However, among these six categories, there are three categories only significant at 0.05 level.

Table (3) shows the distribution of the diagnostic categories during the odd months (1, 3, 5, 7, 9, 11) and even months (2, 4, 6, 8, 10, 12) for males only. The total number of each diagnostic category during odd months is compared with the total number of the same diagnostic category during even months.

TABLE I

## Raw Material (Cards) Available For Analysis

| Type of cards:<br>month | Available    | Having<br>no data | Undiagnosed* | Total valid<br>for analysis | Missing    | Total<br>from<br>files |
|-------------------------|--------------|-------------------|--------------|-----------------------------|------------|------------------------|
| January                 | 1660         | 79                | 37           | 1581                        | 173        | 1833                   |
| February                | 1178         | 101               | 23           | 1077                        | 70         | 1248                   |
| March                   | 1170         | 86                | 20           | 1084                        | 7          | 1177                   |
| April                   | 1098         | 56                | 25           | 1042                        | 38         | 1136                   |
| May                     | 1100         | 107               | 36           | 993                         | 68         | 1168                   |
| June                    | 984          | 49                | 34           | 935                         | 69         | 1053                   |
| July                    | 1090         | 106               | 27           | 984                         | 147        | 1237                   |
| August                  | 1016         | 102               | 27           | 914                         | 137        | 1153                   |
| September               | 703          | 82                | 16           | 621                         | 79         | 782                    |
| October                 | 1157         | 172               | 41           | 985                         | 63         | 1220                   |
| November                | 775          | 94                | 27           | 681                         | 99         | 874                    |
| December                | 955          | 78                | 30           | 877                         | 17         | 972                    |
| <b>Total</b>            | <b>12886</b> | <b>1112</b>       | <b>343</b>   | <b>11774</b>                | <b>967</b> | <b>13853</b>           |

\* This diagnostic category is included in the total cards valid for analysis, i.e. they are part of the 11774 cards.

TABLE II

**Correlation Between the Diagnostic Categories of Odd Months  
and Even Months (Both Males and Females)**

| Category     | Odd months  |              | Even months |              | T. Test | Statistical<br>Significance |
|--------------|-------------|--------------|-------------|--------------|---------|-----------------------------|
| (Code)*      | No.         | %            | No.         | %            |         |                             |
| 01           | 193         | 3.32         | 179         | 3.19         | 0.39    | N.S.                        |
| 02           | 129         | 2.22         | 119         | 2.12         | 0.37    | N.S.                        |
| 03           | 38          | 0.65         | 36          | 0.64         | 0.005   | N.S.                        |
| 04           | 48          | 0.83         | 63          | 1.12         | 1.60    | N.S.                        |
| 05           | 18          | 0.31         | 5           | 0.09         | 2.63    | O.01                        |
| 06           | 1030        | 17.71        | 898         | 16.00        | 2.44    | O.05                        |
| 07           | 460         | 7.91         | 416         | 7.41         | 1.01    | N.S.                        |
| 08           | 89          | 1.53         | 77          | 1.37         | 0.72    | N.S.                        |
| 09           | 173         | 2.97         | 209         | 3.72         | 2.23    | O.05                        |
| 10           | 2198        | 37.79        | 2293        | 40.86        | 3.36    | O.001                       |
| 11           | 74          | 1.27         | 67          | 1.19         | 0.39    | N.S.                        |
| 12           | 94          | 1.62         | 85          | 1.51         | 0.06    | N.S.                        |
| 13           | 70          | 1.20         | 80          | 1.43         | 1.08    | N.S.                        |
| 14           | 628         | 10.80        | 680         | 12.11        | 2.20    | O.05                        |
| 15           | 49          | 0.84         | 51          | 0.91         | 0.40    | N.S.                        |
| 16           | 525         | 9.03         | 357         | 6.36         | 5.35    | O.001                       |
| <b>Total</b> | <b>5816</b> | <b>100.0</b> | <b>5615</b> | <b>100.0</b> | —       | —                           |

\* 01 mental retardation, 02 psychoses associated with organic brain syndromes, 03 non-psychotic conditions associated with organic brain syndromes, 04 psychiatric disorders of epilepsy, 05 drug dependence, alcoholism and alcoholic psychoses, 06 manic and depressive illnesses, 07 schizophrenia, 08 paranoid states, 09 other functional psychoses, 10 neuroses, 11 personality and character disorders, 12 psychophysiological disorders, 13 behaviour disorders of childhood and adolescence, 14 special symptoms not elsewhere classified, 15 conditions not classifiable under any of the previous categories, and 16 no psychiatric disorder.

TABLE III

**Correlation Between the Diagnostic Categories of Odd Months  
and Even Months (Males Only)**

| Category     | Odd months  |              | Even months |              | T. Test  | Statistical<br>Significance |
|--------------|-------------|--------------|-------------|--------------|----------|-----------------------------|
|              | No.         | %            | No.         | %            |          |                             |
| 01           | 106         | 3.78         | 124         | 4.64         | 1.59     | N.S.                        |
| 02           | 64          | 2.29         | 59          | 2.21         | 0.20     | N.S.                        |
| 03           | 20          | 0.71         | 19          | 0.71         | —        | N.S.                        |
| 04           | 28          | 1.00         | 40          | 1.50         | 1.68     | N.S.                        |
| 05           | 18          | 0.64         | 5           | 0.19         | 2.60     | O.01                        |
| 06           | 500         | 17.86        | 428         | 16.02        | 1.81     | N.S.                        |
| 07           | 304         | 10.86        | 290         | 10.85        | 0.01     | N.S.                        |
| 08           | 61          | 2.18         | 42          | 1.57         | 1.66     | N.S.                        |
| 09           | 89          | 3.18         | 107         | 4.00         | 1.63     | N.S.                        |
| 10           | 845         | 30.18        | 885         | 33.12        | 2.34     | O.05                        |
| 11           | 64          | 2.29         | 51          | 1.91         | 0.98     | N.S.                        |
| 12           | 37          | 1.32         | 35          | 1.31         | 0.03     | N.S.                        |
| 13           | 51          | 1.82         | 60          | 2.25         | 1.13     | N.S.                        |
| 14           | 291         | 10.39        | 324         | 12.13        | 2.04     | O.05                        |
| 15           | 27          | 0.96         | 32          | 1.20         | 0.86     | N.S.                        |
| 16           | 295         | 10.54        | 171         | 6.40         | 5.49     | O.001                       |
| <b>Total</b> | <b>2800</b> | <b>100.0</b> | <b>2672</b> | <b>100.0</b> | <b>—</b> | <b>—</b>                    |

In this table, only four categories (05, 10, 14, and 16) showed statistical significance of the latter, two categories are significant only at 0.05 level.

Table (4) shows the distribution of the diagnostic categories during odd months as compared with the total number of the same diagnostic category during even months. In this table only three diagnostic categories (04, 10 and 16) showed statistical significance. All of them are only at the 0.05 level.

Table (5) shows the distribution of the diagnostic categories during the first six months and the second six months of the year 1977 (Both males & females). The total number of each diagnostic category during the first half of the year is compared with the total number of the same diagnostic category during the second half of the year. In this table only three diagnostic categories (04, 06, and 08) showed statistical significance.

## DISCUSSION

We tried in this work to guarantee a certain degree of consistency. We have chosen a particular year where the supervision of the diagnostic procedure was predetermined so much so that we can hardly consider this study as a "retrospective" one.

In considering the comparative analysis of our diagnostic categories we can notice that the diagnostic categories are relatively consistent in table (2) of the odd — even months (both males & females). Taking the male odd — even months correlation (table 3) we find that there is less statistical differences which may reflect the opinion that males represent a more homogenous group (than both males and females) and the more homogenous the group better the nosological agreement and consistency of the diagnostic categories. Taking the female odd — even months correlation (table 4) the differences decline once more which needs a trial for explanation and at the same time proves more nosological agreement and consistency of the diagnostic categories.

TABLE IV

Correlation Between the Diagnostic Categories of Odd Months  
and Even Months (Females Only)

| Category | Odd months |       | Even months |       | T. Test | Statistical<br>Significance |
|----------|------------|-------|-------------|-------|---------|-----------------------------|
|          | No.        | %     | No.         | %     |         |                             |
| 01       | 87         | 2.88  | 55          | 1.87  | 2.56    | 0.05                        |
| 02       | 65         | 2.16  | 60          | 2.04  | 0.32    | N.S.                        |
| 03       | 18         | 0.60  | 17          | 0.58  | 0.10    | N.S.                        |
| 04       | 20         | 0.66  | 23          | 0.78  | 0.55    | N.S.                        |
| 05       | —          | —     | —           | —     | —       | N.S.                        |
| 06       | 530        | 17.57 | 470         | 15.99 | 1.63    | N.S.                        |
| 07       | 156        | 5.17  | 126         | 4.29  | 1.60    | N.S.                        |
| 08       | 28         | 0.93  | 35          | 1.19  | 0.98    | N.S.                        |
| 09       | 84         | 2.79  | 102         | 3.47  | 1.51    | N.S.                        |
| 10       | 1353       | 44.86 | 1408        | 47.89 | 2.34    | 0.05                        |
| 11       | 10         | 0.33  | 16          | 0.54  | 1.23    | N.S.                        |
| 12       | 57         | 1.89  | 50          | 1.70  | 0.55    | N.S.                        |
| 13       | 19         | 0.63  | 20          | 0.68  | 0.24    | N.S.                        |
| 14       | 337        | 11.17 | 356         | 12.10 | 1.12    | N.S.                        |
| 15       | 22         | 0.73  | 19          | 0.65  | 0.38    | N.S.                        |
| 16       | 230        | 7.63  | 186         | 6.33  | 1.97    | 0.05                        |
| Total    | 3016       | 100.0 | 2940        | 100.0 | —       | —                           |

TABLE V

Correlation Between the Diagnostic Categories of the First and  
Second Six Months of 1977 (Males and Females)

| Category | 1st Six months |       | 2nd Six months |       | T Test | Statistical<br>Significance |
|----------|----------------|-------|----------------|-------|--------|-----------------------------|
|          | No.            | %     | No.            | %     |        |                             |
| 01       | 200            | 3.06  | 172            | 3.51  | 1.34   | N.S.                        |
| 02       | 130            | 1.99  | 118            | 2.41  | 1.53   | N.S.                        |
| 03       | 36             | 0.55  | 38             | 0.78  | 1.55   | N.S.                        |
| 04       | 51             | 0.78  | 60             | 1.23  | 2.44   | 0.05                        |
| 05       | 15             | 0.23  | 8              | 0.16  | 0.84   | N.S.                        |
| 06       | 1197           | 18.31 | 731            | 14.94 | 4.77   | 0.001                       |
| 07       | 484            | 7.40  | 392            | 8.01  | 1.22   | N.S.                        |
| 08       | 110            | 1.68  | 56             | 1.14  | 2.39   | 0.05                        |
| 09       | 203            | 3.11  | 179            | 3.66  | 1.62   | N.S.                        |
| 10       | 2535           | 38.78 | 1956           | 39.97 | 1.29   | N.S.                        |
| 11       | 83             | 1.27  | 58             | 1.19  | 0.39   | N.S.                        |
| 12       | 98             | 1.50  | 81             | 1.66  | 0.68   | N.S.                        |
| 13       | 87             | 1.33  | 63             | 1.29  | 0.19   | N.S.                        |
| 14       | 733            | 11.21 | 575            | 11.75 | 0.90   | N.S.                        |
| 15       | 52             | 0.80  | 48             | 0.98  | 1.04   | N.S.                        |
| 16       | 523            | 8.00  | 359            | 7.34  | 1.31   | N.S.                        |
| Total    | 6537           | 100.0 | 4894           | 100.0 | —      | —                           |

In our sample, females are of special population and expected to be relatively more homogeneous in comparison to the male population. This may be due to the fact that they (females) are rather nearer to each other as regards socioeconomic standard and occupation as house wives coming usually on their own without official referral. We can conclude till now that such proved consistency denotes a homogenous consistency in the diagnostic procedure.

A step further was carried out searching for better orientation about our diagnostic categories. This is a correlation between the first six months of 1977 with the second six months of the same year (table 5). Here we got only three categories that show statistically significant differences, two of which are only at 0.05 level. We cannot find a visible explanation of such finding that reflects more consistent representation between the two halves of the same year. In the first — last halves of the year we should have expected numerous differences relevant to the numerous variables interacting. The January overload due to renewal of old cards is present in the first six months while Ramadan drop\* is presented in the last six months. Another added variable could be related to various stresses expected in two different seasons with different climates and different socio-economic variations.

First this consistency may denote that the number does not count in the distribution of the diagnostic categories, second it may refer to the possibility that the limited variables may be better searched for in a limited sample with a particular goal. Spitzer *et al.* (1975) enumerated five variances that could interfere with psychiatric diagnosis. The first is the subject variance, the second is the occasional variance when patients are in different stages of the same condition at different times. The third is the information variance, the fourth is the observation variance and the fifth and most important is the criterion variance, that is, when there

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\* This is a religious fasting month, when the number of patients consulting the medical centres usually drops markedly.

are differences in the formal inclusion and exclusion criteria that clinicians use to summarize patient data into psychiatric diagnoses. Our sample could be influenced at least by the first four variances; the last being partly eliminated by the standardization of diagnostic procedures using the same discipline under supervision (DMP-I).

To conclude, we can say that a common nosological discipline in psychiatry has a direct influence on the investigation of any aspect of a given phenomenon in the field. The introduction of the Egyptian Diagnostic Manual (DMP-I, 1975) has an influence on the homogeneity and internal consistency of psychiatric diagnoses.

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## الموجز

### تقويم درجة التماسك ( الثبات ) فى تشخيص الأمراض النفسية بعد استعمال الدليل المصرى

لقد أجريت هذه الدراسة لمعرفة مدى درجة الثبات فى تشخيص الأمراض النفسية التى تحققت بعد استعمال الدليل المصرى لتشخيص الأمراض النفسية، وذلك فى مستشفى القصر العينى ، ولقد جمعت مادة البحث من بطاقات مرضى العيادة الخارجية لهذه المستشفى .

ولقد عقدت مقارنة بين تواتر الفئات التشخيصية :

( ١ ) أثناء شهور السنة الفردية وشهورها الزوجية بالنسبة للرجال والنساء من المرضى .

( ب ) أثناء شهور السنة الفردية وشهورها الزوجية بالنسبة للرجال فقط .

( ج ) أثناء شهور السنة الفردية وشهورها الزوجية بالنسبة للنساء فقط

( د ) أثناء الستة شهور الأولى من العام والسنة الأخيرة .

وقد أوضحت نتائج كل هذه المقارنات أن استعمال الدليل المصرى لتشخيص الأمراض النفسية نتج عنه درجة عالية نسبيا من التماسك الداخلى فى التشخيصات فى مستشفى القصر العينى .

## **A B S T R A I T**

### **L'évaluation de la consistance des diagnostics psychiatriques après l'emploi du DMP-I\***

L'étude présente a été conduite pour évaluer le degré de consistance des diagnostics psychiatriques dans un centre égyptien après l'introduction du DMP-I. La matière de cette étude rassemblée des fiches des malades consultant ce centre durant l'année 1977.

La comparaison entre la distribution des catégories diagnostiques a été faite : a) pendant les mois de nombre impair et les mois de nombre pair pour les patients mâles seulement, c) pendant les mois de nombre pair et ceux de nombre impair pour les malades femelles seulement et d) durant les six premiers mois et les six mois suivants de l'année.

Les résultats de ces comparaisons ont montré que l'introduction du DMP-I a mené à un plus haut niveau de consistance dans les diagnostics psychiatriques dans le centre en question de cette étude.

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\* Le manual diagnostique des troubles psychiatriques publié par l'association psychiatrique égyptienne en 1975.

