# Comorbidity of Anxiety and Depressive Disorders in Psychiatric Outpatients

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**This investigation aimed at calculating the extent of comorbidity of DSM-III-R anxiety and depressive disorders in psychiatric outpatients. It hypothesized that routine outpatient psychiatric practice tends to overlook anxiety disorders in favour of depressive conditions. Comorbidity was studied by comparing the diagnostic pattern of outpatient clinicians with the joint diagnoses formulated by two clinicians applying the Structured Clinical Interview for Diagnosis according to DSM-III-R. SCID (Spitzer et al., 1990). The presence of anxiety and/or depression was further confirmed by the Hamilton Anxiety, and Hamilton Depression Rating Scales respectively. In 50 subjects presenting with anxiety or depression comorbidity of criteria based diagnoses was estimated at 72%. Pure forms of depression were found in 20% of cases, and pure anxiety in only 8%. The clinic psychiatrist gave more than one diagnosis in 24% of cases. This confirms our original prediction. In the majority of cases, the additional diagnosis was more frequently an anxiety disorder or major depression. When studied retrospectively, it was more common to find cases of anxiety evolving into depression (42%) rather than the other way round (19%). The overall conclusion derived from the study is that cases with concurrent anxiety and depressive disorders are more common in a cohort of psychiatric out-patients than cases with a single diagnosis. Assessment of these cases necessitates awareness of the possibility of comorbidity. The extent of the association supports the notion that the relationship between anxiety and depression is more than just coincidental presence of two prevalent conditions .**

**(Egypt.J. Psychiat.,1995,18: 61- 69).**

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## Introduction

The term comorbidity has varying connotations in different settings.

In epidemiology it indicates that the presence of one disorder increases or decreases the risk of having another disorder. In aetiological terms comorbidity covers disorders that increase the likelihood of certain complications (Kaplan and Feinstein, 1974). In clinical usage it has come to indicate that more than one

disorder can be diagnosed in the same individual. In such circumstances, co- occurrence rather than comorbidity seems to be the more appropriate term. Lastly, comorbidity may point to a group of symptoms shared by more than one disorder.

Comorbidity is increasingly recognized as one of the main features of psychiatric disorder.

It is encouraged by the diagnostic rules of descriptive nosological systems e.g. DSM- IV (APA, 1994) that tend to avoid inferences about aetiology. The increasing number of diagnostic categories will create "cases" who meet the criteria for more than one disorder (Frances et al, 1990) .The nosologic scatter of single clinical entities that we now live through threatens to blur even the most obvious clinical interrelationships. Anxiety disorders and depressive disorders can be diagnosed in the organic mental disorder, substance use disorder, and adjustment disorder sections, even though the symptoms may be the same. The purpose of this study is to state that comorbidity in case of anxiety and depressive disorder recognized by the ICD - 10 does not give adequate credence to the association between anxiety and depression . It is a residual category that necessitates that the clinical picture does not satisfy and diagnostic criteria of either depression or anxiety. The patient has some symptoms of anxiety and depression, not to the extent of forming a complete disorder in either direction.

The relationship between anxiety and depression has been described in various ways (Frances et, al, 1992). The dimensional spectrum suggests a single unity of experience with pure anxiety and pure depression existing at two poles, with the majority of cases falling in between and having differing proportions of either disorder. The causal hypothesis assumes that anxiety and depression are two syndromes that are causally interconnected. The presence of one predisposes and leads to the other. The common stem hypothesis indicates that both disorders originate from one basic disturbance; a general neurotic propensity, a core of psychopathology, an undifferentiated mood disorder, that may evolve in either or both directions at the same time (Boulenger and Lavallce, 1993). The artefact of improper diagnosis. A patient may have anxiety or depression not both.

The distinction between primary and secondary comorbid conditions is another issue that is difficult to resolve. The concept assumes that in one way occurrence of the secondary disorder would not have taken place if the primary disorder was not there. The primary disorder has been variously characterized as the one that started first; or the one whose symptoms predominate in the clinical picture (Klerman, 1990). In some diagnostic systems e.g. DSM-III (APA, 1980) a hierarchical conception is adopted so that when two particular disorders coexist a particular one must be primary and the other secondary e.g. dementia and depression.

This study aims at stating that the co- occurrence of anxiety and depressive disorders is sufficiently frequent to point to more than the chance co- occurrence of two prevalent disorders i.e. they are comorbid rather than co- occurring . It started out of a simple observation that anxiety disorders are much less common diagnostic entities than depressive disorders at the psychiatric outpatient clinic of Kasr El - Aini Hospitals. We hypothesized that comorbidity may be the reason when depressive symptoms are present, the clinician tends to ignore or overlook anxiety symptoms.

## Subjects and Method

To study the relative frequency of anxiety and depressive disorder diagnoses, clinicians undergoing patient assessment were instructed to refer any case with a dagnosis of anxiety and /or depressive disorder. Clinicians who were either residents or senior lecturers knew the purpose of the study. On each Sunday over a period of 3 months, the first three such cases who consent to be interviewed were included in the study. The outpatient clinician would carry out a regular diagnostic interview, keep the diagnosis, and then refer the patient for further evaluation. The second interview was carried out by a team of two researchers after collecting necessary demographic information. The structured clinical interview for diagnosis according to DSM- III - R (SCID) (patient version) Spitzer et al., 1990) was applied. The latter is a structured interview with the sections for anxiety and depression covered by approximately 136 statements or probes directly based upon the diagnostic criteria of DSM-II-R (APA, 1987). These sections were translated by the researchers and revised for feasibility. At the end of the SCID interview a joint diagnosis or diagnoses were formulated diagnosis that includes evaluation of psychosocial stressor (axisIV) and highest level of adaptive functioning during the last year (axis V). Routine physical and neurological examination was undertaken. Hamilton Rating scale for depression (Hamilton, 1960) and the Hamilton Anxiety Rating Scale (1959) were then completed . The purpose of applying these scales was to provide measures of symptom severity in pure cases of anxiety and depression versus mixed cases.

The total number of subjects included in the study is fifty. Their demographic characteristics are illustrated in Table I. It shows that the majority were females, younger adults and mostly with few years of education .The majority of the sample were married and among females most of them were housewives.

## Results

The diagnostic distribution of the sample according to the research interview is illustrated in table 2. The majoriy (72%) are cases that have more than one disorder. a combination of an anxiety and depressive disorder. Only 4 cases were diagnosed by the research team as cases of pure anxiety (8%), and 10 cases were diagnosed as suffering from a pure depressive disorder (20%) . The concept of comorbidity adoptred in this study is defined as the presence of more than one disorder that satisfy the diagnostic criteria of these disorders independently in DSM- III-R. It is not based upon the ICD- 10 concept of mixed anxiety depressive disorders that contain incomplete symptoms of either disorder.

The duration of each disorder was explored retrospectively in cases with mul-

**Table 1**
Sample Characteristics (n=50)

| | | |
|---|---|---|
| | Sex | |
| | male | 16(32%) |
| | female | 34(68%) |
| Mean Age | | 30.3(± 6.88) years. |
| | Education | |
| | Illiterate | 21(42%) |
| | primary and preparatory | 16(32%) |
| | Secondary or higher | 13(26%) |
| Married | | 40(80%) |
| | Employment | |
| | Professionals | 3(6%) |
| | Manual and technical | 17(34%) |
| | Students | 5(10%) |
| | Housewives | 25(50%) |

tiple diagnosis (table 3). Conditions starting earlier were considered primary and those starting later were considered secondary. Twice as many cases (42%) start with anxiety, than those that start with depression (19%). When the diagnosis of SCID interview is compared with the clinic diagnosis interesting figures appear. The extent of comorbidity described in routine clinical interviews is much less (24%) compared to the research, SCID, interview (72%). The differences is highly significant (P<0.001) (table 4) .Total disagreement between clinicians and researchers occurred in only one case (2%), and total diagnostic agreement occurred in 14%. The majority of disagreement occurred within the same syndrome i.e. anxiety or depression (28 cases, 56%) and was mainly due to the additional diagnosis of the research team (33 cases, 66%).

The relative proportions of each disorder according to clinicians and researchers (table 5) show a significant displacement in favour of major depression, at the expense of dysthymia in the research team. The research interview revealed more than double the number of cases of generalized anxiety states compared to clinicians . OCD and panic disorder show a considerable degree of agreement.

Application of the Hamilton depression, and Hamilton anxiety scales in this study aimed at validating the results of the SCID interview. The Hamilton Depression Scale shows an excess in scores above 17 in the depressed and mixed cases (table 6). The difference is not significant. According to the Hamilton Anxiety Scale, anxiety and mixed cases have significantly higher scores. These findings are in the same direction of the clinical interview .

The number of anxiety cases is small. Comparisons between mixed cases and purely depressed patients did not show

**Table 2**
Diagnosis After SCID Interview

| | | |
|---|---|---|
| Anxiety Disorder | 4 | 8% |
| Depressive Disorder | 10 | 20% |
| Anxiety & Depressive Disorders | 36 | 72% |

**Table 3**
Primary/ Secondary Distinction in Cases with Multiple Diagnoses (n=36)

| | | |
|---|---|---|
| Primary Anxiety | 15 | 42% |
| Primary Depression | 7 | 19% |
| Simultaneous Onset | 14 | 39% |

**Table 4**
Extent of Co- occurrence of Anxiety and Depression

| | Clinician | Researches | X2, P |
|---|---|---|---|
| One Diagnosis | 38(76%) | 14(28%) | 23.08 |
| > One Diagnosis | 12(24%) | 36(72%) | P<0.001 |

**Table 5**
Diagnostic Breakdown

| | Clinical Diagnosis | Research Diagnosis |
|---|---|---|
| Dysthymia | 23(46%) | 14(28%) |
| Major Depression | 9(18%) | 29(58%) |
| Adjustment Disorder with Depression | 7(14%) | 2(4%) |
| Generalized Anxiety State | 9(18%) | 22(44%) |
| OCD | 10(20%) | 9(18%) |
| Panic Disorder | 5(10%) | 6(12%) |
| Phobic Disorders | 1(2%) | 4(8%) |
| Post Traumatic Stress Disorder | 0 | 1(2%) |

**Table 6**
Clinical Characteristics of Pure and Mixed Forms of Anxiety and Depression

| | Anx. | Dep. | Anx. & Dep | P |
|---|---|---|---|---|
| Family history | | | | |
| +ve | 3(75%) | 7(70%) | 11(30.6%) | X2= 6.94,5.1 |
| -ve | 1(25%) | 3(30%) | 25(69.4%) | <0.05,0.025 |
| Duration of disorder in months (median) | 4 | 3 | 13.5 | t= 0.75,n.s. |
| Psychosocial stressors | | | | X2=2.48, |
| mild or none | 3(75%) | 3(30%) | 14(38.9%) | P<0.27 |
| moderate & severe | 1(25%) | 7(70%) | 22(61.1%) | n.s. |
| GAF | 68±10.3 | 67±9.7 | 65±6.4 | X2= 0.59, 0.67,n.s. |
| Hamilton Depression Scale>17 | 2(50%) | 6(60%) | 30(83%) | x2= 3.95. 2.5n.s. |
| Hamilton Anxiety Scale Mean± S.D. | 19.3±2.95 | 13.8± 4.5 | 19.8±6 | t=2.9 P<0.01 |

significant differences in the duration of disorder, severity of psychosocial stressors, severity of psychosocial stressors, and global assessment of functioning. Family history of similar of psychosocial stressors , and global assessment of functioning. Family history of similar illness was significantly more positive in cases with pure disorder compared to mixed cases.

## Discussion

The study deals with the extent to which anxiety disoders, and depressive disorders coexist. Before applying the SCID (Spitzer et, al, 1990) comorbidity is 24% and after applying it, comorbidity rises to 72%. More cases (41%) started with an anxiety disorder and later in the course of the illness develop an additional depressive disorder. The opposite pattern occurs less frequently (19%). Disagreements between diagnoses based upon an open clinical interview and those based upon a structured standard interview were mostly minor i.e. within the main diagnostic category. They were largely due to an additional diagnosis proposed by the research team.

Certain factors may act to decrease sensitivity to comorbidity in outpatient clinics. In comparing between the referring doctor diagnosis and the researcher diagnosis, diagnosing anxiety disorder was missing in 38% of referred patients. This may be due to the existence of symptoms common to both depressive and anxiety disorders, unawareness of the high comorbidity rate and absence of a separate "Mixed Anxiety and depressive" syndrome in disciplines such as DMP- I (Egyptian Psychiatric Association, 1979) and the DSM-III- R (American Psychiatric Association, 1987). There is a possibility that psychiatrists "tend" to consider depression on a higher diagnostic hierarchy than anxiety. Anxiety symptoms in a depressed patient do not justify changing the diagnosis or even adding a second diagnosis. All these reasons may make the referring doctor satisfied once they reached a single diagnosis that was usually depression.

On the other hand, there are other factors that may act to decrease specificity i.e. lead to overdetection of comorbidity, when the SCID is applied. The SCID is a structured interview that depends to a considerable extent on direct

questioning and direct feed back from the patient. According to Spitzer and colleaguest (1992) the SCID encourages follow- up questions based on clininal judgement. Still it allows less room for the clinician to add his own cues to understanding symptom and syndrome. The latter opportunity is an advantageous aspect of less structured interviews e.g. Present State Examination (Wing et al., 1974: WHO, 1992). Being a direct translation of DSM- IIIR criteria, makes the questions of the SCID even more difficult to contradict. The wording may have been somewhat complicated for the less educated Egyptian patient included in our study especially when there is an attempt to describe intimate inner experience. When it is difficult to differentiate experience, patients may answer affirmatively rather than negatively in order to impress interviewers with their illness.

For all these reason, it may be necessary to revise up the extent of comorbidity dexcribed by clinic psychiatrists, and revise down the extent of comorbidity detected by the SCID. The latter possibility is aided by the relative ease with which the criteria of DSM- III R allow a diagnosis of major depression.

The fact still remains that when two clinicians interview a patient jointly and search for symtoms in an orderly and detailed fashion, comorbidity of anxiety and depressive disorders will be exceptionally high. In this study comorbidity of anxiety and depression is at the upper limit of the range described in a series of similar studies. The comorbidity rate has been described to be as low as 8% for an association between dysthymid and anxiety disorders (Brawman Mintzer etal., 1993) to a high of 75% when symtoms of anxiety are not allocated to specific disorders (Angst et al., 1984; Murphy, 1986). In large scale studies, comorbidity ranges between 40% - 60% (Wetzler and Katz, 1989; Schatzberg et al., 1990). The higher estimate in this study may be party explained by the inclusion of all forms of anxiety disorders including OCD, and phobias in the calculation of comorbidity. The latter, in particular, has been found to be particularly prevalent in large community surveys (Regier et al, 1990).

Use of the Hamilton Anxiety (HAS), and Hamilton Depression Rating (HDRS) Scales was not particularly helpful in this study. They are not very specific because the HAS contains enquiries about depressive symptoms, namely depressed mood, insomnia, and decreased concentration. The HDRS contains symptoms, of anxiety like paychic and somatic anxiety. Indeed scores of patients with mixed anxiety and depressive disoders were higher on both scales than pure cases with a single disorder (table 6). From a different perspective, these findings may be explained by the fact that the presence of anxiety might aggravate symptoms of depression (Monroe, 1990)or make clinicians see more depressive symptoms. The pattern of scoring indicates that mixed cases are not mild cases, in fact they seem to incur higher degrees of morbidity.

This study demonstrated a higher proportion of cases with secondary onset depression compared to secondary onset anxiety (30% and 14% of the whole samle respectively ).Kendell (1974) found that 24% of individuals who had first received an anxiety diagnosis, were rediagnosed several years later as a depressive disorder. Neurochemical, psychodynamic and behavioural postulates support this line of evolution of depression from anxiety (e.g. Less 1982; Paul, 1988; Alloy, et al., 1990).

## Conclusion

There is a high rate of co- occurrence between anxiety and depressive disorders.

Anxiety disorders are less commmonly found in isolated forms.

Depressive disorders frequently follow anxiety disorders rather than the other way round.

Comorbidity is likely to be missed in routine clinical interviews. Anxiey disorders may be overlooked when a depressive condition is present.

Mixed anxiety depressive disorders seem to incur higher levels of symptom severity than isolated syndromes.

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**Acknowledgement**

Thanks are due for Mr. M. Govindan for Secretarial assistance and typing of this manuscript.

## La comorbidité des troubles anxieux et dépressif chez des consultants en psychiatrie

**Cette étude a tenté d'évaluer la fréquence de la comorbidité des troubles anxieux et dépressif selon le D.S.M.III-R chez des consultants en psychiatrie. Nous pensons que dans la pratique des consultations extra-hospitalières les troubles anxieux passent inaperçus au profit des troubles dépressifs. Nous avons conclus que les patients souffrant de troubles dépressif et anxieux concommittant sont plus fréquant dans un échantillon de consultant psychiatrique que les cas souffrant d'un seul trouble. La prise en considératon de la possibilité de la comorbidité et nécessaire afin qu'une évaluation adéquate soit faite. L'étendu de l'association soutien l'idée que la relation entre la dépression et l'anxiété est plus qu'une coincidence entre deux conditions prévalentes.**

## تواجد اضطرابات القلق والاكتئاب

## فى المرضى النفسيين فى عيادة خارجية

قام الباحثون بهذه الدراسة لتقييم مدى تواجد اضطرابات القلق والإكتئاب لدى مرضى نفسيين من المترددين على العيادة الخارجية فى مستشفى قصر العينى، وقام الباحثون باستخدام المقابلة الإكلينيكية القائمة على التصنيف الأمريكى الثالث المراجع التشخيصى والإحصائى، بالإضافة إلى مقاييس هاملتون للإكتئاب والقلق .

وقد أظهرت النتائج أن تشخيص تواجد اضطراب القلق والإكتئاب فى نفس المرضى كان ٧٢٪ أما أعراض الإكتئاب المنفرد فقد ظهرت فى ٢٠٪ واضطراب القلق فى ٨٪ من الحالات، وقد ناقشت الدراسة ضرورة وأهمية الأخذ فى الإعتبار وجود أكثر من تشخيص وإحتمالية تواجد ومصاحبة اضطرابات مختلفة فى نفس المريض، كما إستعرضت الدراسة أن ظهور تواجد القلق والإكتئاب يرجع للعلاقة بين هذين الاضطرابين أكثر من كونه مجرد تواتر بالصدفة بين اضطرابين شائعين.