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# Psychiatric Morbidity and Consultations among Medical and Surgical Inpatients in a General Hospital in Kuwait

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# الاضطرابات والاستشارات النفسية لدى مرضى الأقسام الداخلية للباطنة والجراحة بمستشفى عام في دولة الكويت

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**Abstract:**
A number of studies have shown high prevalence of psychiatric morbidity among medical and surgical inpatients. However, few inpatients with psychiatric morbidity receive psychiatric consultation. The objectives of this study were to measure the prevalence of psychiatric problems requiring psychiatric consultation among general medical and surgical inpatients and the ratio between number of patients having such problems and those referred for psychiatric consultation. The study included all patients admitted to general medicine and general surgery departments of Farwaniya General Hospital in Kuwait over one month. These patients were screened for presence/absence of clinically significant depressive and anxiety symptoms, hallucinations, excitement, disorientation, suicidal behavior, and occurrence of psychiatric consultation during their hospital stay. Patients were assessed using Brief Psychiatric Rating Scale, Beck Depression Inventory, Self Rating Anxiety Scale, and patients' medical records. Results showed that of the studied 295 inpatients (193 medical and 102 surgical), 122 (41.4%) were found to have one or more of the manifestations of psychiatric morbidity. Clinically significant depressive symptoms were found in 99 patients (35.2%), anxiety symptoms in 24 patients (8.5%), disorientation in 14 patients (4.7%), excitement in 10 patients (3.4%), hallucinations in 6 patients (2%), and suicidal behavior in 8 patients (2.7%). Only 13 patients (10.7% of patients having psychiatric morbidity) were referred for psychiatric consultation. The study concluded that the prevalence of psychiatric morbidity, especially depression, among general medical and surgical inpatients is high, and a small percentage of inpatients with psychiatric morbidity are referred for psychiatric consultation.
**Key words:** psychiatric morbidity, consultation, medical, surgical, inpatients

## Introduction:

One problem that has attracted growing attention lately is the concurrence of physical and mental Morbidity, or what is called "comorbidity". A positive statistical association between these two types of morbidity has been documented by researchers and underscores the need

for collaboration between psychiatrists and their non-psychiatric colleagues[1].

Medical and surgical inpatients often have psychiatric conditions that require psychiatric consultation[2]. It is now widely accepted that psychiatric disorders are common in the general hospital[3]. Studies show that up to 65% of medical inpatients have psychiatric disorders[4]. Moreover, psychological symptoms of severity insufficient to satisfy diagnostic criteria for a psychiatric disorder may cause considerable morbidity and lead to an increased use of medical services[5]. However, in only a tenth of cases is a psychiatric consultation requested, with high levels of psychopathology detected in patients who do not receive psychiatric attention[6-11].

Although psychiatric consultation in general hospital patients can reduce mortality, morbidity, length of stay, and hospitalization costs[12,13], there is often reluctance on the part of patients, families, or physicians to consult a psychiatrist[14].

The objectives of this study are to measure the prevalence of psychiatric problems requiring psychiatric consultation among medical and surgical inpatients and the ratio between number of patients having such problems and those referred for psychiatric consultation.

**Methods:**

The study included all patients who are above 12-year-old and capable of communication admitted to general medicine and general surgery departments of Farwaniya* General Hospital (Kuwait) over one month (from 29/4/2000 to 28/5/2000 and from 23/7/2000 to 22/8/2000 for medical and surgical patients respectively).

These patients were screened for presence/absence of the following:

1) ***Clinically significant depressive symptoms*** and 2) ***clinically significant anxiety symptoms*** using the corresponding items in Brief Psychiatric Rating Scale (BPRS)[15] (Depressive mood item for depression and Anxiety item for anxiety) in addition to Beck Depression Inventory (BDI)[16] and Self Rating Anxiety Scale (SAS)[17] for depression and anxiety respectively.

3) ***Hallucinations,*** 4) ***Excitement*** and 5) ***Disorientation*** using the corresponding items in BPRS.

6) ***Suicidal behavior***, and 7) ***Occurrence of psychiatric consultation during their hospital stay*** through reviewing patients' medical records.

**Instruments**:

a) *Brief psychiatric Rating Scale (BPRS)*[15]:

This is a semi-structured interview that have high reliability and is easy to use. Ratings are completed on the basis of observation and information obtained in an interview of 30 to 45 minutes. It contains 18 items dealing with groups

of symptoms[18]. Each item is scored on a 7-point scale (not present, very mild, mild, moderate to severe, severe, extremely severe).[19]

***b) Beck Depression Inventory (BDI).[16]***

This is generally used as a self-rated inventory. It comprises 21 items, each describing a specific behavioral manifestation of depression. In each instance there are 4 self-evaluative statements. These are read aloud to the patient, who also has a copy of the inventory. He then selects the statement which fits him best at the time of interview[19]. An Arabic translated inventory prepared by a senior clinical psychologist* [20] was used in the study.

***C) Self Rating Anxiety Scale (SAS)[17].***

This is a 20-item instrument consisting of the most commonly found characteristics of an anxiety disorder (5 affective and 15 somatic symptoms). Five of the items are worded symptomatically positive and 15 are worded symptomatically negative; respondents use a 4-point scale to rate how each item applied to him-self or herself during the past week[21]. The scale was translated and prepared for use in Arabic culture by a senior clinical psychologist*.

The SAS is scored by summing the values on each item to produce a raw score ranging from 20 to 80. A cutoff score of 50 is recommended, with scores over 50 suggesting the presence of clinically meaningful anxiety[21]. Criteria used to identify clinically significant depressive symptoms were score 3 or more in "Depressive mood" item of BPRS and score 10 or more in BDI. Depression was then classified into mild, moderate, and severe according to BDI score (10-16, 17 – 29, and 30 – 63 respectively). Criteria used to identify clinically significant anxiety symptoms were score 3 or more in "Anxiety" item of BPRS and score 50 or more in SAS. Hallucinations, Excitement, and Disorientation were identified according to the corresponding items in BPRS (score 1 or more for hallucinations and score 3 or more for excitement and disorientation).

***D) Medical records:***

History, examination findings, and clinical progress notes recorded in the patients' files were used to obtain information especially those related to suicidal behavior, refusal to consent to therapeutic procedures, and referral for psychiatric consultation.

Medical patients were assessed on the second or third day of admission because, on the first day, the acute somatic symptoms (e.g. dyspnoea, pains,…etc.) were severe enough to prevent being comfortable during the interview with relative improvement on the next days.

Most surgical interventions performed in surgical wards were elective and done on the second day of admission. Since patients who undergo invasive surgery can have manifestation similar

to somatic and vegetative symptoms of depression such as weight loss, loss of appetite, insomnia and fatigability in the postoperative period that are not related to depression[22], psychiatric assessment of surgical inpatients were done on the first day of admission to avoid the above mentioned post-operative symptoms.

**Results:**

Total number of patients admitted to general medicine and general surgery wards during the study period was 339. Patients who were below 12 year-old (9 patients), comatose (14 patients), having language barrier (7 patients), aphasia (5 patients), or deafness (3 patients), and those who refused to participate in the study (6 patients) were excluded from the study. So, number of patients included in the study was 295 (193 medical and 102 surgical patients).

Of the studied 193 medical inpatients, 95 (49.2%) were males and 98 (50.8%) were females. Ages of medical inpatients ranged from 13 to 107 years with a mean (+ SD) 50.95 + 18.8. The most frequent age group was that between 41 and 60 years (39.4%). 59.6% of patients were Kuwaitis and the rest of the patients were other Arabs (18.6%) and from south Asia (India, Bangladesh, Sri Lanka, Philippines, Pakistan, Iran, and Afghanistan) (21.8%). The majority of the patients (67.9%) were married, 13.5% were single, 3.6% were divorced, and 15% widowed. Forty-one percent of the patients were employed and 59% were unemployed **(Table 1)**. Cardiovascular and respiratory diseases were the most frequent diseases (42% and 10.9% respectively) **(Table 2).**

Of the studied 102 surgical inpatients, 64 (62.7%) were males and 38 (37.3%) were females. Ages of surgical inpatients ranged from 13 to 72 years with a mean (+ SD) 35.70 + 12.48. the most frequent age group was that between 21 and years (54.9%). 43.1% of the patients were Kuwaitis, 14.7% were other Arabs and 42.2% were from south Asia. 75.5% of the patients were married, 21.6% were single, 2% were divorced, and 1% widowed. 72.6% of the patients were employed and 27.4% were unemployed **(Table 1)**. Anal diseases (piles, fissure, and fistula) and hernias were the most frequent diseases (28.4% and 26.5% respectively) **(Table2)**.

The treating physicians recorded only 7 medical patients (3.6%) and 2 surgical patients (2%) as having psychopathological symptoms; depressed mood (6 cases), anxious mood (one case), obsessive compulsive disorder under psychiatric treatment (one case), and delirium tremens (one case).

Of the studied 295 medical and surgical inpatients, 122 patients (41.4%) were found to have one or more of the manifestation of psychiatric morbidity. Clinically significant depressive symptoms were found in 99 patients (35.2%) [with mild, moderate, and severe depression in 17 (16%), 52 (18.5%), and 30 (10.7%) patients respectively],

clinically significant anxiety symptoms in 24 patients (8.5%), both depressive and anxiety symptoms in 16 patients (5.7%), disorientation in 14 patients (4.7%), excitement in 10 patients (3.4%), hallucinations in 6 patients (2%), and suicidal behavior in 8 patients (2.7%). None of the patients was found to be refusing to consent to therapeutic procedures **(Table3).**
N.B: Patients with disorientation (14 patients) could not go through assessment by BDI and SAS, so these patients were excluded from the results related to depression and anxiety. (i.e. number of patients assessed for depression and anxiety was 281).
Of 193 medical inpatients, 93 (48.2%) were found to have one or more of the manifestation of psychiatric morbidity. Clinically significant depressive symptoms were found in 72 (40.2%) medical inpatients with mild, moderate, and severe depression in 11 (6.1%), 38 (21.2%), and 23 (12.8%) patients respectively. Nineteen medical inpatients (10.6%) were found to have clinically significant anxiety symptoms. Within the cases of depression and anxiety, 13 (7.3%) medical patients were found to have Both depressive and anxiety symptoms. Disorientation, hallucinations, and suicidal behavior were found in 14 (7.2%), 6 (3.1%), and 8 (4.1%) medical inpatients respectively **(Table 3)**. Disorientation was found to be more prevalent in patients over 60 year-old than in younger patients (P=0.000) **(Table 7).** Medical diagnostic categories of cases of disorientation are shown in Table 7.
Of the 6 cases of hallucinations, 3 cases had comorbid depression, and 3 cases had comorbid disorientation. Cases of hallucinations had cerebrovascular disease (2 cases), cardiovascular disease (one case), substance related disease (one case), respiratory disease (one case), and metabolic disease (one case).
Of the 8 cases admitted because of suicidal attempt, 6 cases (75%) were females and 2 cases (25%) were males. Six cases attempted suicide by drug overdose, one case by disinfectant (Detol) ingestion, and one case by cleaning solution (Clorox) ingestion. Seven cases of suicidal attempt were found to have depressive symptoms and one case had both depressive and anxiety symptoms. (i.e 7 cases of suicidal attempt are included within the cases of depression and anxiety). Suicidal attempt was found more prevalent in patients below 21year-old than in older patients (P=.000) (Table 8).
Twelve cases (6.2%) were referred for psychiatric consultation; 8 cases (66.7%) of them were referred because of suicidal attempt, 2 cases because of physically unexplained somatic symptoms, one case because of positive past psychiatric history and one case because of having delirium tremens. All referred patients were identified by screening instruments used in the study as having psychopathological symptoms. Of those six patients were identified as

having depressive symptoms, two patients having anxiety symptoms, three patients having both depressive and anxiety symptoms, and one patient having hallucinations and disorientation.

Ratio of medical inpatients referred for psychiatric consultation to those having manifestations of psychiatric morbidity is 12/93 (12.9%) (Table 3).

Of 102 surgical inpatients, 29 patients (28.4%) were found to have one or more of the manifestations of psychiatric morbidity. Clinically significant depressive symptoms were found in 27 (26.5) surgical inpatients with mild, moderate, and severe depression in 6 (5.9%), 14 (13.7%), and 7 (6.9%) patients respectively. Clinically significant anxiety symptoms were found in 5 (4.9%) surgical inpatients. Of the 27 depressed patients and 5 patients having anxiety symptoms, 3 surgical inpatients (2.9%) were found to have both anxiety and depressive symptoms. One surgical inpatient (1%) was found to have excitement. No cases of disorientation, hallucinations or suicidal behavior were found among the studied surgical inpatients **(Table3).**

One surgical inpatient (1.0%) was referred for psychiatric consultation. She was a female having clinically significant depressive symptoms. Ratio of surgical inpatients referred for psychiatric consultation to those having manifestations of psychiatric morbidity is 1/29 (3.4%).

Thirteen out of 295 medical and surgical patients (4.4%) were referred for psychiatric consultation. So, the ratio of patients referred for psychiatric consultation to those with psychiatric morbidity was 10.7%.

Overall psychiatric morbidity, clinically significant depressive and anxiety symptoms, severe depressive symptoms, disorientation, suicidal behavior, and psychiatric referrals were found to be statistically significantly more prevalent in medical inpatients than in surgical inpatients **(Table 3).** Psychiatric morbidity was found to be statistically, significantly more prevalent in female than in male, in widowed and divorced than in married and single, and in unemployed than in employed medical and surgical inpatients. No statistically significant difference in prevalence of psychiatric morbidity among different age groups **(Table 4).**

Depressive and anxiety symptoms were found to be more prevalent in female than in male medical and surgical inpatients (P=0.001 and 0.014 for depression and anxiety respectively), in unemployed than in employed patients (P=0.000 and 0.033). Anxiety symptoms were found more prevalent in widowed and divorced than in married and single patients (P=0.018). Differences in the prevalence of depressive and anxiety symptoms according to age were statistically non-significant **(Table 5).**

Depressive symptoms were found to be more prevalent in patients with cerebrovascular diseases (83.3%) and

in drug overdose patients (81.8%) than in those with other diseases (P=0.000) **(Table6).**

**Discussion**

It is important to mention that our aim in this study was to detect ***symptoms*** indicative of psychiatric morbidity, and not to diagnose psychiatric syndromes or disorders. The majority of prospective studies on psychiatric comorbidity in general medical and surgical inpatients have relied on mental health symptoms, rather than on psychiatric diagnoses, in determining prevalence[23]. There are difficulties in the use of standard criteria for the diagnosis of psychiatric disorder in the physically ill[24,25]. Although modifications to the criteria have been suggested to make them more appropriate for patients with physical as well as psychiatric disorder, none is wholly satisfactory [26,27]. Furthermore, according to DSM-IV diagnostic criteria for Psychological Factors Affecting Medical Condition, *"psychological symptoms affecting medical condition"* and *"mental disorder affecting medical condition"* were identified as two separate factors[28]. This highlights the importance of psychiatric ***symptoms*** in case of physical illness.

Psychopathological symptoms chosen to be screened for in the study were determined on the basis of previous studies which showed that the most common psychiatric symptoms among medical inpatients are anxiety, depression, and disorientation[4]. Suicide attempt or threat, hallucinations, agitation, and disorientation are common consultation-liaison problems[29].

Depressive and anxiety symptoms are not only diagnostic of Depressive Illness Spectrum Disorders (major depressive disorder, adjustment disorder with depressed mood, dysthymic disorder, organic or substance-induced depressive disorder, and depressive disorder not otherwise specified)[30] and Anxiety Disorders, but also, commonly associated with other psychiatric disorders e.g., somatoform and dissociative disorders.

Other symptoms chosen to be assessed in the study (hallucinations, excitement, and disorientation) are characterized by being easy to detect, each symptom of them *per se* indicates presence of an underlying psychiatric disorder (e.g., schizophrenia, delirium….etc.), and they are common reasons for psychiatric consultation[4].

In medical and surgical inpatients, some psychopathological symptoms (e.g., depressed mood) of mild severity may be expected and may not indicate presence of psychiatric morbidity, so scores less than 3 (i.e., less than moderate severity) in the assessed items of BPRS were ignored. An exception from this rule was "hallucinatory behavior" item in which a score 1 or more was considered as having hallucinations. In case of "depressive mood" and "anxiety" items, even scores 3 or more were ignored unless they are associated with

scores 10 and 50 or more in BDI and SAS respectively.

The results of this study have shown that 41.4% of studied medical and surgical inpatients have one or more of the studied manifestations of psychiatric morbidity **(Table 3).** Previous surveys have reported variable rates of psychiatric morbidity. This variation has largely resulted from different screening instruments and diagnostic criteria used by different workers[26,27]. However, our finding has come within the range of previous reports. Derogates *et al*.[31], Fulop et al.[32], and Wells[33] have reported that as many as 50% of general medical and surgical inpatients have symptoms indicative of psychological distress or disturbance. Levenson *et al*.[34] identified 51% of the studied medical inpatients as having high levels of psychopathology. Bell *et al*.[35] found that a psychiatric diagnosis was made in 37% of medical and surgical inpatients screened for psychiatric disorders. Despande *et al*.[36] obtained a psychiatric diagnosis in 34% of patients studied in general medical wards of an Indian hospital.

Our finding of higher prevalence of psychiatric morbidity in female than in male medical and surgical inpatients **(Table 4)** is consistent with that of Mayou *et al*[37] and Kisely and Goldberg[38]. Hansen *et al*[39] found that mental illness had a significant impact on women's health perception while men's health reports were not linked with their mental health status. This may contribute to a more help-seeking illness behavior in mentally disordered women, and thus, to a high utilization of health resources and to comorbidity[39]. Other studies[40,41] showed no gender difference.

Our finding regarding the relationship between employment status and psychiatric morbidity **(Table 4)** replicates the findings of Bell et al.[35] and Kisely and Goldberg[38] who found that psychiatric morbidity is more prevalent in unemployed than in employed patients. Regarding marital status, Bell *et al*.[35] found that psychiatric morbidity among medical and surgical inpatients was associated with being single. In our study, psychiatric morbidity was associated with being divorced or widowed **(Table 4).**

Zigmond and Snaith[42] found that the most common aspects of neurosis presenting in hospital practice are depression and anxiety. Similarly, in our study, depressive and anxiety symptoms were the most prevalent manifestations of psychiatric morbidity among medical and surgical inpatients. Clinically significant depressive symptoms were found in 35.2% of the patients with severe symptoms in 10.7% **(Table 3).** This finding is consistent with the earlier reports[43-46] that have shown ranges of 15% - 36% for psychologically significant depression and 8% - 14% for severe depression compared with a prevalence of depression in the community of about 4% - 8%[47]. In Iran, Ghoreishizadeh and his colleagues[48] who assessed 100 surgical inpatients

using only Beck Depression Inventory found that 69% of the patients scored 10 or more and 34% scored 18 or more.

Several explanations for the high prevalence of mental disorders in medical settings have been introduced. One explanation is a psychological reaction to the distress imposed by a chronic medical condition, by a life-threatening condition, or by the overall severity of the illness. Another is a difference in illness perception and behavior in which mentally disordered patients may consider themselves more troubled by medical conditions and therefore be more likely to seek medical help than mentally healthy patients. A third possible explanation is somatization[49]. Derogatis and Wise[50] have outlined four distinct modes of interaction between depression or anxiety and medical illnesses: depression/anxiety with medical etiology, depression/anxiety presenting as somatizing, depression/anxiety precipitated by a medical disorder, and depression/anxiety that is concomitant with a medical disorder.

Our finding of higher prevalence of depressive symptoms in female compared with male medical and surgical inpatients **(Table 5)** is consistent with that of Nair and Pillay[51].

It should be noted that patients with depressive symptoms constituted 82.5% of patients with psychiatric morbidity in our study. So, the higher prevalence of psychiatric morbidity in females, divorced and widowed, and unemployed patients is attributed, mainly, to the higher prevalence of depressive symptoms in these patients.

An important finding in our study was the higher prevalence of depressive symptoms in inpatients with cerebrovascular diseases than in those with other diseases **(Table 6).** This finding is consistent with that of Rao[52] that stroke is the commonest physical disorder accompanying depression in patients referred to a liaison old age psychiatry service. Previous reports have indicated that depressive symptomatology is both predictive of stroke[53] and a common psychiatric consequence of stroke[54] especially in cases of lesions affecting the prefrontosubcortical circuits (namely the caudate, pallidum, and genu of internal capsule) and in particular on the left cerebral hemisphere[55]. In our study, owing to the cross-sectional design of the study, the temporal relationship between stroke and depression (i.e., which of them preceded the other) could not be found.

In medically ill patients, anxiety or fear may be a reaction to the stress of illness or hospitalization, may be due to a pre-existing psychiatric disorder, may be a manifestation of the medical illness itself, or may be an adverse effect of medication[56]. This explains the high prevalence of anxiety symptoms among physically ill patients. Previous studies have indicated that between 5% and 20% of general medical inpatients have an

anxiety disorder[57]. The percentage of patients having clinically significant anxiety symptoms in our study (8.5%) **(Table 3)** has come within the range reported in previous studies.

Most cases of anxiety (66.7%), in our study, had comorbid depressive symptoms which might have contributed to the found similarities in prevalence pattern between anxiety and depressive symptoms; both of them were found to be more prevalent in female, divorced and widowed, and unemployed compared with male, married and single, and employed patients respectively **(Table 5).**

Disorientation is an invariable feature of delirium, and is almost invariable in well established cases of dementia[58]. So, presence of disorientation in an apparently conscious patient in a medical or surgical ward indicates presence of delirium or dementia which might have been overlooked. It has been reported that delirium occurs in about 15-20% of all general admissions to hospital[59] with higher frequency in elderly people and in those with pre-existing cognitive impairment[60]. However, disorientation is under-identified in clinical practice[61]. In our study, exclusion of unconscious and post-operative cases has contributed to our finding as regards prevalence of disorientation (4.7%), which is lower than the prevalence range reported in previous studies. However, our finding of statistically significant higher prevalence of disorientation in over 60 year-old patients **(Table 7)** is consistent with the above mentioned reports.

It has been reported that women are 3 times more likely to attempt suicide than are men[56], older people attempt suicide less often than do younger people[4], and that self medication or drug overdose is the most frequent method of attempting suicide[56,62]. Our findings of higher prevalence of suicidal attempt in females and in individuals below 21 year-old **(Table 8**) confirm these reports. Also, 6 out of 8 cases (75%), in our study, attempted suicide through drug overdose.

The results of our study have shown that psychiatric morbidity is significantly more prevalent among medical inpatients compared to surgical inpatients **(Table 3)**. This finding has come in agreement with that of Clarke et al.[41]. Furthermore, our finding of higher prevalence of depressive symptoms in medical compared to surgical inpatients is similar to the finding of Nair and Pillay[51]. However, the more frequency of females, widowed, and unemployed patients among medical patients than among surgical patients, in our study **(Table 1)** may explain the higher frequency of depressive symptoms, and total psychiatric morbidity in medical inpatients compared to surgical inpatients.

Number of patients recorded by their treating physicians as having psychiatric symptoms was much less than that of patients found to have psychiatric morbidity (9:122). This indicates that non-psychiatric

physicians either lack the skills of eliciting psychopathological symptoms[63] or consider these symptoms as non-significant or having no impact on patients' physical health.

Previous studies have shown that the percentage of patient admissions receiving psychiatric consultation varies from institution to institution, ranging from 1% to 10%[64-67]. That percentage in our study (4.4%) **(Table 3)** was within the range reported in previous studies**.**

Some previous studies have shown that in only 10% of general hospital patients with psychiatric disorders a psychiatric consultation is requested[6-11]. In other studies[68,69], 11% - 12% of medical inpatients with significant psychiatric morbidity are referred for psychiatric consultation. Saravay et al.[70] found that only 12% of patients with psychologically significant depression and 14% with organicity were referred for psychiatric consultation. In our study, the ratio of patients referred for psychiatric consultation to those having psychiatric morbidity (10.7%) **(Table 3)** was within the range reported in the above mentioned previous studies.

In our study, the ratio of patients referred for psychiatric consultation to those having psychiatric morbidity in medical patients was higher than that ratio in surgical patients (12.9% vs. 3.4%) **(Table 3).** This may be due to the high frequency of suicide attempters, who are usually admitted in general medical wards; among patients referred for psychiatric consultation (53.8% of patients referred for psychiatric consultation were suicide attempters).

Our study confirms findings from previous studies that, despite high prevalence of psychiatric morbidity among medical and surgical inpatients, there is often reluctance on the part of physicians to consult a psychiatrist [14]. Hospital doctors, who readily admit their lack of psychiatric knowledge and skills, frequently fail to detect psychiatric disorders and even when problems are recognized they are usually not treated or referred[63].

An important reason of non-referral, as proposed by Nair and Pillay[51], is the high patient turnover and the constant pressure placed upon doctors to have beds available for the numerous seriously ill, new patients requiring admission. Similarly, Zigmond and Snaith[42] reported that physicians and surgeons are usually aware of the emotional components of their patients' illnesses but, under pressure of work in busy hospital settings, they have little time to sort out how the neurosis contributes to the disorder or from just what form of neurosis the patient is suffering. Nair and Pillay[51], however, attributed non-referral of some patients to negative counter-transference issues in the doctors, who although recognize the problem, do not refer patients for psychiatric treatment.

In Saudi Arabia, Alhamad *et al.*[71] found that poor knowledge and

negative attitude of physicians towards psychiatry negatively influenced psychiatric referral rates and reflected the lack of integration of psychiatry and medicine at the training level. The authors recommended that psychiatrists need to work in collaboration with hospital doctors to integrate psychiatry into medicine at all levels and that education of hospital staff, patients and the community in consultation-liaison psychiatry should be a priority.

Although the problem of under-detection of psychiatric symptoms by non-psychiatric physician, and consequently under-referral, is not limited to Arab countries, poor undergraduate psychiatric training, which characterizes most Arab medical schools, is an important factor exacerbating this problem in our countries. The "stigma" of psychiatric disorders, which is more prominent in Arabic culture than in Western culture, is another factor contributing to the problem. Some non-psychiatric physicians may avoid informing their patients, who perceive psychiatry as a stigma that they are suffering from a psychiatric disorder.

**Conclusions**

1. Despite the high prevalence of psychiatric morbidity, especially depression, among general medical and surgical inpatients, a few number of patients are noted by their treating physicians as having psychopathological symptoms and a small percentage of those patients with psychiatric morbidity are referred for psychiatric consultation.
2. Female gender, unemployment, and being divorced or widowed are associated with higher prevalence of depressive and anxiety symptoms in medical and surgical inpatients. Depressive symptoms are also more common in patients with cerebrovascular diseases than in patients with other physical illnesses.
3. Disorientation is more common in elderly than in younger medical and surgical inpatients.

**الملخص**

أظهرت العديد من الدراسات إرتفاع معدل إنتشار الإضطرابات النفسية بين مرضى الأقسام الداخلية للباطنة والجراحة العامة ومع ذلك فإن القليل من هؤلاء المرضى يتم عمل استشارات نفسية لهم.

تهدف هذه الدراسة الى قياس معدل إنتشار المشكلات النفسية التي تستدعي طلب إستشارة نفسية بين مرضى الأقسام الداخلية للباطنة والجراحة العامة وكذلك قياس النسبة بين عدد المرضى ذوي هذه المشكلات وعدد الإستشارات النفسية المطلوبة لهم.

تم فحص جميع المرضى الذين أدخلوا لقسمي الباطنة والجراحة العامة بمستشفى الفروانية العام بدولة الكويت خلال شهر من حيث وجود أو عدم وجود أعراض اكتئابية، أعراض قلق، هلاوس، هياج, عدم إدراك الزمان والمكان والأشخاص، السلوك الانتحاري، وحدوث استشارات نفسية للمرضى خلال فترة إقامتهم بالمستشفى. وقد تم ذلك من خلال استعمال المقياس النفسي المختصر (Brief Psychiatric Rating Scale), استبيان بيك للاكتئاب ( Beck

Depression Inventory) مقياس القلق ذاتي التقييم (Self Rating Anxiety Scale) بالإضافة إلى الاطلاع على السجل الطبي للمريض.

من بين 295 مريضا ومريضة شملتهم الدراسة وجد أن 122 (41.4%) لديهم واحد أو أكثر من مظاهر الاضطرابات النفسية. فقد وجد أن 99 (35.2%) لديهم أعراض اكتئاب ذات دلالة إكلينيكية و 24 (8.5%) لديهم أعراض قلق ذات دلالة إكلينيكية و 14 (4.7%) لديهم عدم إدراك للزمان أو المكان أو الأشخاص و10 (3.4%) لديهم هياج و6 (2%) لديهم هلاوس و8 (2.7%) لديهم سلوك انتحاري. وقد وجد أن 13 مريضا فقط (4.4%) تم طلب إستشارات نفسية لهم وكانت النسبة المئوية للاستشارات النفسية المطلوبة بالنسبة لعدد المرضى ذوي الاضطرابات النفسية 10.7%. وقد خلصت الدراسة إلى ارتفاع معدل انتشار الاضطرابات النفسية وخاصة الاكتئاب بين مرضى الأقسام الداخلية للباطنة والجراحة العامة وإلى انخفاض نسبة الاستشارات النفسية المطلوبة لهؤلاء المرضى.

## References


1. Lipowski ZJ: Consultation-Liaison Psychiatry at Century's End, Psychosomatics 33 (2) 128-133, 1992.
2. Liptzin B, Gottlieb G L, and Summergrad P. The Future of Psychiatric Services in General Hospitals. Am J Psychiatry 164:1468-1472, October 2007.
3. House A: Psychiatric disorders, inappropriate health service utilization and the role of consultation-liaison psychiatry. Journal of Psychosomatic Research 1995; 39(7):799-802.
4. Kaplan HI, Sadock BJ: Psychiatric emergencies, Suicide. Kaplan and Sadock's Synopsis of Psychiatry Behavioral Sciences/Clinical Psychiatry, 8th Ed. Mass Publishing CO. Egypt 1998, pp. 864-872.
5. Johnson J, Weissman MM, Klerman GL. Service utilization and social morbidity associated with depressive symptoms in the community. Journal of the American Medical Association 267 (11), 1478-83, 1992.
6. Stocking M, Rothney W, Grsser G, et al: Psychopathology in the pediatric hospital: implication for the pediatrician. Psychiatr Med 1970; 1:329-338.
7. Awad GA, Poznanski EO: Psychiatric consultations in a pediatric hospital. Am J Psychiatry 1975; 132:915-918.
8. Shevitz SA, Silberfarb PM, Lipowski ZJ: Psychiatric consultation in a general hospital. A report on 1,000 referrals. Disease of the Nervous System 1976; 37: 295-300.
9. Karasu TB, Plutchik R, Steimuller RI, et al: Patterns of psychiatric consultation in a general hospital. Hosp

Community Psychiatry 1977; 29:291-294.

10. Ruskin PE: Geopsychiatric consultation in a university hospital: a report on 67 referrals. Am J Psychiatry 1985; 142: 333-336.
11. Gobar AS, Collins JL, Mathura CB: Utilization of a consultation liaison psychiatry service in a general hospital. J Nat Med Assoc 1987; 79: 505-508
12. Levitan SJ, Kornfeld DS: Clinical and cost benefits of liaison psychiatry. Am J Psychiatry 1981; 138:790-793.
13. Cassem NH, Hackett IP: Psychiatric consultation in a coronary care unit. Ann Intern Med 1983; 75:9-14.
14. Wise MG and Rundell JR, Concise guide to Consultation Psychiatry, American Psychiatric Press, Inc. Introduction p. 1-8, 1988.
15. Overall JE, Gorham DR 1962 The Brief psychiatric Rating Scale .Psychological Reports 10: 799-812.
16. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J 1961 An inventory for measuring depression. Archives of General Psychiatry 4: 561-585.
17. Zung W K, A rating instrument for anxiety disorders, Psychosomatics 1971, 12; 371-379.
18. Kaplan HI and Sadock BJ: Mood (affective) disorders, in Comprehensive Textbook of Psychiatry, 5TH edition, 1989.
19. Peck DF: Measurement in psychiatry, in Companion to Psychiatric Studies, 5th edition, Kendell RE and Zealley. Churchill Livingstone, 1993, pp. 169-186.
20. أحمد عبد الخالق "الاكتئاب لدى الكويتيين في أعقاب الغزو العراقي", 1995- مكتب الإنماء الاجتماعي- طبعة الكويت.
21. Fischer J,Corcoran K: Measures for Clinical Practice, 1994.
22. Vingerhoets G: Perioperative anxiety and depression in open-heart surgery. Psychosomatics 1998; 39:30-37.
23. Booth BM, Blow FC, Cook CA. Functional impairment and co-occurring psychiatric disorders in medically hospitalized men. Arch Intern Med; 158:1551-1559, 1998.
24. Cooper JE: The classification of mental disorders for use in general medical settings. In Psychological disorders in general medical settings (ed.N.Sartorius D, Goldberg D. de Girolamo et al.), pp. 49-59. Hogrefer and Huber, Gottingen 1990.
25. Von Korff M: Case definition in primary care: the need for clinical epidemiology. General Hospital Psychiatry 1992; 14:293-295.
26. Dean C, Suretees PG, Sashidharan SP: Comparison of research diagnostic systems in

an Edinburgh community sample. BR J Psychiatry 1983; 142:247-256

27. Goldberg D, Huxley P: Common Mental Disorders: A Biosocial Model. London, Routledge, 1992.
28. American Psychiatric Association: Quick reference to the Diagnostic Criteria from DSM-IV, Washington, DC, Multiaxial Assessment pp. 37-48, 1994.
29. Bronheim HE, Fulop G, Kunkel EJ, et al: The Academy of Psychosomatic Medicine Practice Guidelines for Psychiatric Consultation in the General Medical Setting, Psychosomatics 39: s8-s30, August 1998.
30. Smith GC, Clarke DM, Handrinos D, Dunsis A: Consultation-liaison psychiatrists' management of depression. Psychosomatics 1998; 39:244-252.
31. Derogates LR, Morrow GR, Fetting J, et al. The prevalence of psychiatric disorders among cancer patients. JAMA, 1983;249:751-757
32. Fulop G F, Strain J J, Vita J, et al: Impact of psychiatric comorbidity on length of hospital stay for medical/surgical patients: a preliminary report. Am J Psychiatry 1987; 144: 878-882.
33. Wells KB. Depression in general medical settings: implications of three health policy studies for consultation-liaison psychiatry. Psychosomatics. 1994;35:279-296.
34. Levenson JL, Hamer RM, Rossiter LF. Relation of psychopathology in general medical inpatients to use and cost of services. Am J Psychiatry. 1990;147:1498-1503.
35. Bell G, Reinstein DZ, Rajiyah G, Rosser R: Psychiatric screening of admissions to an accident and emergency wards. Br J Psychiatry 1991;158:554-557.
36. Despande SN, Sundaram KR, Wig NN: Psychiatric disorders among medical inpatients in an Indian hospital. Br J Psychiatry 1989;154:504-509.
37. Mayou R, Hawton K, Feldman E: What happens to medical patients with psychiatric disorders? J Psychosom Res 1988;32:541-549.
38. Kisely SR, Goldberg DP. Physical and psychiatric comorbidity in general practice. British Journal of Psychiatry; 169:236-242, 1996.
39. Hansen MS, Fink P, Frydenberg M, Oxhoj ML, Sondergaard L: Mental disorders in medical inpatients and the association to severity of illness, self-rated

physical disability, and health perception. Psychosomatics 2001; 42:41-47.
40. Clarke D, Minas IH, Stuart GW: The prevalence of psychiatric morbidity in general hospital inpatients. Aust NZ J Psychiatry 1991;25:322-329.
41. Feldman E, Mayou R, Hawton K, Arden E, Smith EBO: Psychiatric disorder in medical in-patients. Q J Med 1987;63(241):405-412.
42. Zigmond AS, Snaith RP: The Hospital Anxiety and Depression Scale. Acta Psychiatr Scand 1983; 67:361-370.
43. Schwabb JJ, Bialow M, Brown JM, et al: Diagnosing depression in medical inpatients. Ann Intern Med 1967; 67:695-707.
44. Moffic HS, Paykel ES: Depression in medical in-patients. Br J Psychiatry 1975; 126:346-353.
45. Cavanaugh von Ammon S: The prevalence of emotional and cognitive dysfunction in a general medical population: usin the MMSE, GHQ, and BDI. Gen Hosp Psychiatry 1983; 5:15-24.
46. McDaniel JS, Musselman DL, Porter MR, et al: Depression in patients with cancer: diagnosis, biology and treatment. Arch Gen Psychiatry 1995; 52:89-99.
47. Blazer DG, Kessler RC, McGonagle KA, et al: The prevalence and distribution of major depression in a national community sample: the national comorbidity survey. Am J Psychiatry 1994; 151:979-986.
48. Ghoreishizadeh M A, Salimi Namin M, and Moosavi Torshizi S A. Depression among General Hospital Surgical Inpatients and its Effect on Length of Hospital Stay. Research Journal of Biological Sciences 2008, 3 (9): 1018-1021.
49. Fink P: The use of hospitalization by persistent somatizing patients. Psychol Med 1992; 22:173-180.
50. Derogatis LR, Wise TN: Anxiety and depressive disorders in the medical patient. Washington, DC, American Psychiatric Press, 1989, pp. 1116-1118.
51. Nair MG and Pillay SS: Psychiatric disorder in a South African general hospital-: Prevalence in medical, surgical, and gynecological ward. Gen Hosp Psychiatry 1997;19:144-148.
52. Rao R: Sadly confused, the detection of depression and dementia on medical wards. Psychiatric Bulletin 2001, 25: 177-179.
53. Jonas BS, Mussolino ME: Symptoms of depression as a prospective risk factor for stroke. Psychosomatic Medicine 2000; 62:463-471.
54. Robinson RG: Prevalence of psychiatric disorders. In : The clinical neuropsychiatry of

stroke. Cambridge, England: Cambridge University Press; 1998: 53-59

55. Vataja R, Pohjasvaara T, Leppavuori A, Mantyla R, Aronen HJ, et al.: Magnetic Resonance Imaging Correlates of Depression After Ischemic Stroke. Arch Gen Psychiatry, 2001;58: 925-931
56. Wise MG, Rundell JR: Anxiety: in Concise Guide to Consultation Psychiatry. American Psychiatric Press, Inc. Washington, DC. 1988, pp. 56-68.
57. 56. Strain JJ, Leibowitz MR, Klein DF: Anxiety and panic attacks in the medically ill. Psychiatr Clin North Am 1981; 4:333-350.
58. Gelder M, Gath D, Mayou R, Cowen P: Psychiatry and medicine. In Oxford Textbook of Psychiatry, 3rd edition, Oxford New York Melbourne, Oxford University Press 1996, pp. 342-413.
59. Trzepacz PT: Delirium: advances in diagnosis, pathophysiology, and treatment. Psychiatr. Clin North Am 1996; 19:429-448.
60. American Psychiatric Association. Practice guidelines for the treatment of patients with delirium. Washington, DC: American Psychiatric Association, 1999.
61. Inouye SK: The dilemma of delirium: clinical and research controversies regarding diagnosis and evaluation of delirium in hospitalized elderly medical patients. Am J Med 1994; 97:278-288.
62. Frierson RL, Lippmann SB: Psychiatric consultation for patients with self-inflicted gunshot wounds. Psychosomatics 1990; 31:67-74.
63. Mayou R, Smith E: Hospital doctors' management of psychological problems. British Journal of Psychiatry 1986; 148:194-197.
64. Lipowski ZJ: Review of consultation psychiatry and psychosomatic medicine, II: clinical aspects. Psychosom Med 1967; 29: 201-224.
65. Wallen J, Pincus HA, Goldman HH, et al: Psychiatric consultation in short-term general hospitals. Arch Gen Psychiatry 1987; 44:163-168.
66. Pablo RY, Lamarre CJ: Psychiatric consultation on a general hospital. Can J Psychiatry 1988; 33:224-230.
67. Swigar ME, Sanguineti VR, Piscatelli RL: A retrospective study on the perceived need for and actual use of psychiatric consultation in older medical patients. Int J Psychiatry Med 1992; 22:239-249.
68. Maguire GP, Julier DL, Hawton KE, et al: Psychiatric morbidity

and referral on two general medical wards. Br Med J 1974; 1:268-270.

69. Torem M, Saravay SM, Steinberg H: Psychiatric liaison: benefits of an "active" approach. Psychosomatics 1979; 20:598-611.
70. Saravay SM, Steinberg MD, Weinschel B, Pollack S, Alovis N: Psychological comorbidity and length of stay in the general hospital. Am J Psychiatry 1991;148:324-329.
71. Alhamad AM, Al-Sawaf MH, Osman AA, Ibrahim IS: Differential aspects of consultation-liaison psychiatry in a Saudi hospital. II: knowledge and attitudes of physicians and patients. East Mediterr Health J. 2006 May-Jul;12(3-4):324-30.

**Table (1): Characteristics of medical and surgical inpatients**

| | **Medical pts.***(n=193)* | | **Surgical pts.** *(n=102)* | | **Total***(n=295)* | |
|---|---|---|---|---|---|---|
| | *N.* | *%* | *N.* | *%* | *N.* | *%* |
| **Sex** | | | | | | |
| Male | 95 | 49.2 | 64 | 62.7 | 159 | 53.9 |
| Female | 98 | 50.8 | 38 | 37.3 | 136 | 46.1 |
| **Age** | | | | | | |
| Mean ± SD (years) | 50.95±18.8 | | 35.70 ± 12.48 | | 45.68+18.39 | |
| Age groups (years): | | | | | | |
| < 21 | 15 | 7.8 | 13 | 12.7 | 28 | 9.5 |
| 21 – 40 | 41 | 21.2 | 56 | 54.9 | 98 | 33.2 |
| 41 – 60 | 76 | 39.4 | 29 | 28.4 | 105 | 35.6 |
| > 60 | 61 | 31.6 | 4 | 3.9 | 64 | 21.7 |
| **Nationality** | | | | | | |
| Kuwaiti | 115 | 59.6 | 44 | 43.1 | 159 | 53.9 |
| Other Arab | 36 | 18.6 | 43 | 42.2 | 79 | 26.8 |
| Asian* | 42 | 21.8 | 15 | 14.7 | 57 | 19.3 |
| **Marital status** | | | | | | |
| Married | 131 | 67.9 | 77 | 75.5 | 208 | 70.5 |
| Single | 24 | 12.4 | 22 | 21.6 | 46 | 15.6 |
| Divorced | 6 | 3.1 | 1 | 1.0 | 7 | 2.4 |
| Widowed | 32 | 16.6 | 2 | 2.0 | 34 | 11.5 |
| **Employment** | | | | | | |
| Employed | 79 | 41 | 74 | 72.6 | 153 | 51.9 |
| Not employed | 114 | 59 | 28 | 27.4 | 142 | 48.1 |

*From India, Bangladesh, Sri Lanka, Philippines, Pakistan, Iran, and Afghanistan.

**Table (2): Physical diagnosis of medical and surgical inpatients**

| **Medical patients** | *N.* | *%* | **Surgical patients** | *N.* | *%* |
|---|---|---|---|---|---|
| Cardiovasc. dis. | 81 | 42.0 | Anal dis. (piles, fissure& fistula) | 29 | 28.4 |
| Gastrointest. dis. | 22 | 11.4 | | | |
| Respiratory dis. | 21 | 10.9 | Hernias | 27 | 26.5 |
| Blood dis. | 6 | 3.1 | Biliary dis. | 11 | 10.8 |
| Cerebrovasc. dis. | 14 | 7.3 | Goiter | 5 | 4.9 |
| Other CNS dis. | 9 | 4.7 | Appendicitis | 4 | 3.9 |
| Drug overdose | 9 | 4.7 | Miscellaneous | 26 | 25.5 |
| Endocrine dis. | 7 | 3.6 | | | |
| Infectious dis. | 5 | 2.6 | | | |
| Neoplastic dis. | 5 | 2.6 | | | |
| Miscellaneous | 12 | 6.9 | | | |
| No organic dis. | 2 | 1.6 | | | |

**Table (3): Psychiatric morbidity, referrals and comparison between medical and surgical inpatients**

| | **Medical pts.** *(n=193)#* | | **Surgical pts.** *(n=102)#* | | **Total** *(n=295)#* **Signif.##** | | |
|---|---|---|---|---|---|---|---|
| | *Count* | *%* | *Count* | *%* | *Count* | *%* | *P* |
| **Depression** | | | | | | | |
| *Mild* | 11 | 6.1 | 6 | 5.9 | 17 | 6.0 | .109 |
| *Moderate* | 38 | 21.2 | 14 | 13.7 | 52 | 18.5 | .099 |
| *Severe* | 23 | 12.8 | 7 | 6.9 | 30 | 10.7 | .015* |
| **Total** | 72 | 40.2 | 27 | 26.5 | 99 | 35.2 | .014* |
| **Anxiety** | 19 | 10.6 | 5 | 4.9 | 24 | 8.5 | .074 |
| **Mixed anx.&dep.** | 13 | 7.3 | 3 | 2.9 | 16 | 5.7 | .105 |
| **Disorientation** | 14 | 7.2 | 0 | 0.0 | 14 | 4.7 | .002* |
| **Excitement** | 9 | 4.7 | 1 | 1.0 | 10 | 3.4 | .087 |
| **Hallucinations** | 6 | 3.1 | 0 | 0.0 | 6 | 2.0 | .076 |
| **Suicidal behavior** | 8 | 4.1 | 0 | 0.0 | 8 | 2.7 | .032* |
| **Overall psych. morb.** | 93 | **48.2** | 29 | **28.4** | 122 | **41.4** | .001* |
| **Psychiatric referrals** | 12 | 6.2 | 1 | 1.0 | 13 | 4.4 | .029* |
| **Referral /morb. ratio** | 12.9% | | 3.4% | | 10.7% | | |

*# Patients with disorientation were excluded from results related to depression and anxiety. ##Chi-Square test * significant P<0.05*

**Table (4): Prevalence of psychiatric morbidity according to sex, age, marital and employment status in medical and surgical inpatients***(n=295)*

| | **Psychiatric morbidity** | | |
|---|---|---|---|
| | *Count* | *% (within group)* | *Significance P* |
| **Sex** | | | |
| Male *(n=159)* | 49 | 30.8 | 0.000* |
| Female *(n=136)* | 71 | 52.2 | |
| **Age** *(in years)* | | | |
| < 21 *(n=28)* | 9 | 32,1 | 0.239 |
| 21 – 40 *(n=98)* | 35 | 35.7 | |
| 41 – 60 *(n=105)* | 44 | 41.9 | |
| > 60 *(n=64)* | 32 | 50.0 | |
| **Marital status** | | | |
| Married *(n=208)* | 84 | 40.4 | 0.016* |
| Single *(n=46)* | 12 | 26.1 | |
| Divorced *(n=7)* | 3 | 42.9 | |
| Widowed *(n=34)* | 21 | 61.8 | |
| **Employment** | | | |
| Employed *(n=153)* | 42 | 27.5 | 0.000* |
| Not employed *(n=142)* | 78 | 54.9 | |

** Significant*

**Table (5): Prevalence of depression and anxiety according to sex, age, employment and marital status in medical and surgical inpatients*(n=295)***

| | **Depression** *(n=99)* | | | **Anxiety** *(n=24)* | | |
|---|---|---|---|---|---|---|
| | *Count* | *% within group* | *Significance P* | *Count* | *% within group* | *Significance P* |
| **Sex** | | | | | | |
| Male *(n=149)* | 39 | 26.2 | .001* | 7 | 4.7 | .014* |
| Female *(n=132)* | 60 | 45.5 | | 17 | 12.9 | |
| **Age** *(in years)* | | | | | | |
| < 21 *(n=28)* | 9 | 32.1 | .569 | 0 | 0.0 | .385 |
| 21 – 40 *(n=98)* | 30 | 30.6 | | 10 | 10.2 | |
| 41 – 60 *(n=103)* | 41 | 39.8 | | 9 | 8.7 | |
| > 60 *(n=52)* | 19 | 36.5 | | 5 | 9.6 | |
| **Marital status** | | | | | | |
| Married *(n=199)* | 70 | 35.2 | .259 | 17 | 8.5 | .018* |
| Single *(n=46)* | 12 | 26.1 | | 0 | 0.0 | |
| Divorced *(n=7)* | 3 | 42.9 | | 1 | 14.3 | |
| Widowed*(n=29)* | 14 | 48.3 | | 6 | 20.7 | |
| **Employment** | | | | | | |
| Employed*(n=152*) | 39 | 25.7 | .000* | 8 | 5.3 | .033* |
| Unempl. *(n=129)* | 60 | 46.5 | | 16 | 12.4 | |

* Significant

**Table (6): Prevalence of depression in different diagnostic categories**

| **Diagnostic categories** | **Depression** *(n=99)* | | | | |
|---|---|---|---|---|---|
| | *N.* | *%within diag. cat.* | *Significance Chi-Squ.* | *df* | *P* |
| Cerebrovascular dis. *(n=12)* | 10 | 83.3 | 47.725 | 17 | .000* |
| Drug overdose *(n=11)* | 9 | 81.8 | | | |
| Blood dis. *(n=6)* | 4 | 66.7 | | | |
| Biliary dis. *(n=11)* | 6 | 54.5 | | | |
| Urinary tract dis. *(n=4)* | 2 | 50.0 | | | |
| GIT dis. *(n=12)* | 6 | 50.0 | | | |
| Appendicitis *(n=4)* | 2 | 50.0 | | | |
| Respiratory tract dis. *(n=20)* | 7 | 35.0 | | | |
| Other CNS dis. *(n=11)* | 3 | 27.3 | | | |
| Cardiocvascular dis. *(n=75)* | 22 | 29.3 | | | |
| Diabetic complic.. *(n=7)* | 2 | 28.6 | | | |
| Anal dis. (piles, fissure& fistula) *(n=29)* | 8 | 27.6 | | | |
| Hernias (*(n=27)* | 1 | 3.7 | | | |
| Goiter *(n=5)* | 0 | 0.0 | | | |
| Fever for investing. *(n=3)* | 0 | 0.0 | | | |
| No organic dis. *(n=2)* | 1 | 50.0 | | | |
| Miscellaneous *(n=42)* | 16 | 38.1 | | | |

** Significant*

**Table (7): Distribution of cases of disorientation according to sex, age, and physical diagnostic categories in medical and surgical inpatients**

| | **Disorientation** *(n=14)* | | | |
|---|---|---|---|---|
| | *Count* | *% within Group* | *% within disorientation* | *Significance P* |
| **Sex** | | | | |
| Male *(n=159)* | 10 | 6.3 | 71.4 | .178 |
| Female *(n=139)* | 4 | 3.3 | 28.6 | |
| **Age groups** *(in years)*: | | | | |
| < 21 *(n=28)* | 0 | 0.0 | 0.0 | .000* |
| 21 – 40 *(n=98)* | 0 | 0.0 | 0.0 | |
| 41 – 60 *(n=105)* | 2 | 1.9 | 14.3 | |
| > 60 *(n=64)* | 12 | 18.8 | 85.7 | |
| **Physical diagnosis** | | | | |
| Cardiovascular dis. *(n=78)* | 3 | 3.8 | 21.4 | .101 |
| Respiratory dis. *(n=23)* | 3 | 13.0 | 21.4 | |
| Cerebrovascular dis. *(n=14)* | 2 | 14.3 | 14.3 | |
| Other CNS dis. *(n=14)* | 3 | 21.3 | 21.3 | |
| Diabetic complic. *(n=8)* | 1 | 12.5 | 7.1 | |
| Miscellaneous *(n=18)* | 2 | 11.1 | 14.3 | |

** Significant*

**Table (8): Prevalence of suicidal attempt according to sex and age**

| | **Suicidal attempt** *(n= 8)* | | *Significance P* |
|---|---|---|---|
| | *Count* | *%* | |
| **Sex** | | | |
| Male *(n= 159)* | 2 | 25.0 | .096 |
| Female *(n= 136)* | 6 | 75.0 | |
| **Age groups** *(years)* | | | |
| < 21 *(n=28)* | 6 | 75.0 | .000* |
| 21 – 40 *(n=98)* | 2 | 25.0 | |
| 41 – 60 *(n=105)* | 0 | 0 | |
| > 60 *(n=64)* | 0 | 0 | |

** Significant*


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* One of 6 regional general hospitals in Kuwait serving a catchment area of about 650,000 (of the total 3 million population). It has 449 beds, of which 114 in general medicine department (57 for male and 57 for female) and 87 in general surgery department (68 for male and 19 for female).

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