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Comparison between Psychiatrists and Non-Psychiatric Physicians Identifying Psychiatric Symptoms: A Clinical Study

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Abstract

Background and Objectives: The high prevalence of psychiatric conditions in the general hospital settings and its demand on the system is well known. The aim of this study was to examine the overall diagnostic trends in psychiatric consultations in the city of Zulfi in Riyadh province and to test the ability of non-psychiatric physicians in proper detection of psychiatric morbidity.

Subjects and methods: 113 patients were studied in detail over a period of two years.

Results: three psychiatric diagnoses were the most prevalent: (1) neurotic, stress related and somatoform disorders (27.6%) (2) Organic, including symptomatic mental disorder (29.2%), and Mood [affective] disorders (15%). There was significantly high agreement between psychiatrists and non- psychiatric physicians in detecting single psychiatric symptomatology (P<0.001),With higher ability to detect negative symptoms (99.1%) conversion (96.5%-) ; and suicide/para suicide (95.6%), but non-psychiatric physicians showed lower ability to detect cognitive, emotional or psychotic symptoms and a significantly lower tendency in detecting the whole range of psychiatric symptoms.

Conclusion: Non-psychiatric physicians, sometimes, over-estimate or underestimate the importance of symptom. Because of the high prevalence of organic / cognitive disorders, neurotic and mood disorders in the general medical sitting, Consultation-Liaison teaching should devote most of its energy towards the identification and management of these disorders.

Key words

Consultation-Liaison; Psychiatric; Somatoform disorders

Introduction

Consultation - Liaison psychiatry (CL) is concerned with the clinical service, to medical surgical patients with co-morbid psychiatric difficulties, psycho-educating and assisting non-psychiatric health workers to recognize and manage psychiatric problems in patients under their care [1], as well as developing research in this area; finally reducing costs and assuring quality care [2]. Estimates of the proportion of general hospital inpatient who receive psychiatric consultation range between 0.9% and 6%. However, certain medical conditions (e.g. cancer, spinal cord injury, and AIDS) have much higher consultation rates [3,4] . In the general hospital setting, the prevalence of diagnosable psychiatric conditions have been estimated as between 30% to 60% depending on the criteria used [5,6]. Despite their high prevalence rate and demands on the system, psychiatric disorders in primary care and general hospital settings often go unrecognized and untreated [7]. Evidence from a large, multi site epidemiological study by the National Institute of Mental Health revealed that more than 50% of all patients with significant psychiatric disorders have been treated mainly within the primary medical care service sector [8]. However, there is evidence that despite this broad awareness, psychiatric disorders continue to be under-diagnosed or misdiagnosed in the general medical inpatient settings [9,10] . Those undiagnosed psychiatric comorbidities have been associated with poorer outcome. For example: depression is associated with increased mortality and morbidity in patients with coronary heart disease [11].

A liaison psychiatry service, which improves treatment of psychological disorders in the general hospital, should reduce the investigations performed for physical symptoms that actually reflect underlying distress, reduce length of hospital stay, to relieve symptoms of distress and improve the quality of life of patients with serious physical illness. Hence, education of non psychiatric physicians about medical and psychiatric issues related to patients' illness is a core component of the liaison model. In this study we sought to: reveal the ability of non-psychiatric physicians in proper detection of psychiatric symptoms, examine whether the overall diagnostic trends in psychiatric consultation patients seen in prior studies still held true, or if a new pattern of referral and diagnosis may be emerging.

Subjects and methods

The study was conducted at the Zulfi general hospital and private clinics in zulfi. The assessment was performed by professional psychiatrists. The study was designed over a period of two years starting from 1st march 2012 - 31st March 2014. A total of 113 cases were studied. Data was collected in semi-structured sheets including the following details: personal data: site and mode of referrals; timing of referral, provisional medical and psychiatric diagnoses. Provisional psychiatric symptoms detected by psychiatrists compared to those

detected by non-psychiatric physicians; reported past psychiatric history; whether the patient was informed or not about being referred to a psychiatrist and finally, if there is any recommendations to refer the patient to continue treatment at the psychiatric hospital.

Statistical methodology

Data were collected and analyzed using the SPSS version 12 for Windows. Entered data were checked for accuracy then for normality, using Kolmogorov-Smirnov & Shapiro-Wilk tests, and proved to be normally distributed. Qualitative variables were expressed as number and percentage while quantitative variables were expressed as median, mean and standard deviation (S).The arithmetic mean was used as a measure of central tendency, while the standard deviation (S) was-used as a measure of dispersion. The following statistical tests were used:

Independent samples Mann-Whitney's U-test (or Z-test) was used as a nonparametric test of significance for comparison between two sample medians.

The _2-test was used as a non-parametric test of significance for comparison between the distributions of two qualitative variables.

The Fisher's exact test was used as a non-parametric test of significance for comparison between the distributions of two qualitative variables whenever the 2- test was not appropriate. It gives a p-value directly.

Kappa measures the agreement between the evaluations of two raters when both are rating the same object. A value of 1 indicates perfect agreement. A value of 0 indicates that agreement is no better than chance. Kappa is only available for tables in which both variables use the same category values and both variables have the same number of categories. A 5% level is chosen as a level of significance in all statistical significance tests used.

Diagnoses	N	%
Organic, including symptomatic, mental disorder	33	29.2
Neurotic, stress-related somatoform	31	27.6
Mood [affective] disorders	17	15
Psychotic disorders	10	8.8
Mental and behavioral disorders due to psychoactive substance use	3	2.7
Co morbidity	6	5.3
No psychiatric diagnosis	13	11.5

Table 1: Final psychiatric diagnoses of 113 patients referred to C-L psychiatry

Results

Demographics and characteristics of the sample: In the sample of 113 patients, female sex predominates (56.6%). Patients' age ranged from 7-93 years, nearly half of them (49.6%) were below 40 years. Non-psychiatric physicians did not inform 59.3 % of their patients about being referred to psychiatric consultations. Out of the 113 patients, 55.8 % had past psychiatric illness.

Three psychiatric diagnoses were the most prevalent

Neurotic, stress-related and somatoform disorders

Organic, including symptomatic mental disorder

Mood (affective) disorders (Table 1)

MW: Mann-Whitney test

Agreement between psychiatric and non-psychiatric physicians in detecting psychiatric symptoms:

Quantitative agreement

There was significantly high agreement in detecting single psychiatric symptomatology (P<0.001) but less agreement for detecting multiple symptoms. (Table 2)

Presenting symptom	Agreement		Disagreement		Kappa	P value
	Yes / Yes	No/ No	Yes / No	Yes / No		
Suicide or Para-suicide	25	83	1	4	0.880	<0.001 *
Negative symptoms	1	111	1	-	0.663	<0.001 *
Behavioral Disturbance	29	66	11	7	0.644	<0.001 *
Nonorganic sleep disorders	12	87	12	2	0.583	<0.001 *
Dissociative [conversion] disorders	3	106	1	3	0.582	<0.001 *
Emotional	24	56	25	8	0.380	<0.001 *
Psychotic symptoms	8	86	13	6	0.362	<0.001 *
Catatonic	2	104	7	-	0.345	<0.001 *
Cognitive	4	95	14	-	0.325	<0.001 *
Disturbed consciousness	4	94	11	4	0.281	<0.001 *
No psychiatric symptoms	1	107	5	-	0.275	<0.001 *

Table 2: Agreement of symptoms between psychiatrist & non-psychiatric physicians (n=113)

Multiple symptom presentations

Even after high agreement between the two groups, non-psychiatrists were still significantly less able to detect the whole range of symptoms quantitatively (Table 3). Psychiatrists reported multiple symptom presentations in (72.6%) of patients. Unfortunately, non-psychiatrists were able to detect multiplicity of symptoms in only (30.4%) of cases. Non-psychiatric physicians were also significantly less able to define cases with no psychiatric symptoms.

Number of symptoms category	Psychiatrists (n=113)	Non-psychiatric physicians (n=113)	P
One symptom	31 (27.4%)	71 (62.8%)	<0.001*
Multiple symptoms	81 (71.7%)	34 (30.1%)	<0.001*
No psychiatric symptoms	1 (0.9%)	8(7.1%)	<0.112

Table 3: Comparison between psychiatrists and non-psychiatric physicians regarding number of symptom category detected

Qualitative agreement

After adding both positive (yes/yes) and negative (No/No) agreements for each symptom, the highest agreement was in detecting negative symptoms (99.1%), followed by Dissociative [conversion] disorders (96.5%) then suicide/Parasuicide (95.6%). Despite high prevalence of cognitive disorders (29.2%), and Mood [affective] disorders (15%), non-psychiatric physicians were less able to define cognitive deficits and emotional symptoms as a presenting symptom with a 17.82% and 29.2% agreement, respectively.

Psychiatric symptoms and/or diagnoses and their relations

Despite high agreement of suicide detection, it did not correlate positively either with urgency of request (P=0.42) or with recommendations of referral to the psychiatric hospitals (P=0.567). On the other hand, patients who presented with suicide /para-suicide were referred to C-L psychiatry at a significantly earlier time (3.81 ± 6.88 days, P=0.001). Suicide /para-suicide were more prevalent in females (P=0.031) and was positively associated with younger age (23.53 ± 9.52 years, P<0.001). In contrast, the presence of organic/cognitive disorders correlated positively with older age (51.94 ± 17.69, PO.001). A significant number of patients with organic/cognitive disorders were receiving their treatment in non-psychiatric hospitals and psychiatrists did not find any need to refer them to the psychiatric hospital to continue their treatment (P=0.018) (Table 4). Psychiatrists preferred to refer patients with either negative symptoms or psychotic disorders to continue their treatment in the psychiatric hospital (Table 5). Regarding neurotic & stress related disorders, they were significantly prevalent in females (P=0.013), but not associated with specific age. Substance use disorders were significantly present in younger age group (26.17 ± 4.67, P>0.001).

Psychiatric diagnoses made by Psychiatrists	Sex			Age(years)			Time of C-L (days)		Recommendation of referral		
	F (n=64)	M (n=49)	P-Value	X±SD	t-test	P	X±SD	M-W test P-value	Not referred (n=92)	referred (n=21)	P-value
Neurotic & stress related disorders	15	3	0.013*	36.83 ± 15.02	0.996	p>0.05	17.89 ± 9.18	0.289	14	4	0.742
Suicide or Para suicide	15	4	0.031*	23.53 ± 9.52	6.86	p<0.001*	1.21 ± 1.03	0.001*	15	3	1,000
Mood disorders	9	6~	0.844	39.71 ± 120.98	0.127	p>0.05-	10.06 ± 10.00	0.063	10	6	0.085
Substance use disorders	2	4	0.42	26.17 ± 4.67	5.56	p<0.001*	10.67 ± 110.73	0.089	5	1	1.000
Psychotic disorders	4	6	0.326	40.801 ± 19.34	0.09	p>0.05	5.401 ± 8.39	0.470	4	6	0.003*
Organic/ cognitive disorders	15	20	0.05	51.94±17.69	4.72	p<0.001*	5.71 ± 15.73	0.162	33	2	0.018*
No specific psychiatric diagnosis	4	6	0.27	41.42 ± I9.79	0.22	p>0.05	4.25 ± 14.00	0.700	11	-	0.119

Table 4: Relationship of symptoms detected by psychiatrists in the sample (n=113 patients).* Sign. At 5% level of significance.

Discussion

In the current study, Organic, including symptomatic, mental disorder (29.2%) and neurotic, stress related disorders (27.6%) as well as Mood [affective] disorders (15%) showed the highest prevalence in both whole and sub-samples respectively. The majority of previous studies reported that the most common diagnostic group was Mood [affective] disorders [12,14]. Three of the previous studies included "neurosis" or "neurotic disorders" as diagnostic group and did not include data for mood disorders as a discrete group [15-17]. The interpretations of previous studies may overestimate the prevalence of mood disorders and underestimate the prevalence of anxiety disorders. Although found less consistently across these study organic/ cognitive disorders were generally the second most common group, detected delirium in 10% of all medical inpatients and all over 30% in some high-risk groups [18]. Katone and Bourgeosis reviewed the diagnoses from all 901 in-patient psychiatric consultation [19,20]. The most frequent diagnosis groups were mood (40.7%), cognitive (32%), and substance use disorders (18.6%) when multiple psychiatric diagnoses were made. The rates of those diagnoses were 35.4%, 20.1%. Dilts, et al, reported that three diagnostic categories- cognitive disorders, substance use disorders and depressive disorders - dominate both the initial and final diagnosis impression accounting as a group for 56.6% and 80.6% of diagnoses, respectively [21].

Symptoms	Attitude of patient towards C-L			Urgency of request			Time of C-L (days)			Recommendation of referral		
	Informed	Not Informed	P-Value	Urgent	Not urgent	P-value X2	No	Yes	MW P-Value	Not referred	Referred	P-Value
							X ± SD	X ± SD				
Psychos	7	14	0.446	6	15	0.655	5.53 ± 6.97	7.57 ± 8.6	0.180	14	7	0.066
Emotional	21	28	0.684	11	38	0.616	5.17 ± 6.74	6.88 ± 7.39	0.233	37	12	0.158
Cognitive	5	13	0.223	5	13	0.769	5.84 ± 7.42	6.28 ± 9.79	0.196	17	1	0.187
Disturbed consciousness	7	8	0.614	4	11	1.00	5.82 ± 7.25	6.53 ± 7.83	0.523	12	3	1.00
Behavioral disturbance	18	22	0.492	12	28	0.341	5.41 ± 7.33	6.83 ± 7.25	0.067	35	5	0.218
Suicide or Para	10	16	0.790	8	18	0.420	6.54 ± 7.34	3.81 ± 6.88	0.001*	20	6	0.567
Conversion	2	2	1.000	2	2	0.256	6.05 ± 7.39	2.25 ± 1.50	0.345	2	2	0.156
Sleep disturbance	12	12	0.296	7	17	0.575	4.88 ± 6.39	9.75 ± 9.15	0.001*	21	3	0.557
Negative symptoms	1	1	1.000	-	2	1.00	5.97 ± 7.35	2.50 ± 2.12	0.612	-	2	0.033*
Catatonic	6	3	0.156	3	6	0.687	5.85 ± 7.16	6.56 ± 9.21	0.875	7	2	0.673
No Psychiatric symptoms	4	2	0.222	-	6	0.334	5.97 ± 7.3&	4.83 ± 6.15	0.488	6	-	• 0.591

Table 5: Relationship of symptoms detected by psychiatrists in the sample (n=113 patients). * Sign. At 5% level of significance.

Although, most of our patients were presented with multiple symptoms (72.6%), non-psychiatric physicians showed tendency for detecting only one psychiatric symptom (62.8%). Seven % of our patients presented with no psychiatric --'symptoms whatsoever. The low detection sensitivity may reflect lack of knowledge, negative attitude, or may be work overload which all are expected in medical settings. Moderate agreement accuracy in conversion, sleep and behavioral disturbance symptoms could be explained by being more overt and distressing for medical staff. Highest degree of accuracy was in the detection of negative symptoms, suicidal and para-suicidal symptoms which are distressing for non psychiatrists and has medico-legal implications Non-psychiatrists exhibited tendency for referring cases presented with sleep disturbance and suicide earlier than those complaining from other symptoms (P=0.001) but they refer them as non urgent, and did not even inform the patients about psychiatric referral. This may reflect the lack of official referral protocol, negative attitude as well as less efficient liaison communication and referral system. Interestingly, it was observed that suicidal and para-suicidal patients showed highest detection sensitivity with high agreement in liaison setting and early referral, but psychiatrists showed low tendency for referring them to the psychiatric hospital. This could be explained by socio-cultural resistance, fear of stigma and patients' preference for treatment within general medical settings and may raise questions about the system of referral in both directions. The relatively low prevalence of substance use disorders in our study may be explained by a less perceived need to refer to C-L psychiatrists or by a more pronounced resistance of patients due to local socio cultural factor or by unlikely coincidence of neurological and/or medical disorders occurring as a result of substance abuse.

In our study, there is a likelihood of accuracy when non-psychiatric physicians suspect negative symptoms, conversion or suicide. This may be due to the small number of patients who presented with negative symptoms or conversion, or due to the overtness of symptom in case of suicidality. However, those non-psychiatric physicians were prone to miss the significance of cognitive impairment, emotional and psychotic symptoms. This failure to accurately appreciate the prevalence of cognitive impairment can delay treatment of covert general medical conditions, and can result in the initiation of inappropriate therapy. Our result confirms the difficulty in the identification of cognitive disorders that has been seen in others studies [22,23]. As well as difficulty in recognizing the whole range of psychiatric symptoms, a result reported by Bridges and Goldberg who found that 72% of patients suffering from psychiatric symptoms remained unrecognized by the neurologists [24]. Similarly, Mayou and Howton declared that diagnosis of mental disorder in patients, who are admitted to the general hospital, is often missed or not judged to be relevant for specialist treatment in almost 905 of the cases [25]. However the non-psychiatric physicians in our study had high agreement with psychiatric physicians in diagnosing symptoms of suicide like withdrawal, hopelessness, moodiness etc. they were also able to detect accurately symptoms of sleep disorders (light sleep, fragmented sleep, waking up from sleep easily), dissociative disorders (poor coordination, difficulty in speaking/ swallowing, loss of touch and pain sensation) and behavioral disorders (conduct disorders, hyperactive disorders). This could be used to better the clinical liaison setting and may help in early referral of patients with this disorder

Conclusion

Our study showed many discrepancies in the ability to detect multiple symptoms between non psychiatric physicians and

psychiatrists; in addition some of the non psychiatrists did not inform the patients about the psychiatric referral. Hence we suggest- Better liaison is needed for education of non psychiatrists for early and accurate detection of psychiatric symptoms. Evaluate the physicians who could identify multiple symptoms regarding any additional courses attended or training received by them. Allocate the physicians in clinics where more younger female population is seen, who are at risk of having more suicidal tendencies. Formulate a referral form specifically for psychiatric disorders which will help them to identify multiple symptoms and identify disorders which need immediate referral to psychiatrists. Good referral system and ability to follow up is needed for better health service planning and cost effective psychiatric service.

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