

Profile of Patients Seen in Consultation-Liaison Psychiatry in India: A Systematic Review

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ABSTRACT

Objectives: This review aimed to evaluate all the published studies from India conducted in the consultation-liaison (CL) psychiatry setting to identify the diagnostic patterns and referral rates in this setting. Understanding the same can help in organizing the services and knowing the training needs.

Materials and Methods: A thorough literature search was done in August 2020 using different search engines (PubMed, Medknow, and Google Scholar). This was followed by an individual search of various Indian Psychiatry journals and a hand search of references in the available articles. Only those studies that described patients referred to psychiatry services from various specialties were included.

Results: A total of 33 studies were selected for the review. More than half of them were published in the last 5 years. Studies have primarily reported psychiatric profile medically ill inpatients referred to CL psychiatry services, with the majority of the studies reporting the number of patients seen for the duration of at least 1 year. The referral rates for inpatients across different institutes have varied from 0.01% to 3.6%.

The referral rates from emergency set-ups have varied from 1.42% to 5.4%, and in outpatients, from 0.06% to 7.17%. The most commonly diagnosed psychiatric disorders across different studies include depression; organic disorders, including delirium; substance use; intentional self-harm; and anxiety disorders.

Conclusions: A limited number of studies have reported the profile of patients seen in CL psychiatry setups. Available data from these studies suggest that referral rates to psychiatry services from other specialists are dismal. There is an urgent need to change the focus of psychiatry training at both undergraduate and the postgraduate levels to enhance the psychiatric knowledge of physicians to improve psychiatry referrals.

Keywords: Consultation, liaison, psychiatry, India

Key Messages: 1. The referral rates to psychiatry liaison services for all the inpatients across different institutes have varied from 0.01% to 3.6%.

2. The referral rates to consultation liaison psychiatry services in the emergency set-ups have varied from 1.42% to 5.4%,

3. The most common diagnosed psychiatric disorders across different studies include depression, organic disorders, including delirium, substance use, intentional self-harm, and anxiety disorders.

Compared to other subspecialties of psychiatry, such as child or addiction psychiatry, consultation-liaison psychiatry (CLP) has received less importance in India. However, most of the psychiatry training in the country is done in the general hospital psychiatry units in which there are many cross referrals among the various departments.¹

In India, a major part of health care is provided through the private sector.² Over the years, the care model in the private sector has shifted to corporate and multispecialty hospitals. With the expansion of psychiatry in the private sector, a large proportion of psychiatrists are part of multispecialty hospitals and cater to the mental health needs of persons with various physical illnesses.¹ Addressing these needs requires a thorough knowledge of the principles of CLP.

Unfortunately, due to lack of human resources across different institutes, ei-

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HOW TO CITE THIS ARTICLE: Dua D, Grover S. Profile of patients seen in consultation-liaison psychiatry in India: A systematic review. *Indian J Psychol Med.* 2020;42(6): 503–512

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Submitted: 18 Aug. 2020
Accepted: 22 Sep. 2020
Published Online: 9 Nov. 2020



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ACCESS THIS ARTICLE ONLINE
Website: journals.sagepub.com/home/szj
DOI: 10.1177/0253717620964970

ther in the form of the number of faculty members or the total number of trainees, CLP has not received its due importance in the postgraduate training. When one looks at the existing literature, little is understood about the service models of CLP practiced in India.³ The available studies, which have described the referral patterns of patients seen CLP practice, are, in general, silent about the functional aspects of the services.¹ From the published data from various centers, it is evident that CLP services across the centers follow the consultation model, that is, patients are evaluated by the psychiatrists on the request of the physician/surgeon and the needful care is provided. This consultation model is followed in both inpatient and outpatient settings.¹

Although data from different institutes are available about the profile of patients with various physical illnesses seen in CLP practice, little is understood about the data from one institute compared with the other. In this background, this review aimed to evaluate the published literature for the pattern of psychiatry referrals in terms of various psychiatric diagnoses and referral rates.

Materials and Methods

For this review, published literature was searched in the month of August 2020 by using the search engines of PubMed, Medknow, and Google Scholar using terms like consultation, liaison, consultation-liaison, psychiatry referrals, emergency, and India in various permutations and combinations. Additionally, tables of content of online issues of various psychiatric journals published from India (*Indian Journal of Psychiatry*, *Indian Journal of Social Psychiatry*, *Industrial Psychiatric Journal*, *Journal of Geriatric Mental Health*, *Journal of Indian Association of Child and Adolescent Mental Health*, *Indian Journal of Private Psychiatry*, *Indian Journal of Psychological Medicine*, *Annals of Indian Psychiatry*, *Journal of Mental Health and Human Behaviour*, *Eastern Journal of Psychiatry*, *Indian Journal of Behavioural Sciences*, *Andhra Pradesh Journal of Psychological Medicine*, *Kerala Journal of Psychiatry* (2013 onwards), *Telangana Journal of Psychiatry*, *Orissa Journal of Psychiatry*, *Bengal Journal of Psychiatry*, *Delhi Psychiatric Bulletin*, *Indian Journal of Social Work*, *International Journal of Psychiatry and*

Psychology, *Journal of Psychiatric Nursing*, *Journal of Psychosocial Rehabilitation and Mental Health*, and *Indian Journal of Clinical Psychology*) were specifically searched for studies evaluating psychiatry referrals. Only studies that described patients referred to psychiatry services from various specialties were included. Studies that described psychiatric morbidity in patients with various physical illnesses, but were not based on psychiatry referral pattern, were excluded. Similarly, studies describing psychiatry morbidity in patients from one specific specialty or those describing specific psychiatric disorder, but not based on psychiatry referrals, were excluded. Studies describing only patients of self-harm, seen in the CLP setup, were also excluded. Case reports, review articles, viewpoints, etc., describing specific mental health issues in patients with various physical illnesses or in relation to CLP (such as self-harm, delirium, etc.), were excluded. Data published only as part of the abstracts of a national conference were also excluded. However, studies that reported screening of all the patients admitted to a medical/surgical ward and reported the diagnostic profile were included. The search was carried out

in mid-August 2020 and encompassed the studies from 1968 to August 2020.

An initial internet search yielded 346 articles. Screening of specific journals provided an additional 20 articles. Furthermore, the reference lists of all the articles were reviewed to look for missing studies. Abstracts of these articles were initially reviewed, and the full-text articles of those relevant to CLP were collected. Finally, 33 studies were selected for this review.

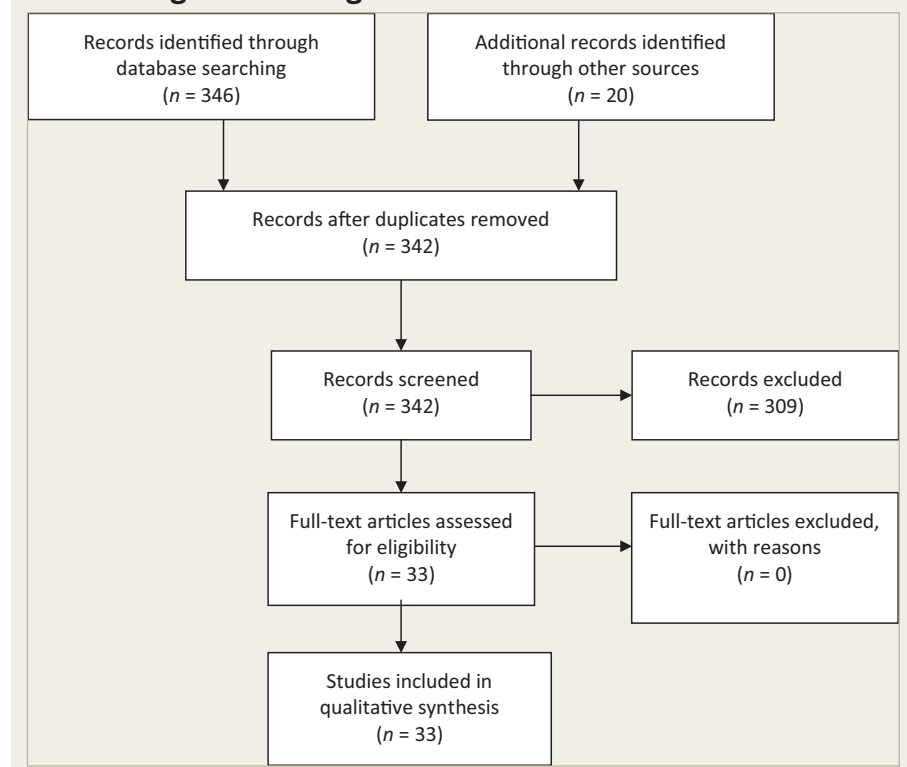
Studies reporting the patient profile seen in CLP referrals were reviewed, and the following data were extracted: year of publication, study site/center, duration of data for which data was reported, number of patients, setting at which the referrals were seen, the gender distribution of patients, age categories of patients, psychiatry referral rates, and the most common diagnostic categories. Additionally, if the studies reported additional diagnosis-specific data, that was also extracted.

Results

The initial search yielded 346 papers/abstracts. We screened all of them for relevance by going through the full papers. When the full papers were not available, we relied on the abstracts ($n = 5$). Addition-

FIGURE 1.

PRISMA Diagram Showing Selection of the Studies for the Review



ally, we also checked the cross references of the papers, which yielded an additional 20 papers. After checking for duplicity, we were left with 342 papers, of which 309 were excluded as they were review articles, focused on specific issues such as delirium or self-harm, or pertained to psychiatric morbidity in a specific specialty or specific physical diseases. Finally, we were left with 33 studies, which were included in the review (**Figure 1**).

Table 1 provides a summary of the findings of the various studies reporting the profile of the patients seen in the CLP settings. Out of the 33 studies describing the patient profile, more than half ($n = 20$) were published in the last 5 years. Most of these studies reported the patient profile of inpatients ($n = 14$),⁴⁻¹⁷ with a few reporting the profile of the patients referred to the psychiatry outpatient department from other specialties,¹¹ and others reported patients seen by the CLP team in the emergency setting.¹⁷⁻²² Occasional studies have reported profiles of both inpatient and outpatient referrals.²³⁻³⁰ In terms of centers, the maximum number of studies ($n = 6$) came from the Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh. The duration for which referral patterns have been described in various studies varied from 1 month to 84 months, with 13 studies reporting referral patterns for a duration of ≥ 1 year.^{8,11,12,14,20,22,23,26,28-33} Most studies focused on the referral patterns for all age groups, except for one study each that focused on geriatric³⁴ or pediatric²² patients seen in the emergency department. A few studies focused on screening all patients admitted to various medical-surgical wards or the emergency setting.³⁴ The sample size in different studies varied from 60 to 2355, with only nine studies^{4,10,14,17,18,20,24,28,29,33} reporting data of more than 500 patients. The proportions of males in these studies varied from 30.9% to 88%. All the studies did not report the referral rates. Studies that calculated referral rates for the inpatients took the total number of admission in the hospital across various specialties as the denominator.^{4,7-9,11-13,24,25,27-29,31,35} In contrast, those reporting referral patterns of outpatients took the total number of cases seen in the psychiatry outpatient

department as the denominator.^{24,27,33,36} The studies reporting referral rates for inpatients suggest that 0.01% to 3.6% of patients admitted in various medical-surgical wards are referred to psychiatry liaison services.^{4,7,9,25,31} The referral rates have been slightly higher for studies reporting the profile of patients seen in the emergency set-up, and the rates varied from 1.42% to 5.4%.^{18,19,21} In terms of outpatients, the referral rates varied from 0.06% to 7.17%.^{24,27,33,36}

In terms of diagnostic profile, there is significant heterogeneity in reporting patterns across studies, with some reporting the specific diagnosis and some reporting only the broad diagnostic categories. Furthermore, some older studies reported the diagnosis as per the International Classification of Diseases (ICD), 9th revision (ICD-9),^{4,8,19,27} whereas recent studies used the ICD-10 criteria.^{5-7,9,11,14,15,17,18,20-23,25,26,28-33} Occasional study reported the diagnosis as per the Diagnostic and Statistical Manual (DSM) criteria.³⁶ A few studies have been silent about the criteria used to make the diagnosis.^{12,16} When the three most common diagnoses reported in the studies were taken into account, depression, organic disorders (including delirium), drug dependence, substance use disorder, intentional self-harm (ISH), anxiety disorders, and dissociative disorders emerged as the most common diagnostic categories. Studies that focused on patients referred to psychiatry outpatient services have, in general, reported neurotic, stress-related, and somatoform disorders to be the most common diagnostic category (**Table 1**).

In terms of a specific diagnosis, the prevalence of delirium varied across studies, with a range of 2.81%–3.4% among all inpatient referrals. Similarly, among the inpatient referrals, the prevalence of substance use disorders varied from 1.78% to 28.87%. For psychotic disorders, the prevalence varied from 3% to 33.3%. For affective disorders, the prevalence ranged from 1.6% to 40%. For neurotic and stress-related disorders, the range was 5.8%–62.65% (**Table 2**).

Six studies reported patients seen in emergency settings.^{18-22,34} The most common diagnoses in these studies include delirium or an organic condition, neurosis, substance use disorder, and affective disorder (**Table 3**).

Studies that reported referred patients seen in the outpatient setting suggest that the most common diagnostic categories include affective disorders, neurotic and stress-related disorders, psychotic disorders, and organic brain syndrome (**Table 4**).

Studies reporting the prevalence of various psychiatric disorders by combining inpatient and outpatient referrals suggest affective disorders, psychotic disorders, and substance use disorders to be more common (**Table 5**).

Discussion

This review suggests that only a limited number of studies from India had evaluated the referral patterns to psychiatry and the diagnostic profile of patients referred to CLP services in various medical institutes in the country. There is significant heterogeneity across the studies in reporting patient profile and duration for which the profile was reported. Further, there is a lack of data on specific age groups, with only one study on the profile of elderly patients seen in the emergency setting³⁴ and one on the profile of pediatric age group referred for psychiatric evaluation.²² Few studies focused on screening all patients admitted to various medical-surgical wards or the emergency setting.³⁴

If one evaluates these studies, it is apparent that at present, CLP in the country is mainly functioning on the consultation model only. Further, referral of medically ill patients to the psychiatry outpatient services highlights that there are no CLP teams that can examine the medically ill patients at the bedside. A survey that evaluated CLP services in the country reported the availability of three-tier on-call services (i.e., CLP team comprising a faculty member, a senior resident, and a junior resident) in only one-third of the institutes. Based on this data, it can be said that there is a need to develop a model for reporting patients seen in CLP setting. Further, there is a need to develop a model to collect data simultaneously from different centers, both institutes/medical colleges and corporate hospitals, to understand the training needs in CLP. This would help in evaluating and comparing the CLP services across different institutes and also help

TABLE 1.

Summary of the Studies Evaluating the Profile of Patients Seen by Psychiatry Liaison Services

S. No.	Center	Duration of Data Collection (in Months)	Year	Sample Size	Setting	%age of Males	Referral Rate	Most Common Diagnosis	Reference Number
1.	JIPMER, Pondicherry	12	1966–1967	108	Inpatient	60	1.4	1. Neurotic and personality 2. Acute organic reaction 3. Functional psychosis	12
2.	KEM, Mumbai	2	1968	60	Inpatient	56.67	0.66	1. Organic psychosis 2. Schizophrenia 3. Hysteria	35
3.	Command Hospital, Southern Command	36	1972–1975	624	Inpatient outpatient	88	1.54 2.64	1. Neuroses 2. Schizophrenia 3. Nil 4. Organic psychosis	24
4.	Sajdurjung Hospital, Delhi	3	1978	94	Inpatient outpatient	54.25	0.15 0.06	1. Hysteria 2. Anxiety neurosis 3. Schizophrenia	27
5.	PGIMER, Chandigarh	12	1978–1979	336	Inpatient		1.48	1. Neuroses 2. Nil 3. Organic psychosis 4. Functional psychosis	8
6.	PGIMER, Chandigarh	1	1981	100	Emergency	51	5.4	1. Neurosis 2. Functional psychosis 3. Nil 4. Acute situational disturbance	19
7.	St. John's, Bangalore	7	1984–1985	150	Inpatient	53.3	3.6	1. Neurotic depression 2. Nil 3. Alcohol 4. OBS, adjustment	13
8.	JNMC, Belgaum	12	1996–1997	186 153	Inpatient outpatient	69.73 67.97		IP 1. F4 2. Fo/1 3. F3 OP 1. F4 2. F3 3. Others 4. Fo/1	23
9.	PGIMER, Chandigarh	84	NA	1245	Inpatient	58	0.65	1. Organic psychosis 2. Nil psychiatry 3. Depressive disorders	4
10.	GMCH, Chandigarh	4.5	2002	268	Emergency	52.23	1.42	1. Substance use 2. Dissociative disorder 3. Other anxiety disorder	21
11.	JNMC, Belgaum	48	2000–2003	309	Inpatient (ICU)	30.9	1.97	1. ISH 2. OBS 3. Alcohol	11
12.	AIIMS, Delhi	2	2009	160	Inpatient and outpatient	48.8	0.01	1. Depressive disorder 2. Delirium 3. Substance use	25
13.	Sri Siddhartha Medical College, Tumkur	24	2011–2012	520 307 213	Outpatient inpatient	58 60.1	0.42	OP 1. F4 2. F3 3. F2 IP 1. F4 2. F1 3. F3	28
14.	UCMS, Delhi	12	2011–2012	484	Multiple	40.9	NA	1. Depression 2. Anxiety 3. Substance	26
15.	North Bengal Medical College, West Bengal	6	2012	264	Inpatient	55.9	0.89	1. Depressive episode 2. Substance use 3. Bipolar disorder	9

S. No.	Center	Duration of Data Collection (in Months)	Year	Sample Size	Setting	%age of Males	Referral Rate	Most Common Diagnosis	Reference Number
16.	KGMU, UP	12	2012	135	Outpatient	56.3		1. Nil 2. Organic mental disorder 3. Neurotic stress related 4. Affective	32
17.	PGIMER, Chandigarh	9	2012	383	Emergency	60.3	1.74	1. Delirium 2. Substance use 3. Psychosis	18
		9	2013	594	Emergency	59.6	2.4	1. Substance use 2. Delirium 3. Self-harm	
18.	Kamineni Institute of Medical Sciences, Telangana	24	2013–2015	680	Outpatient inpatient	60.7	0.18	OP 1. F4 2. Nil 3. F1 4. F3 IP 1. Fo 2. F1 3. F4	29
19.	Silchar Medical College, Assam	12	2014–2015	1153	Emergency	47.78		1. F4 2. Deferred 3. F2 4. F3	20
20.	Chalmeda Ananda Rao Institute of Medical Sciences, Karimnagar, Telangana	9	2014–2015	114	Inpatient	50.9	0.95	1. Alcohol withdrawal 2. Anxiety disorders 3. Somatoform disorder	7
21.	AIIMS, New Delhi	24	March 2014 to February 2016	2355	Inpatient and emergency	60	0.6 per bed per year	1. Delirium 2. Depression 3. Substance use	17
22.	Gauhati Medical College, Assam	6	2015	748	Inpatient	58.95	NA	1. Intentional self-harm 2. Drug dependence 3. Postpartum psychosis *Listed as reason for referral (not diagnoses)	10
23.	PGIMER, Chandigarh	2	2015	219	Inpatient	60		1. Delirium 2. Depressive disorder 3. Nil 4. Alcohol dependence	5
24.	GSL Medical College, Andhra Pradesh	36	2015–2017	518	Outpatient	51.5	7.17	1. Organic disorders 2. Drug dependence 3. Depressive disorders	33
25.	AIIMS, New Delhi	13	January 2015 to January 2016	65 pediatric patients	Emergency	36.9	NA (10% of total psychiatry referrals)	1. Dissociative disorder 2. Schizophrenia 3. Mood disorder	22
26.	Al Ameen Medical College, Telangana	9	2015–2016	131	Outpatient	62	1.8	1. Depression 2. GAD, panic disorder 3. Psychosis not otherwise specified	36
27.	Command Hospital, Kolkata, West Bengal	13	2016	157	Inpatient and emergency	51.59	0.31	1. Delirium 2. Depressive episode 3. Alcohol dependence	31
28.	PGIMER, Chandigarh	2	2016	232	Emergency	65.5		1. Delirium 2. Substance 3. Dementia	34

S. No.	Center	Duration of Data Collection (in Months)	Year	Sample Size	Setting	%age of Males	Referral Rate	Most Common Diagnosis	Reference Number
29.	Pushpagiri Medical College, Thiruvalla, Kerala	12	August 2017 to July 2018	530	Inpatient	59.6	1.76	1. Alcohol 2. Delirium 3. Depressive disorder	14
30.	Mamta General Hospital, Telangana	6	2018	100	Inpatient	NA	NA	1. Substance 2. ISH 3. Organic mental disorders	6
31.	Mahatma Gandhi Memorial medical College, Indore, MP	3	January 2018 to March 2018	172	Inpatient	56.4	1.1	1. Depression 2. Substance use 3. No psychiatric diagnosis 4. Schizophrenia	15
32.	GEMS Medical College, Srikakulam, AP	12	November 2018 to October 2019	220	Outpatient and inpatient	55.9	NA	1. Alcohol 2. Depression 3. Somatization	30
33.	Gauhati Medical College Hospital, Assam	1	May 2019	178	Inpatient	59.5	NA	1. Deliberate self-harm 2. Alcohol use	16

IP: inpatient setting, GAD: Generalized Anxiety Disorder ISH: intentional self-harm, OBS: organic brain syndrome, OP: outpatient setting, Fo: organic, including symptomatic, mental disorders, F1: mental and behavioral disorders due to psychoactive substance use, F2: schizophrenia, schizotypal, and delusional disorders, F3: mood [affective] disorders, F4: neurotic, stress-related, and somatoform disorders, JIPMER: Institute Jawaharlal Institute of Postgraduate Medical Education and Research, JNMC: Jawaharlal Nehru Medical College, KEM: King Edward Memorial Hospital, KGMU: King George's Medical University, PGIMER: Post Graduate Institute of Medical Education and Research. AIIMS: All India Institute of Medical Sciences; GEMS: Great Eastern Medical School & Hospital, Srikakulam; GMCH: Government Medical College and Hospital; GSL: Ganni Subha Lakshmi; UCMS: University College of Medical Sciences

different institutes to learn from each other and a comprehensive CLP model can be developed for various institutes in the country. However, one good aspect of the research in this area is that more than half of the studies have emerged in the last 5 years, suggesting that CLP is gaining momentum in the country.

The psychiatric referral rates for inpatients of various medical and surgical wards suggest that 0.01% to 3.6% of patients are referred to psychiatry liaison services.^{4,7,9,25,31} The referral rates from emergency set-up varied from 1.42% to 2.4%^{18,19,21} and at the outpatient level from 0.06% to 7.17%.^{24,27,33,36} These findings suggest that the rates of psychiatry referrals are dismal. When one compares these referral rates with the available studies from India that screened patients with various physical illnesses, they suggest the prevalence rates of specific psychiatric disorders to be much higher. For example, one study that screened all the elderly patients visiting an emergency setting reported the prevalence of axis-1 diagnoses to be 47.4%.³⁴

Accordingly, it can be said that only a very small proportion of medically ill patients who require psychiatric help are actually referred to the psychiatry services. A possible reason for this dismal referral

TABLE 2.

Proportion of Patients with a Specific Diagnosis or a Diagnostic Category in Studies which have focused on inpatients

Diagnosis	No. of Studies	Range	Reference Number
Delirium	10	2.81%–43.4%	5, 7, 9, 12, 14–17, 25, 33
Dementia	5	0.9%–3.82%	5, 7, 14, 15, 25
Organic psychosis	6	0.63%–25.5%	4, 8, 12, 15, 24, 35
Organic brain syndrome	3	10.7%–19.09%	4, 17, 35
Organic mental and personality disorder	2	4.2%–4.4%	14, 25
Fo	18	2.81%–47.5%	4–9, 12, 14–17, 23–25, 28, 29, 33, 35
Substance use (including alcohol)	15	1.78%–28.87%	4, 5, 7–10, 12, 14–17, 25, 26, 31, 32
F1	18	1.78%–28.87%	4–10, 12, 14–17, 25, 26, 28, 29, 31, 32
Psychotic illness (including schizophrenia)	15	3.24%–33.3%	5, 7–9, 12, 14–17, 24–27, 31, 35
F2	18	3.0%–33.3%	5–9, 12, 14–17, 23–29, 31, 35
Depression	13	1.47%–24.4%	5, 7, 9–11, 14, 15, 17, 25–27, 31, 35
Bipolar disorder	7	2.3%–10.4%	5, 7, 9, 14, 15, 17, 23, 27, 31
F3	20	1.6%–40.0%	5–11, 13–15, 17, 23–29, 31, 32, 35
Anxiety	10	1.1%–13.1%	5, 7, 9, 14, 15, 17, 26, 27, 31, 33
Adjustment reaction	7	0.4%–16.0%	4, 5, 13–15, 17, 31, 33
Dissociation/hysteria	8	0.9%–8.3%	5, 7, 9, 14–16, 27, 31, 33
Psychosomatic, somatoform	10	0.8%–7.69%	7–9, 14–16, 24, 26, 27, 33
Neuroses	3	28.7%–54.96%	8, 12, 24
F4	19	5.8%–62.65%	4–9, 12–15, 17, 23, 24, 26, 27, 31–33

Diagnosis	No. of Studies	Range	Reference Number
Post/ante partum psychosis	5	0.63%–2.6%	7–10, 15, 31
Psychosexual/sexual	1	0.7%	13
F5	9	0.63%–2.6%	6, 7, 9, 10, 13, 15, 22, 23, 31
Personality	8	0.63%–5.3%	7–9, 14, 15, 24, 25, 31
F6	10	0%–5.3%	6–9, 14, 15, 23, 24, 30
Mental Retardation	5	0.63%–7%	5, 7, 14, 24, 27
F7	6	0.63%–7%	5, 7, 14, 23, 24, 27
Conduct disorder	1	0.8%	7
ADHD	2	0.4%–0.8%	7, 14
F9	3	0.4%–1.6%	6, 7, 14
ISH	8	2.7%–33.95%	5, 9, 10, 14–17, 26
X category of ICD-10	10	2.7%–33.95%	5, 6, 9, 10, 14–17, 23, 26
Catatonia	1	0.8%	9
Munchausen/factitious/malingering	2	0.2%–0.7%	13, 14
Tic disorder	1	0.8%	9
ADR	2	0.6%–2.6%	9, 14
Other	7	2.3%–12.0%	4, 8, 9, 15, 17, 27, 32
Nil psychiatry	15	1.1%–32.1%	4–9, 13–15, 17, 23, 26–28
Deferred	4	1.9%–11.3%	7–9, 13

ADHD: attention deficit hyperkinetic disorder, ADR: adverse drug reaction, Fo: organic, including symptomatic, mental disorders, F1: mental and behavioral disorders due to psychoactive substance use, F2: schizophrenia, schizotypal and delusional disorders, F3: mood [affective] disorders, F4: neurotic, stress-related and somatoform disorders, F5: behavioral syndromes associated with physiological disturbances and physical factors, F6: disorders of adult personality and behavior, F7: mental retardation, F9: behavioral and emotional disorders with onset usually occurring in childhood and adolescence, ICD-10: *International Classification of Diseases (ICD), 10th revision*, ISH: intentional self-harm, OBS: organic brain syndrome.

rates could be the stigma associated with mental illnesses. However, if one tries to hypothesize the possible reasons for these dismal rates, they can also be attributed to poor knowledge about mental illnesses among other specialists, poor psychiatry training at the undergraduate levels, and poor exposure of other specialists to the specialty of psychiatry during the postgraduate training. Other possible reasons could be confinement of psychiatry training during undergraduate and postgraduate training to the psychiatry inpatient and outpatient services only. Studies that evaluated the reasons for referral suggested that in general, there is poor concordance in the psychiatry diagnosis made by the CLP teams and other specialists.^{5,14} Accordingly, it can be said that there is an urgent need to focus on the stigma associated with mental illnesses in the general public per se, but also among other specialists.³⁷ Additionally, there is a need to improve exposure to psychiatry during the undergraduate training and for other specialists in their postgraduate training. For undergraduate training, psychiatrists should focus

on training the students in identifying various psychiatric issues in medically ill patients, rather than focusing only on those with primary psychiatric disorders. This can be done by having cases for discussion from the medical-surgical wards, rather than limiting training on those from psychiatry wards only. It can also be argued that the low referral rates could be due to the fact that the other specialists themselves manage psychiatry morbidity, rather than referring the patients to the CLP services. However, at present, there is no data to support the same.

A survey of CLP services in India showed a lack of CLP service posting for the junior and senior residents in most institutes in the country.³⁸ This suggests that there is a need to improve CLP training in India. If one tries to look at the implications of this review in terms of psychiatry training in the country in the background of the previous survey, it can be said that at present, psychiatry trainees are not adequately trained to manage various psychiatric disorders among the medically ill patients. This suggests that they are ill equipped to manage patients

TABLE 3.

Proportion of Patients with a Specific Diagnosis or a Diagnostic Category In Studies Based on Emergency Setting

Diagnosis	No. of Studies	Range	Reference Number
Delirium	3	4.6%–34.1%	18, 22, 34
Dementia	1	9.5%	34
Organic psychiatric illness	2	2.6%–4.2%	18, 21
Organic psychosis	1	7%	19
Fo	6	3.35%–43.6%	18–22, 34
Substance use	5	1.5%–35.3%	18, 19, 21, 22, 34
F1	6	1.5%–35.3%	18–22, 34
Psychotic illness	4	7.08%–13.6%	18, 19, 21, 22
F2	5	7.08%–13.6%	18–22
Depression	2	6.2%–10.07%	21, 34
Affective disorder	2 (2 samples in one study)	8.4%–9.3%	18, 22
Bipolar disorder	1	5.97%	21
F3	5	6.2%–16.04%	18, 20–22, 34
Anxiety	4	3.4%–12.31%	18, 21, 22, 34
Adjustment	3	1.86%–8.0%	18, 21, 34
Dissociation	3	12.8%–27.7%	18, 21, 22
Psychosomatic, somatoform	1	10.82%	21
Neurosis	1	51%	19
F4	6	6.0%–51.0%	18–22, 34
F5	1	1.65%	20
F6	1	0.09%	20

Diagnosis	No. of Studies	Range	Reference Number
Fg	1	0.17%	20
ISH	3	5.22%–17.0%	18, 21, 22
Deferred	5	2.9%–16.9%	18–22
Nil	5	1.6%–13%	18–22
Others	5	1.2%–12.3%	18–22

Fo: organic, including symptomatic, mental disorders, F1: mental and behavioral disorders due to psychoactive substance use, F2: schizophrenia, schizotypal and delusional disorders, F3: mood [affective] disorders, F4: neurotic, stress-related and somatoform disorders, F5: behavioral syndromes associated with physiological disturbances and physical factors, F6: disorders of adult personality and behavior, F7: mental retardation, Fg: behavioral and emotional disorders with onset usually occurring in childhood and adolescence, ISH: intentional self-harm.

TABLE 4.
Proportion of Patients with a Specific Diagnosis or a Diagnostic Category In Consultation Liaison Studies Based on Psychiatry Outpatient Setting

Diagnosis	No. of Studies	Range	Reference Number
Organic psychosis	1	0.86%	24
Organic disorders	1	23.16%	33
Psychosis associated with other physical condition	1	5.25%	24
Fo	6	3.1%–23.16%	23, 24, 28, 29, 32, 33
Substance use	2	5%–14.28%	33, 36
F1	5	3.58%–14.28%	28, 29, 32, 33, 36
Psychotic illness	3	9.26%–37.39%	24, 33, 36
F2	7	4.57%–37.39%	23, 24, 28, 29, 32, 33, 36
Depression	2	15.83%–20.0%	33, 36
Affective psychosis	1	4.75%	24
Bipolar Disorder	2	2.0%–3.08%	33, 36
F3	7	4.75%–22.0%	23, 24, 28, 29, 32, 33, 36
Anxiety	2	19.11%–38.0%	33, 36
Obsessive Compulsive Disorder	1	5.0%	36
Adjustment	1	1.0%	36
Dissociation	1	2.0%	36
Psychosomatic, somatoform	2	3.02%–5.0%	24, 36
Neuroses	1	33.28%	24
F4	7	15%–52.29%	23, 24, 28, 29, 32, 33, 36
Sexual disorder	1	3%	36
Dhat syndrome	1	1%	36
F5	3	1%–4.7%	28, 32, 36
Personality disorder	1	6.7%	24
F6	2	0.8%–6.7%	24, 32
MR	1	3.66%	33
F7	2	3.66%–5.5%	33, 33
Fg	1	1.9%	32
Others	4	9.0%–24.1%	23, 28, 29, 33
Nil psychiatry	4	6.5%–24.0%	24, 28, 29, 32

Fo: organic, including symptomatic, mental disorders, F1: mental and behavioral disorders due to psychoactive substance use, F2: schizophrenia, schizotypal and delusional disorders, F3: mood [affective] disorders, F4: neurotic, stress-related and somatoform disorders, F5: behavioral syndromes associated with physiological disturbances and physical factors, F6: disorders of adult personality and behavior, F7: mental retardation, Fg: behavioral and emotional disorders with onset usually occurring in childhood and adolescence.

with medical comorbidities, and this can lead to improper management of such cases. Hence, there is a need to shift the focus of training, with adequate importance given to CLP. A focus on CLP can also help in improving physical health care of patients with primary psychiatric disorders by the psychiatrist.

The present review also suggests that there is significant heterogeneity in reporting of diagnostic pattern across studies, as reported earlier.³⁹ Further, there is also heterogeneity across studies in terms of the three most common diagnoses. This heterogeneity possibly reflects the sensitivity of other specialists in recognizing different psychiatric disorders across centers. However, when one tries to evaluate these diagnostic categories, it is apparent that clinical conditions like delirium, depression, substance use disorder, other neurotic disorders, and ISH are very common in medically ill inpatients. Accordingly, there is a need to develop treatment models for assessing and managing these disorders in the medically ill patients.

Most studies are retrospective, with only a few prospective studies. Accordingly, there is a need to carry out more prospective studies.

The present review has certain limitations. It was limited to studies that assessed psychiatric referral patterns and reported multiple diagnoses and referral rates. However, studies reporting referral patterns for specific conditions (for example, ISH, delirium) were excluded. Although efforts were made to trace all the studies, some studies that would have been published but not available on the journal websites, could have been left out. Due to heterogeneity in the reporting of data, we were unable to carry out a pooled analysis or a meta-analysis.

Conclusion

Only a few studies have reported the patient profile seen in CLP set-up. There is much heterogeneity in the reporting profile. Available data suggest that, in general, referral rates to psychiatry services from other specialists are dismal. Accordingly, there is an urgent need to change the focus of psychiatry training at both the undergraduate and postgraduate levels.

TABLE 5.

Proportion of Patients with a Specific Diagnosis or a Diagnostic Category in Consultation Liaison Reporting Findings of Both Inpatient and Outpatient Together

Diagnosis	No. of Studies	Range	Reference Number
Delirium	1	1.36%	30
Dementia	1	0.45%	30
Organic psychosis	2	0.45%–5.3%	27, 30
Organic mental disorder	1	7%	26
Psychosis associated with other physical condition	1	8.5%	27
F0	3	2.3%–13.8%	26, 27, 30
Substance use	2	13.0%–26.36%	26, 30
F1	2	13.0%–26.36%	26, 30
Psychotic illness	2	3.5%–19.0%	26, 27
F2	2	3.5%–19.0%	26, 27
Depression	3	5.3%–25%	26, 27, 30
Bipolar disorder	1	3.63%	30
Affective psychosis	1	8.5%	27
Affective disorder	2	5.3%–25%	26, 27
F3	3	13.8%–27.2%	26, 27, 30
Anxiety	3	7.2%–15%	26, 27, 30
Adjustment	1	5%	26
Psychosomatic, somatoform	3	2.1%–7.5%	26, 27, 30
Hypochondriasis	1	6.4%	27
Dissociation	3	4.1%–19.2%	26, 27, 30
Obsessive compulsive disorder	1	1.36%	30
F4	2	20.45%–40.5%	26, 27, 30
Postpartum mental disorders	1	1.81%	30
Intentional self-harm	2	3.63%–9.0%	26, 30
Intellectual disability	2	3.2%–6.81%	27, 30
Nil psychiatry	3	1.36%–10.7%	26, 27, 30

F0: organic, including symptomatic, mental disorders, F1: mental and behavioral disorders due to psychoactive substance use, F2: schizophrenia, schizotypal and delusional disorders, F3: mood [affective] disorders, F4: neurotic, stress-related and somatoform disorders.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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