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Need and utilization of psychiatric consultation services among general hospital inpatients

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Abstract *Objective* The aim of the present study was to estimate the need for psychiatric consultation services and psychiatric inpatient referral among inpatients of non-psychiatric hospital departments, and to assess the actual utilization of these services. *Methods* The study was carried out among 728 inpatients of physical rehabilitation wards, medical, surgical, and gynecological wards in Austrian hospitals. Psychiatric case identification was performed by research psychiatrists using the Clinical Interview Schedule (CIS). Diagnoses were given according to DSM-III-R. The assessment of need for consultation and inpatient referral was based on the clinical judgments of research psychiatrists. *Results* Overall, 34.2% of the inpatients were cases according to the CIS-criteria, 51.8% of them needing either psychiatric consultation or inpatient referral according to research psychiatrists. In 66.7% of those for whom research psychiatrists had stated a need, this need was not met (“unmet need”), while only 33.3% of them had their need met. In contrast, a psychiatric consultation was performed among 5% of those patients not needing psychiatric services according to the research psychiatrists (“overprovision”). Variables of the health care system (i.e. department type and catchment area of the hospital) were among the predictors for “met needs”. *Conclusion* The rate of actual psychiatric consultations and admissions to psychiatric wards was markedly lower than the need according to research psychiatrists’ judgment.

Key words: general hospitals – non-psychiatric inpatients – prevalence – consultation psychiatry – needs

Introduction

A large number of studies have shown that a high proportion of patients with somatic illnesses suffer from a coexisting psychiatric disorder [1–7]. Several authors [8, 9] reported that only a small proportion of general hospital inpatients with psychiatric co-morbidity are referred to specialist psychiatric services such as psychiatric consultation services or psychiatric wards. However, of course, not every person suffering from a psychiatric disorder needs specialist care [10, 11]. Until now, it is not clearly defined which general hospital inpatients with psychiatric co-morbidity need psychiatric consultation or inpatient referral [12, 13]. For this reason, Arolt [12] suggested that planning of psychiatric services for inpatients of non-psychiatric departments should be based on clinical judgments as part of epidemiological surveys. But, some general considerations could help to make such clinical judgments.

Obviously, inpatients of non-psychiatric departments with psychiatric co-morbidity often can be managed by ward physicians (e.g. specialists in gynecology or internal medicine). Based on general principles of psychiatric service planning [10, 11] only those who cannot be treated adequately by ward physicians should be referred to psychiatric services (with a preference for consultation services over psychiatric inpatient treatment). Furthermore, several patients with psychiatric co-morbidity can be treated adequately as outpatients *after* hospital discharge, without needing any psychiatric treatment during hospital stay. (For example, specialist outpatient treatment after hospital discharge might yield better results for a person with an obsessive-compulsive

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disorder than any treatment offered during the short period of hospital stay.)

To our knowledge, until now only one study attempted to assess the need for psychiatric consultation and psychiatric inpatient referral among inpatients of non-psychiatric general hospital wards [12]. This study reported the prevalence of need and the frequency of utilization of psychiatric services among medical and surgical inpatients in an urban catchment area.

The aim of the present study was to estimate the need for psychiatric consultation and for psychiatric inpatient referral among patients admitted to non-psychiatric wards and to compare the utilization of these psychiatric services with the estimated need. An additional aim was to identify predictors for “met need” (i.e. patients receiving consultation of all those needing consultation or inpatient referral) and for “overprovision” of psychiatric services (i.e. patients receiving consultation of all those needing neither consultation nor inpatient referral).

Methods

■ Subjects

The study was carried out among the inpatients of medical, surgical, gynecological, and physical rehabilitation departments of general hospitals from rural and urban catchment areas in Austria. The hospital departments in Vienna (urban area) altogether held 410 beds and the departments in Tyrol held 444 beds. It was intended to include a minimum of 240 consecutively admitted patients (aged 18 years and above) in each department type, which meant that the intake period was longer in some departments than in others. All patients admitted to the wards were asked to take part in this survey. They were informed of the purpose of this study being the investigation of psychiatric co-morbidity and were assured confidentiality regarding the information obtained. Those judged by the resident physicians as being physically too ill to be interviewed were excluded from the sample, and replaced by the next patient admitted to the ward.

In addition, ward physicians were asked to assess whether the patients suffered from any psychiatric disorder. Due to the work overload of the ward physicians, this information could not be collected in two of the eight departments (urban surgical department and urban rehabilitation department).

In the rural area, routine psychiatric consultation was provided on predetermined weekdays by the same psychiatrists, in the urban area by rotating psychiatrists responding to ward physicians' requests. Continuous liaison relationships were not provided, neither in the urban nor in the rural hospitals. There was no psychiatric inpatient unit in either hospital.

■ Assessment

Psychiatric case identification was carried out by means of the Clinical Interview Schedule (CIS [14]) in a modification suitable for elderly people as well [15]. This semi-structured interview was developed to study psychiatric morbidity in non-psychiatric and community settings. It includes a section with a list of 11 subjectively “reported symptoms” and a section of 12 “observed abnormalities” (23 five-point scales). Furthermore, the rater has to make a rating of the overall clinical severity on a five-point scale [16]. For diagnostic classification, the criteria of the third revised version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-

III-R [17]) were applied. As in other epidemiological studies using the CIS [18], a psychiatric “case” was defined by two criteria: the presence of a DSM diagnosis and the presence of an overall clinical severity of at least two.

For each patient the research psychiatrists made an additional judgment on the actual need for psychiatric consultation or for referral to a psychiatric inpatient unit. This estimation was based on the clinical judgment whether the patient needs further diagnostic assessment and/or specialized treatment by a consultation psychiatrist or on a psychiatric ward. When making these judgments, research psychiatrists took into account the following general considerations [19]: preference for consultation services over psychiatric inpatient treatment, preference of outpatient treatment after hospital discharge over psychiatric consultation during hospital stay, consideration of the extent of individual grief, of the risk of the disease per se, of the risk of the disease to develop into a chronic disorder or of the symptoms to aggravate, of the risk for major disabilities in everyday life and of the risk for increased costs caused by the disease. Further, the psychiatric history, the psychiatric treatment already received as well as the response to treatment were taken into consideration. Ratings were made on a simple three-point scale (0 = no specialized need, 1 = need for psychiatric consultation, 2 = need for referral to an inpatient unit).

The interviews were carried out by three research psychiatrists who had been trained in the use of the CIS. All patients were interviewed by research psychiatrists within five days after their admission to hospital. In a pilot study on 20 patients, the interrater reliability for case identification between the three pairs of raters was found to be satisfactorily high (0.79–1.00 weighted kappa). The interrater reliability for the estimation of need for psychiatric services was between 0.88 and 0.96 (weighted kappa).

The ward physicians were asked to complete a short rating form for every patient seen by the research psychiatrist. In order to assess the ward physician's detection of psychiatric disorders, one single question was asked: “Does the patient suffer at present from any psychiatric disorder?”. The two alternative answers provided were “Yes” and “No”. The ward physicians were instructed to make their ratings on the day of the research psychiatrist's investigation. They were unaware of the research psychiatrists' findings.

Information on duration of inpatient treatment, on the utilization of a consultation psychiatrist and on referral to a psychiatric ward was obtained from the case notes after the patients had been discharged. Additionally, research psychiatrists asked the patients about socio-demographic data and their psychiatric history (previous psychiatric admissions, previous psychiatric outpatient treatment, intake of antidepressants or neuroleptics during three months before hospital admission). If patients had severe cognitive impairment, research psychiatrists attempted to obtain these data from relatives.

■ Statistics

Data were analyzed using the Superior Performing Software System (SPSS Inc. [20]). Since the number of those needing inpatient referral was too small for detailed statistical analyses, and since all those who were referred to a psychiatric ward had been seen by a consultation psychiatrist, anyhow consultation and inpatient referral were merged into one variable. Univariate comparisons were carried out with chi-square statistics and *t*-tests considering a critical alpha of 0.05 as significant. Due to the problem of multiple comparisons alpha-adjustment (Bonferroni) was used. In order to identify predictors for “met need” (i.e. patients receiving consultation of all those needing consultation or inpatient referral) and for “overprovision” of psychiatric services (i.e. patients receiving consultation of all those neither needing consultation nor needing inpatient referral) logistic regression analyses were performed. The independent variables included age, gender, department type (medical, surgical, gynecological, rehabilitation), catchment area (rural vs. urban), intake of psychotropics (antidepressants or neuroleptics) during the three months before admission, previous psychiatric treatment (in- or outpatient), duration of inpatient treatment, sum-score of reported symptoms and sum-score of

Table 1 Demographic and clinical characteristics of the sample, as well as frequency of the need for consultation or inpatient referral and of the actually performed consultations according to sample characteristics: chi square test for categorical variables and *t*-test for continuous variables (critical alpha after Bonferoni adjustment 0.0045)

	Characteristics of the sample	Need for consultation or inpatient referral			Actual consultations		
	N (%)	%	Chi-2/ <i>t</i> -test	<i>P</i>	%	Chi-2/ <i>t</i> -test	<i>P</i>
Total sample	728 (100.0)	17.7			10.0		
Gender							
Female	532 (73.1)	17.5			9.6		
Male	196 (26.9)	18.4			11.2		
Age (years)				n.s.		-4.72	0.000
≤59	375 (51.5)	14.4			5.6		
≥60	353 (48.5)	21.2			14.8		
Department type			20.05	0.000		59.14	0.000
Medical	229 (31.5)	23.6			12.2		
Surgical	124 (17.0)	12.9			8.1		
Gynecological	238 (32.7)	8.8			0.4		
Rehabilitation	137 (18.8)	27.7			24.8		
Catchment area				n.s.		15.34	0.000
Rural	501 (68.8)	18.2			13.0		
Urban	227 (31.2)	16.7			3.5		
Sum-score of reported symptoms			-12.49	0.000		-9.59	0.000
0-5	426 (58.5)	5.2			3.8		
6-10	243 (33.4)	28.4			15.7		
11+	59 (8.1)	64.4			32.2		
Sum-score of observed abnormalities			-14.98	0.000		-10.41	0.000
0-5	445 (61.1)	1.8			3.2		
6-10	213 (29.3)	35.7			16.0		
11+	70 (9.6)	64.3			35.7		
Intake of psychotropics during 3 months before admission			43.36	0.000		22.61	0.000
No	681 (93.5)	15.3			8.7		
Yes	47 (6.5)	53.2			30.4		
Duration of inpatient treatment (days)				n.s.			n.s.
1-7	249 (34.2)	14.9			4.4		
8-14	234 (32.1)	16.7			8.5		
15-21	112 (15.4)	18.8			13.5		
22+ days	133 (18.3)	24.1			20.3		
Previous psychiatric inpatient treatment			41.92	0.000		50.88	0.000
No	646 (96.0)	13.5			7.6		
Yes	27 (4.0)	59.3			48.1		
Previous psychiatric outpatient treatment			84.61	0.000		40.42	0.000
No	601 (89.6)	11.0			6.2		
Yes	70 (10.4)	52.9			28.6		
Identified as psychiatrically ill by non-psychiatric physicians			179.96	0.000		118.15	0.000
No	560 (76.9)	7.3			3.4		
Yes	168 (23.1)	52.4			32.1		

observed abnormalities as independent variables. For these calculations, nominal variables (e.g. department type) were dummy-coded by SPSS into a number of dichotomies.

Results

■ Composition of the sample

Of a total of 1069 patients admitted during the study period, 0.3% were too sick to be interviewed and 3.2% refused to take part in the study. Additionally, 3.6% dropped out for other reasons (e.g. duration of inpatient treatment being too short). Thus, our survey population consisted of 993 patients (92.9% of all admissions). Data on identification of psychiatric disorders by ward physicians were available on 734 patients. For ethical reasons, research psychiatrists

had informed ward physicians about the psychiatric status of six patients suffering from suicidal thoughts, and recommended psychiatric consultation. These patients were excluded from statistical analyses, which left a study population of 728 inpatients. Of the total study population, 48.5% were aged 60 years or above, and 73.1% were female. During the three months before hospital admission, 6.5% used neuroleptics or antidepressants. More characteristics of the sample are presented in Table 1.

■ Cases and psychiatric diagnoses

Overall, 34.2% (N = 249) of the total sample suffered from some kind of psychiatric disorder according to CIS case criteria (Table 2). Of the total sample, dementia (12.5%) and minor depression (8.9%) were

Table 2 Frequency of psychiatric disorders (denominator is the total sample: N = 728) as well as frequency of need for consultation or inpatient referral, and of actually performed consultations within each diagnostic category (denominators are the respective diagnostic categories)

Diagnoses (DSM-III-R codes in brackets)	Frequency of psychiatric disorders according to case criteria ^a	Need for consultation or inpatient referral	Actually performed consultations
	N (%)	% of diagnostic category	% of diagnostic category
All cases	249 (34.2)	51.8	22.6
Dementia and other organic mental illness (290.xx, 293.xx–294.xx, 310.xx, 317.xx–319.xx)	91 (12.5)	47.3	18.9
Substance abuse disorders (303.xx–305.xx)	53 (7.3)	69.8	32.7
Substance-related psychiatric disorders (291.xx–292.xx)	21 (2.9)	95.2	52.4
Major depression (296.20–296.36)	17 (2.3)	76.5	47.1
Minor depression (300.40, 309.00, 311.00)	65 (8.9)	40.0	23.1
Psychosomatic disorders (300.11, 300.70–300.81, 306.xx–307.xx, 316.xx)	20 (2.7)	50.0	10.0
Personality disorders (301.xx)	21 (2.9)	42.9	19.0
Psychoses and bipolar disorders (295.xx, 297.xx–298.xx, 296.40–296.70)	10 (1.4)	90.0	50.0
Anxiety disorders (300.00–300.02, 300.21–300.30, 309.21–309.40)	19 (2.6)	42.1	5.3

^aSince more than one psychiatric diagnosis was possible, percentages add up to more than 100%

the most frequent psychiatric diagnoses, followed by substance abuse disorders (7.3%). The prevalence of psychiatric disorders in the different departments has been described elsewhere [21, 22]. Ward physicians classified 23.1% of all those included into the study as suffering from any psychiatric disorder. When comparing this assessment with that of research psychiatrists, 52.6% of the mentally ill and 92.1% of the mentally well were identified correctly. More details on identification of psychiatric disorders by ward physicians have been reported previously [23].

■ Need for psychiatric consultation and inpatient treatment

According to research psychiatrists, 51.8% of the 249 psychiatric cases (i.e. 17.7% of the total sample) needed either psychiatric consultation (43.4%) or inpatient referral (8.4%).

Need for consultation or inpatient referral according to research psychiatrists was highest among those admitted to rehabilitation departments, followed by medical and surgical departments (Table 1). This need was more frequent when symptoms scores were higher, and among those who had previously been treated as psychiatric in- or outpatients. Need for consultation or inpatient referral was most frequent among those suffering from substance related psychiatric disorders, followed by those with psychoses and bipolar disorders (Table 2).

■ Actually performed psychiatric consultations and inpatient referrals

Of the total sample, 10% (N = 73) were seen by a consultation psychiatrist (Table 3), of those two per-

sons were referred to a psychiatric ward, one of them suffering from delirium during alcohol withdrawal and the other from major depression.

Actual psychiatric consultations were most frequent in the rehabilitation wards, followed by medical wards (Table 1). In rural areas actual psychiatric consultations were more frequent than in urban ones. Of all 249 psychiatric cases, 22.6% (N = 43) were seen by a consultation psychiatrist. About half of those suffering from psychoses or bipolar disorders, from substance-related psychiatric disorders or from major depression had an actual psychiatric consultation (Table 2).

■ Comparing actual utilization with need for psychiatric consultation

Of the 129 patients needing either consultation or inpatients referral according to research psychiatrists, 43 were actually seen by a consultation psychiatrist (i.e. “met need” = 33.3%; Table 3). This means that 66.7% of those for whom the research psychiatrist had stated a need for psychiatric consultation, did not receive it (“unmet need”). In contrast, of the 599 patients *not* needing consultation or inpatients referral, 30 (5.0%) had actually received a psychiatric consultation (“overprovision”).

“Met needs” were highest for patients with psychoses and bipolar disorders, followed by those suffering from substance-related psychiatric disorders (Table 4). Among the different diagnostic groups, “overprovision” was highest among those suffering from major depression.

“Met needs” were most frequently found among patients of the rehabilitation wards, followed by those of the surgical and medical wards (Table 5). “Met

Table 3 Actual psychiatric consultations compared with need for consultation or inpatient referral (according to research psychiatrists)

			Need for consultation or inpatient referral		
			No	Yes	Total
Actually performed consultation	No	N	569	86	655
		Row percent	86.9	13.1	100.0
		Column percent	95.0	66.7	90.0
	Yes	N	30	43	73
		Row percent	41.1	58.9	100.0
		Column percent	5.0	33.3	10.0
Total	N	599	129	728	
	Row percent	82.3	17.7	100.0	
	Column percent	100.0	100.0	100.0	

Table 4 “Met needs” (i.e. patients receiving consultation of all those needing consultation or inpatient referral) and “overprovision” (i.e. patients receiving consultation of all those needing neither consultation nor inpatient referral) according to diagnostic categories

Diagnoses (DSM-III-R codes in brackets)	“Met needs” (%)	“Overprovision” (%)
Total sample	33.3	5.0
Non-cases	0.0	3.5
All cases	33.3	10.9
Dementia and other organic mental illness (290.xx, 293.xx–294.xx, 310.xx, 317.xx–319.xx)	27.9	10.6
Substance abuse disorders (303.xx–305.xx)	37.8	20.0
Substance-related psychiatric disorders (291.xx–292.xx)	55.0	0.0
Major depression (296.20–296.36)	53.8	25.0
Minor depression (300.40, 309.00, 311.00)	30.8	17.9
Psychosomatic disorders (300.11, 300.70–300.81, 306.xx–307.xx, 316.xx)	20.0	0.0
Personality disorders (301.xx)	33.3	8.3
Psychoses and bipolar disorders (295.xx, 297.xx–298.xx, 296.40–296.70)	55.6	0.0
Anxiety disorders (300.00–300.02, 300.21–300.30, 309.21–309.40)	0.0	10.9

needs” were lowest among the gynecological patients. “Overprovision” was more frequent if patients had previously been treated by psychiatric services either as in- or outpatient. If patients had reported an intake of psychotropics during the three months before hospital admission, a higher rate of “overprovision” was observed. In the rural catchment area, “overprovision” occurred more often than in the urban catchment area. “Overprovision” was found most often at rehabilitation wards, followed by medical and surgical wards.

Using logistic regression analysis, “met need” was positively associated with the medical and rehabilitation department (vs. gynecological department), with rural catchment area and the identification of psychiatric disorders by non-psychiatric physicians (Table 6). “Overprovision” was predicted by the sum-score of reported symptoms and identification of psychiatric disorders by non-psychiatric physicians.

Discussion

In the present study, research psychiatrists found more than half of all psychiatric cases in need of either psychiatric consultation or referral to a psychiatric inpatient unit. Among patients admitted to non-psychiatric hospital departments in Germany, Arolt [12] found that 53% of psychiatric cases at medical wards and 49% at surgical wards were in

need of consultation. In addition, he reported that more than 10% of the cases were in need of referral to psychiatric wards. Thus, his estimates of need are slightly higher than ours. This proportion seems to be relatively high when compared to the results of a German general population study reporting a one-week prevalence of 21.2% and about 18% of the psychiatric cases in need of psychiatric outpatient treatment and about 2% in need of psychiatric inpatient treatment [18].

Similar to the results reported by Arolt [12], in the present study the rate of actual consultation and admission to psychiatric hospital departments was markedly lower than the need judged by research psychiatrists. The extent to which this need is met depends on many factors, including the availability of appropriate services. Seltzer [8] reported that referral rates vary with the organization of consultation service. Therefore, Arolt [12] suggested that a markedly higher number of psychiatrists should be available for consultation services. In contrast, Maguire et al. [9] hypothesized that low referral rates are caused by little interest in psychiatric illness, so that only the most disturbed are referred. It is also possible that differences in the psychiatric skills of physicians or distinct individual beliefs about, and attitudes towards, psychiatric treatment might have affected these rates.

Recognition of psychiatric disorders by ward physicians is a crucial factor when discussing whether

Table 5 “Met needs” (i.e. patients receiving consultation of all those needing consultation or inpatient referral) and “overprovision” (i.e. patients receiving consultation of all those needing neither consultation nor inpatient referral) according to sample characteristics: chi-square test for categorical variables and *t*-test for continuous variables (critical alpha after Bonferoni adjustment 0.0045)

	“Met needs”			“Overprovision”		
	%	Chi-2/ <i>t</i> -test	<i>P</i>	%	Chi-2/ <i>t</i> -test	<i>P</i>
Total sample	33.3			5.0		
Gender			n.s.			n.s.
Female	31.2			5.0		
Male	38.9			5.0		
Age (years)			n.s.			n.s.
≤59	29.6			1.6		
≥60	36.0			9.0		
Department type			n.s.		42.50	0.000
Medical	35.2			5.1		
Surgical	37.5			3.7		
Gynecological	4.8			0.0		
Rehabilitation	44.7			17.2		
Catchment area			n.s.		11.57	0.001
Rural	39.6			7.1		
Urban	18.4			0.5		
Sum-score of reported symptoms			n.s.		6.71	0.000
0–5	31.8			2.2		
6–10	31.9			9.2		
11+	36.8			23.8		
Sum-score of observed abnormalities		3.02	0.003		4.25	0.000
0–5	12.5			3.0		
6–10	26.3			10.2		
11+	48.9			12.0		
Intake of psychotropics during 3 months before admission			n.s.		25.34	0.000
No	33.7			4.2		
Yes	32.0			28.6		
Duration of inpatient treatment (days)			n.s.			n.s.
1–7	21.6			1.4		
8–14	30.8			4.1		
15–21	47.6			5.6		
22+	40.6			13.9		
Previous psychiatric inpatient treatment			n.s.		22.67	0.000
No	27.6			4.5		
Yes	56.3			36.4		
Previous psychiatric outpatient treatment			n.s.		29.32	0.000
No	27.3			3.6		
Yes	32.4			24.2		
Identified as psychiatrically ill by non-psychiatric physicians		15.03	0.000		36.55	0.000
No	9.8			2.9		
Yes	44.3			18.8		

referrals are appropriate. Several studies (e.g. [24, 25]) have reported that non-psychiatric physicians often do not recognize the psychiatric disorders of their patients. Not surprisingly, recognition turned out to be a predictor for referral to psychiatric consultation irrespective if research psychiatrists identified a need for consultation.

In the present study, more than a third of those who actually received psychiatric consultation were judged by research psychiatrists as having no need for any specialist psychiatric services. This indicates that, in part, the wrong patients were referred to psychiatric services. For some of them, this might be due to the fact that some psychiatric non-cases (according to CIS) were misclassified by ward physicians as being mentally ill. Further, some patients suffering from psychiatric disorders (e.g. major depression) actually received psychiatric consultation while research psy-

chiatrists judged that they have no need for any specialist psychiatric services. When interpreting these results it must be taken into account that research psychiatrists considered the psychiatric treatment already received by the patients as well as their response to this treatment. For example, if a patient had already started with antidepressants resulting in an improvement of symptoms, research psychiatrists judged this patient as not needing specialist psychiatric services during hospital stay. It might be that ward physicians sometimes did not consider the psychiatric treatment received by the patients.

When interpreting these results some methodological limitations have to be considered. First, we just included patients from four department types and from two catchment areas, however most previous studies included only patients from one or two department types and from one catchment area (e.g.

Table 6 Multiple logistic regression analyses with “met needs” (i.e. patients receiving consultation of all those needing consultation or inpatient referral) and “overprovision” (i.e. patients receiving consultation of all those needing neither consultation nor inpatient referral) as dependent variables^a

Significant independent variables	Adj. OR (95% CI)	P
“Met needs”		
Medical vs. gynecological departments	8.90 (1.07–74.34)	0.048
Rehabilitation vs. gynecological departments	7.00 (1.20–40.69)	0.031
Rural vs. urban catchment area	4.71 (1.09–20.37)	0.047
Identified as psychiatrically ill by non-psychiatric physicians	24.46 (2.75–217.54)	0.004
“Overprovision”		
Sum-score of reported symptoms	1.46 (1.02–2.11)	0.041
Identified as psychiatrically ill by non-psychiatric physicians	2.82 (1.04–7.66)	0.042

^aList of all independent variables: Surgical vs. gynecological departments; medical vs. gynecological departments; rehabilitation vs. gynecological departments; urban vs. rural catchment area; gender; age; intake of psychotropics during 3 months before admission; duration of inpatient treatment;

previous psychiatric outpatient treatment; previous psychiatric inpatient treatment; sum-score of reported symptoms; sum-score of observed abnormalities; identification as psychiatrically ill by non-psychiatric physicians

[12, 26]). Second, in our study we used the CIS in a modification suitable for elderly people as well [15]. Thus, it is difficult to compare our results with some of the most recent studies which are based on the CIDI [1], but the CIDI was not developed to detect disorders which are common among the elderly (e.g. dementia).

In the literature, we could not find any clear defined criteria for the assessment of need among inpatients of non-psychiatric wards. Perhaps, the criteria we have developed for the present study could serve as a basis for the development of an instrument for assessing the need for psychiatric consultation and inpatient referral. Such an instrument would be a prerequisite to perform internationally comparable estimates about the type and quantity of psychiatric services needed by inpatients of non-psychiatric wards. In addition, based on a “bottom-up” approach, it would allow a more detailed planning of psychiatric services.

Since the high prevalence of psychiatric disorders precludes the referral of all patients with psychiatric co-morbidity to psychiatric services, a marked proportion has to be treated by ward physicians themselves. In the present study, similar to other surveys, more than half of all patients received psychotropic drugs during their hospital stay, most of them ordered by non-psychiatric ward physicians [27]. This underlines the importance of acquiring profound knowledge about psychiatric disorders and their treatment for all medical doctors. It seems essential that psychiatric education is obligatory at medical schools and during postgraduate medical training. In addition, the establishment of psychiatric liaison with non-psychiatric wards could contribute to a continuous transfer of relevant knowledge.

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