

# Psychosomatic liaison service in medicine – need for psychotherapeutic interventions and their realisation

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## Summary

**Questions under study:** The aim of the study was to evaluate the need for psychotherapeutic interventions and their realisation within the framework of the psychosomatic liaison service. Apart from establishing the diagnosis of psychosocial distress and mental disorders, we assessed the motivation of the patients for psychotherapy.

**Methods:** 62 consecutive patients admitted to the Department of Medicine (Gastroenterology and Hepatology) Freiburg University Hospital, Freiburg, Germany, underwent standardised psychodiagnostic interviews and completed psychometric self-rating tests to identify mental disorders, psychosocial distress, and motivation for psychotherapy. In addition, the patients' need for psychotherapeutic treatment was rated by the liaison therapist.

**Results:** Using ICD 10-criteria, mental disor-

ders were diagnosed in two thirds of the patients; most frequent were adjustment disorders, affective disorders, and disorders resulting from alcohol use. One third of the patients reported signs of psychological distress; half of them were interested in psychotherapy. A need for psychotherapeutic interventions, based on motivation of the patients and on expert estimate, was found in approximately one third of the patients. 36% received actual psychotherapy.

**Conclusions:** Our study suggests that – in the patient population studied – the patients' motivation ought to be taken into consideration more strongly when evaluating the need for psychotherapy in clinical practice and further research.

**Key words:** consultation liaison service; psychotherapeutic interventions

## Introduction

The co-operation with specialised mental health services is an important component in the treatment of medical in-patients. Previous studies have shown that medical and psychiatric comorbidity can increase the length of hospital stays [1–3]. Prompt psychosocial interventions can reduce the time spent as an in-patient, thus saving costs [4]. Further, there is evidence that psychiatric comorbidity has a negative impact on the course of somatic diseases. Thus, depressive symptoms after a myocardial infarction predict increased cardiovascular mortality [5].

Epidemiological studies have shown that approximately one third of all medical in-patients present with psychological symptoms, related or unrelated to their somatic ailment [6–8]. Compared with the general population, depressive symptoms, alcoholism, and organic psychosyn-

dromes aggregate in the hospital [9]. Up to date, few studies have rated the need for psychotherapeutic treatment in medical in-patients [8, 10]. Steuber et al. [10] found that – from the perspective of physicians and nurses of an internal medicine unit – 20–50% of their patients needed psychotherapy. Arolt et al. [8] reported a need for psychotherapeutic intervention in 37% of 200 medical in-patients. According to the WHO's definition of the need for psychotherapeutic treatment [11], and as a prerequisite for the performance of a psychotherapeutic intervention [12], the presence of psychological distress or mental disorders as well as the patient's motivation for psychotherapy are most important aspects. In cancer patients [13, 14], several studies evaluated patient motivation towards psychotherapeutic support. Beutel et al. [13] reported that 27% of 213 cancer patients

in an outpatient chemotherapy unit were interested in psychotherapeutic counselling. In another study including 215 melanoma patients [14], 21% showed interest in professional psychosocial support. Also, in dermatological in-patients, nearly one third of the patients (29% out of 86) expressed a wish for psychological treatment [15].

The aim of our study was to describe the psychosomatic liaison service of a ward in internal

medicine with a focus on gastrointestinal and liver diseases. Apart from establishing diagnoses of psychosocial distress and mental disorders, we assessed the motivation of the patients for psychotherapy. Here, we evaluated the need for psychotherapeutic interventions and their realisation within the framework of the psychosomatic liaison service.

## Patients and methods

### Patients and study design

For a period of two months, all patients (n = 91) of one ward in the Department of Medicine (Gastroenterology and Hepatology) Freiburg University Hospital, Freiburg, Germany, were consecutively enrolled in the study. Those patients admitted for in-patient care more than once during the study period were evaluated only during their first therapeutic episode. Exclusion criteria for the study were hospitalisation lasting less than 48 hours (n = 4) and an inadequate knowledge of the German language (n = 4). Severity of disease did not allow ten patients to take part in the study; eleven patients refused to participate. Thus, the study sample comprised 62 patients. The patients not included were, on average, older than the patients included (mean 67 yrs vs. 56 yrs; p = 0.001). The subjects excluded and refusers did not differ significantly from those included with respect to gender, type and severity of somatic diagnoses according to the Charlson Comorbidity Index [16] (mean 3.25 vs 3.49) and the number of comorbid diagnoses (mean 1.98 vs 2.45). The frequency of patients with alcohol-related diagnoses (e.g., hepatic cirrhosis) was also similar.

The study was approved by the Ethics Review Committee of the Freiburg University. Informed consent was given by all subjects.

During the first 4 days of in-patient care, the patients completed questionnaires and underwent a psychodiagnostic interview. 48 subjects (77.4%) agreed to participate in the interview and 45 patients (72.6%) completed the questionnaires. Main reasons for non-participation were fear of disclosure of private issues and negative attitudes towards research. Those patients completing the questionnaires were significantly younger than those participating in the interview only (t-value = 2.49; df = 27; p = 0.019). The distribution of the main diagnoses in both groups was similar to the distribution in the whole sample.

At the beginning of in-patient treatment, the liaison therapist (C.S.) estimated the patients' need for psychotherapy in all 62 subjects by means of a standardised test described below.

### Survey methods

#### *Somatic parameters*

The ICD 9 diagnoses of the somatic diseases were taken from the medical records. The Charlson Comorbidity Index [16] was used to classify the patients' number and severity of comorbid somatic diseases.

#### *Questionnaires*

The following standardised tests were used:  
Hospital Anxiety and Depression Scale – HADS [17]  
Freiburg Questionnaire on Coping with Illness – FQCI [18]  
The Everyday Life Questionnaire – EDLQ [19]

Questionnaire for psychotherapeutic treatment motivation – FBB [20]

The presence of psychosocial distress was determined using cut-offs of the subscales (depression >8, anxiety >10) taken from the HADS by Zigmond and Snaith [17]. Since there are no cut-offs for FQCI or EDLQ, these were determined using averages  $\pm$  one standard deviation. In order to assess the psychosocial need for treatment from the patient's view, the scale "motivation and need for care" of the FBB was used. This scale includes the following items: missing psychosocial support, desire for psychological consultation, participation in relaxation procedure training, and inclusion of partner and family. On a five-step Likert scale ranging from "1" (not at all) to "5" (very strong), values  $\geq 4$  were considered as indicators for a requirement and motivation for psychotherapeutic treatment.

#### *Diagnostic procedures*

The Diagnostic Interview for Mental Disorders – Mini-DIPS [21] was performed by a trained research assistant. The Mini-DIPS interview is an objective, reliable, and valid instrument, frequently proven useful in research and practice, for establishing psychological diagnoses according to classification systems ICD 10 and DSM IV. A high inter-rater reliability, with a high degree of agreement of 90% and a Kappa coefficient >.80, demonstrates good evaluation objectivity for making diagnoses. In the present investigation, the ICD [22] was used, due to its wide distribution in German speaking countries.

Cooper's criteria [23] were used to estimate the severity of the mental disorder. Severity categories of "0" and "1" stand for no stress for the patient and no need for treatment, respectively. A severity of "2" delineates a mental disorder leading to a certain impairment for the patient which may necessitate psychotherapy.

In addition to the self-rating patient questionnaires, the liaison therapist estimated the degree of anxiety and depression, their way of coping and degree of social distress of the patients by completing a separate self-provided, not standardised psychometric questionnaire [24]. The rating generated by this questionnaire was based on the clinical interview and on information provided by internal staff. The need for psychotherapeutic treatment was estimated on this basis. The liaison therapist was blinded towards the results of the structured diagnostic interview and the self-rating patient questionnaires.

#### *Documentation of psychotherapeutic treatment*

Psychotherapy performed and treatment recommendations were recorded in the basic documentation routinely used by the Psychosomatic Consultation and Liaison Service of the Department of Psychosomatic and Psychotherapeutic Medicine at Freiburg University Hospital.

### Statistical analyses

Statistical analyses were carried out using the program SPSS 8.0 for Windows. Descriptive statistics were calculated for sociodemographic data, clinical data, and all psychometric tests. To establish group differences at the

interval scale level, the t-test for independent samples was employed. To calculate differences at nominal level, the chi square test was used. All statistical tests were two-sided and a level of  $p < 0.05$  was considered statistically significant.

## Results

### Sociodemographic data

The sociodemographic data of the patient population are shown in table 1.

### Somatic diagnoses

The main somatic diagnoses based on ICD 9 are shown in table 2. The severity of comorbid diagnoses of the patient population ( $n = 62$ ) indicated by the Charlson Comorbidity Index amounted to a mean score of  $3.49 \pm 2.02$ , with a median of 3 and a range from 1 to 11. On average, the number of comorbid diagnoses was  $1.98 \pm 0.88$ , with a median of 2 and a range from 1 to 4.

### Psychosocial distress and mental disorders

In the HADS ( $n = 44$ ), 23% of the patients had elevated values for anxiety, and 32% for depression. Severe problems in social life were present in 42% of the patients; significant functional deficits in daily life in 29% (EDLQ,  $n = 45$ ). In the FQCI ( $n = 42$ ), 19% showed depressive coping, 5% minimisation and wishful thinking.

39/48 patients (81%) examined in the diagnostic interview (Mini-DIPS) had at least one mental disorder. In 31 patients (65%) a main mental disorder was present which might require psy-

chotherapy (severity "2" according to Cooper [23]). Table 3 summarises the distribution of mental disorders among those 31 patients. Eight patients (16%) had a main mental disorder without clear impairment for the patient, thus requiring no treatment (severity of "0" and "1" according to Cooper).

### Motivation of the patients for psychotherapy

In the FBB ( $n = 40$ ), multiple answers regarding the interest in different psychotherapeutic interventions were possible. In total 44% ( $n = 18$ ) of the patients were highly motivated for psychotherapy. 18% ( $n = 7$ ) of the patients indicated that they strongly missed psychological support, 20% ( $n = 8$ ) exhibited a strong interest in psychotherapeutic counselling, an additional 20% ( $n = 8$ ) in counselling of themselves and their partners, and 33% ( $n = 13$ ) in relaxation exercises.

### Need for psychotherapy

According to the expert rating by the liaison therapist at the beginning of in-patient care, 37% ( $n = 27$ ) of the patients ( $n = 62$ ) were currently in need of psychotherapy. The remaining 63% required no psychotherapeutic intervention.

**Table 1**  
Sociodemographic description of the patient population ( $n = 62$ ).

Variable	patient population	number of patients n / %	missing data n / %
Sex	female	15/24	–
	male	47/76	–
Life situation	married / living with a partner	28/64	19/31
	living alone	15/36	
Education	elementary school	24/55	18/29
	vocational school	15/34	
	high school/college	5/11	
Working activity	white-collar workers / officials	16/41	23/37
	workers	10/26	
	self-employed	6/15	
	housekeeping	5/13	
	in education	2/5	
Employment	retired	18/46	23/37
	full-time job	11/28	
	on sick leave or disabled	5/13	
	unemployed	4/10	
	part-time job	1/3	
Age	mean 55.9 years ( $n = 62$ ) (median 57; SD 14.35; min. 18, max. 82)		

**Table 2**

Main somatic diagnoses based on ICD 9 of the patient population (n = 62).

Diagnosis		number of patients
Diseases of the digestive system (35%)	Crohn's disease	2
	ulcerative colitis	1
	hepatic cirrhosis	13
	cholestasis	1
	upper gastro-intestinal bleeding	4
	oesophageal stenosis	1
Malignant neoplasms (24%)	oesophagus	2
	stomach	1
	colon	1
	liver	4
	gall bladder	1
	pancreas	3
	lung	2
	non-Hodgkin lymphoma	1
Cardiovascular diseases (17%)	coronary artery disease	4
	Wolff-Parkinson-White syndrome	1
	cardiac dysrhythmia	3
	peripheral arteriosclerosis	1
	thrombosis	1
	syncope	1
	Diseases of the respiratory system (8%)	pneumonia
Transplantation (5%)	liver transplantation	3
Infectious diseases (5%)	erysipelas	1
	viral hepatitis	2
Metabolic diseases (2%)	Basedow's disease	1
Intoxication (2%)	mercury poisoning	1
Ophthalmological diseases (2%)	amaurosis	1
Total (100%)		62

With regard to age, duration of mental disorder, and values on the scales of the questionnaires, those currently requiring treatment did not differ significantly from those subjects not currently requiring treatment. The only statistical difference was found on the anxiety scale (HADS) and in

treatment motivation (FBB). On average, the former group showed more symptoms of anxiety (mean 8.63 vs. 5.54;  $p = 0.042^*$ ) and was substantially more interested in psychotherapy (mean 2.81 vs. 1.64;  $p = 0.003^{**}$ ) (\* = significant,  $p < 0.05$ ; \*\* = very significant,  $p < 0.01$ ).

As defined by the WHO [11], the indication for psychotherapy is based on the "subjective need" voiced by the persons involved, and the "objective necessity" ascertained by expert estimate or psychometric procedure (questionnaires).

By combining the two means to ascertain the need for psychotherapeutic treatment four possible patient groups can be defined: (1) patients who neither show a need for psychotherapeutic treatment nor have an interest in taking up the offer of psychotherapy, (2) patients who show no need, yet are interested in psychotherapeutic treatment, (3) patients who show need, but have little interest in psychotherapeutic treatment, and (4) patients with a perceived need for, and high interest in psychotherapy. As shown in table 4, 27% of our patients were assigned to group (4), 5% to group (3), 17% to group (2), and 51% to group (1).

In the present study, the criterion of "objective need" required for rating the need for psychotherapy was established either by judgement of the expert (rating by the liaison therapist), or by the degree of psychosocial distress revealed in the questionnaires (HADS and EDLQ). Table 4 summarises the need for psychotherapy as evaluated by expert rating. There was a high congruence between the rating by the liaison therapist and the questionnaires. Thus, to avoid redundancy, those results from the questionnaires were not integrated here.

### Psychotherapeutic interventions

36% (n = 22) of the patients were treated by the liaison therapist during their hospital stay. Besides individual psychotherapeutic sessions which were supportive, behaviour- and conflict-oriented, counselling of the physicians and nurses working in the unit was an essential part of the liaison activity. Figure 1 gives an overview of the distribution of the various forms of intervention. In 27% (n = 6) of the patients, the psychotherapeutic treat-

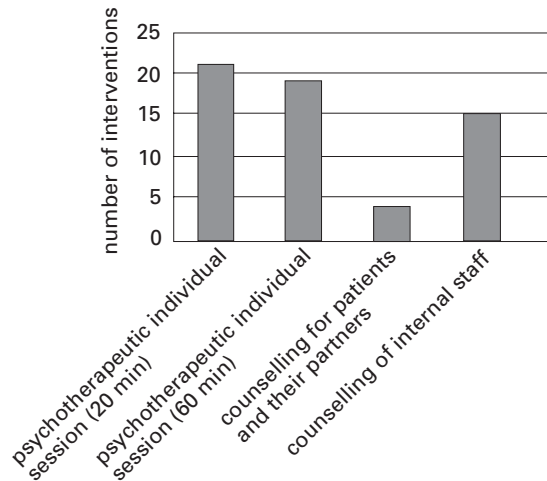
**Table 3**

Distribution of mental disorders on ICD 10 Chapter F 1-6 with a severity of 2 according to Cooper's criteria (n = 31).

	diagnosis	number of patients
F1 Disorders resulting from abuse of substances (28%)	disorders resulting from use of alcohol	9
F2 Schizophrenia and other delusional disorders (3%)	paranoid psychosis	1
F3 Affective disorders (20%)	depressive episode	4
	dysthymia	2
F4 Neurotic, stress-related and somatoform disorders (37%)	adjustment disorder with depressive symptoms	10
	somatoform disorder	2
F5 Behavioral syndromes with physical symptoms (3%)	anorexia nervosa	1
F6 Personality and behavioral disorders (6%)	dissocial personality disorder	1
	dependent personality disorder	1
Total 100%		31

**Figure 1**

Type and frequency of psychotherapeutic interventions (n = 57).



ment included psychotropic medication (antidepressant therapy) which was administered by the liaison therapist. *Table 5* shows the distribution of mental disorders in the patient group (n = 22) who received psychotherapy. All patients in groups (3) and (4) (*table 4*) were treated. 82% (n = 18) of the patients treated were advised to seek further psychotherapeutic counselling after discharge from the hospital.

**Table 4**

Need for psychotherapy and performance of psychotherapeutic interventions (n = 41).

Group	expert rating need for psychotherapy	motivation for psychotherapy	number of patients (n = 41)	number of patients according to group 1–4 who received psychotherapeutic intervention
1	no	low	21 (51%)	2
2	no	high	7 (17%)	1
3	yes	low	2 (5%)	2
4	yes	high	11 (27%)	11

**Table 5**

Distribution of mental disorders based on ICD 10 Chapter F 1–6 in the group of patients who received psychotherapeutic interventions (n = 22).

Mental disorder	number of patients (mental disorder Cooper 2)	number of patients who received psychotherapeutic interventions
F1 Disorders resulting from abuse of substances	9	2
F2 Schizophrenia and other delusional disorders	1	1
F3 Affective disorders	6	3
F4 Neurotic, stress-related, and somatoform disorders	12	8
F5 Behavioral syndromes with physical symptoms	1	1
F6 Personality and behavioral disorders	2	1
No mental disorder Cooper 2	17	2
No diagnostic interview	14	4
Total	62	22

## Discussion

In this study, we evaluated the need for care and psychotherapeutic interventions as part of a routine psychosomatic liaison service. Thus, the data were obtained prospectively during daily clinical routine. This setting was chosen to depict the situation as close to clinical practice as possible. Before we discuss our results in greater detail, however, we would like to mention some limitations inherent in our study. The total number of patients was relatively small, since nearly one third of those eligible were unable to participate and had to be excluded. In addition, not all patients were motivated to complete the questionnaires and to participate in the diagnostic interview. However, the disease spectrum of the patients analysed can be regarded as representative for the unit in which the study was performed.

The frequency and distribution of mental disorders in our study differs from the results de-

scribed previously. The prevalence of mental disorders among medical in-patients varies between 33% (based on the Composite International Diagnostic Interview) and 47% (based on clinical interview) [8], depending on the methodology employed [25]. In a study with 200 medical and 200 surgical in-patients, depressive disorders, alcohol dependence, and psychoorganic disorders were the most frequently observed mental disorders [9]. Also, adjustment disorders were found to be frequent in a large sample (n = 1000) of patients examined in consultation psychiatry [26]. The patient population investigated in the present study differs from other medical in-patient populations studied in connection with psychosocial issues [9, 26, 27] due to the fact that primarily patients with gastroenterological diseases were admitted to the ward where the investigation was carried out. With reference to the Charlson Comorbidity Index, our



patients were more severely ill, while similarly old when compared to in-patient populations in other studies [9, 26, 27]. The specialisation on liver diseases can be seen in the unusually frequent diagnosis of hepatic cirrhosis due to alcohol. A possible reason for the high prevalence of patients with a mental disorder might be the large number of somatic diseases associated with alcohol in our sample. Thus, the frequency of disorders resulting from use of alcohol (approximately 30%) in fact surpasses the prevalence rate of 10 to 20% among all medical in-patients reported in the literature [28–30]. Besides this, we cannot exclude the possibility that the high rate of mental disorders identified by means of the Mini-DIPS may in part be a consequence of the assessment performed by the research assistant. This seems unlikely, however, since he was a clinically experienced physician and was trained in using this instrument. Yet, one needs to bear in mind, that the reliability of diagnostic classification of mental disorders has been found to be rather poor even amongst experienced psychiatrists [31].

For the purpose of evaluating the need for psychotherapeutic intervention, the present study ascertained the motivation of the patients. Approximately half of the patients indicated that they were interested in psychotherapeutic interventions that included psychotherapeutic individual sessions, counselling for patients and their partners, and relaxation training. Compared with the results in the literature [13–15] the fraction of motivated patients in our study was rather high. This might be due to the fact that the patients who did not participate were also less likely to be interested in psychotherapy. Thus, the true proportion of motivated patients would in fact be lower. However, three of the eleven non-participants accepted psychotherapeutic interventions. In our study – as in the few other studies in this field motivation was seen as being present if there was an expressed interest in psychotherapeutic interventions. Of course, more differentiated models of motivation and change exist in behavioural science. Specific methods such as motivational interviewing [32, 33] could be helpful in future studies in the field of psychosomatic liaison service. With respect to our study, however, we chose to use instruments which were feasible in a context of daily clinical routine.

Evaluation of the need for psychotherapeutic interventions from the point of view of the liaison therapist and as derived from the psychometric self-rating questionnaires yielded similar results. This could be regarded as a mutual validation of these differing data sources. In contrast, the evaluation by diagnostic interview revealed a relatively high prevalence of mental disorders – roughly two times higher than the results of the expert rating. Since a mental disorder with a grade of severity  $\geq 2$  according to the Cooper criteria – as applied in our study – does not necessarily imply a need for psychotherapy, the prevalence of mental disorders can hardly be used as a proxy for the need for

psychotherapeutic interventions. This might explain the observed discrepancy.

The group in need of psychotherapeutic interventions – as defined by the WHO [11] – comprised approximately one third of the patients. Investigations on the utilisation of psychosocial services in hospitals have shown that patients who have little motivation and who appear to draw little attention to their situation seldom receive psychosocial support, despite the presence of psychosocial distress [34, 35]. This group might be difficult to reach with an offer of psychotherapeutic interventions. The importance of the patients' own motivation was confirmed by the present study insofar as a significant association was demonstrated between the liaison therapist's evaluation of the need for psychotherapy and the patients' interest in psychotherapeutic interventions.

The conceptualisation of a need for psychotherapy on the basis of evaluation by the liaison therapist and the patients' motivation was consistently reflected in the distribution of the psychotherapeutic interventions. A deficit was revealed by the present data in providing relaxation exercises that were requested by some of the patients. The spectrum of diagnoses of the patients receiving psychotherapeutic interventions coincides with the typical spectrum of psychosomatic services described in other studies [12]. Here, the diagnostic spectrum of psychosomatic services mainly dealt with neurotic and adjustment disorders, as well as with affective disorders, and behavioural syndromes [12]. The small number of patients in our study precluded further subgroup analyses, such as stratification by different disease groups. Furthermore, the patients with alcohol dependency in our study constitute a heterogeneous subgroup with additional psychotherapeutic implications. By means of the trans-theoretical model of change [36], the modification of "addictive" behaviour involves a progression through five stages. Thus, patients with alcohol dependency might be heterogeneous with respect to their degree of motivation towards psychotherapy depending on the specific stage in the modification process.

It has to be pointed out that our survey was conducted in the setting of a specialised department at one centre in Germany. Thus, our results need to be discussed in the context of a specific patient population with a large number of subjects with gastrointestinal and liver diseases. Our data are too limited to extrapolate to other populations.

In summary, our investigation describes the feasibility and patients' acceptance of a psychosomatic liaison service under conditions of routine clinical care in internal medicine. As such, it reflects well the situation encountered in daily clinical practice at a large University hospital in Germany. Our findings support the fact that an additional psychosomatic treatment in medical in-patients is needed and valuable.

## Conclusions

The following conclusions can be reached from this study with respect to the psychosocial care of medical in-patients, in the context of the patient population studied: There is a considerable need for psychotherapeutic treatment of this patient population. As demonstrated here, sufficient psycho-diagnostic and psychotherapeutic steps are possible and reasonable within the framework of a liaison service. Not only for economic reasons, the choice of the specific instrument applied to screen for health service needs assessment is of pivotal importance. The usefulness of simple screening instruments like the HADS applied here might not suffice. Other instruments like the INTERMED [37, 38] may be required. In particular, our study suggests that the patients' motivation plays a decisive role in the process of the distribution of treatment. Thus, apart from expert's evaluation, the patients' perspectives ought to be more strongly conceptualised and taken into consideration. This is of great importance for the physician in clinical practice, who usually adopts the role of a mediator, initiating psychotherapeutic interventions.

Future studies should prospectively investigate the efficacy of psychosocial interventions on the basis of randomised and controlled interven-

tion studies. These trials should also address the question if a specific psychotherapeutic treatment was necessary or if a less specific psychosocial treatment by the caring physicians would be sufficient. In patients suffering from chronic medical conditions, like cancer, basic psychosocial support provided by the treating physicians is considered as a first step of adequate care; in a second step – if basic care does not prove to be sufficient – patients should be referred to mental health professionals [39]. However, in view of the fact that in clinical practice, such recognition of co-morbidity is often poor [40], it has been recommended that the physicians treating such patients should undergo appropriate training in identifying psychiatric co-morbidity and in communication skills [41].

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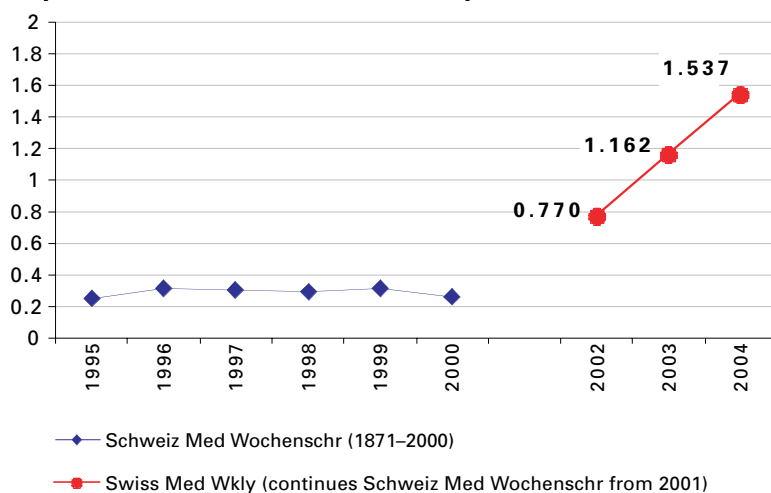
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