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ORIGINAL ARTICLE

Mental health care as delivered by Dutch general practitioners between 2004 and 2008

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Abstract

Objective. In the field of mental health care, a major role for general practice is advocated. However, not much is known about the treatment and referral of mental health problems in general practice. This study aims at the volume and nature of treatment of mental health problems in general practice; the degree to which treatment varies according to patients' gender, age, and social economic status; and trends in treatment and referral between 2004 and 2008. *Design/setting.* Descriptive study with trends in time in general practice in the Netherlands. *Subjects.* 350,000 patients enlisted in general practice, whose data from the Netherlands Information Network of General Practice were routinely collected from 1 January 2004 to 31 December 2008. *Main outcome measures.* For all episodes of mental health problems recorded by the GP, the proportion of patients receiving prolonged attention, medication, and referral during each year have been calculated. *Results.* More than 75% of patients with a recorded mental health problem received some kind of treatment, most often medication. In 15–20% of cases medication was accompanied by prolonged attention; 9–13% of these patients were referred (given referrals), the majority to specialized mental health care. Age is the most important variable associated with treatment received. During the period 2004–2008, treatment with medication declined slightly and referrals increased slightly. *Conclusion.* Treatment for psychological disorders is mostly delivered in general practice. Although in recent years restraint has been advocated in prescribing medication and collaboration between primary and secondary care has been recommended, these recommendations are only partially reflected in the treatment provided.

Key Words: *Anxiety, depression, drug therapy, general practice, referral and consultation, therapy*

Introduction

Mental disorders occur frequently. The annual prevalence of any DSM-IV classified mental disorder is 15–30% of the population [1,2]. More than half of patients with a mental disorder remain untreated [3–5]. The majority of treated patients are treated exclusively in primary care, mostly by general practitioners [3,5,6,7]. This has led to a plea for shifting secondary mental health care to primary care [7], a shift aimed for by the Dutch government during the last decade.

However, not much is known about *the volume and nature* of mental health care as it is delivered in general practice. Epidemiological surveys are mostly limited to the incidence and prevalence rates of mental disorders in primary care. If data on treatment are available, these are generally limited to the type of care provider. Only a few studies, mostly small-scale, report on the nature of treatment within primary care settings [8–13]. Trends in time in mental health care, delivered in primary care, have not been studied.

In the Netherlands, a referral by a GP is needed to enter specialized mental health care; a GP's treatment is reimbursed within the national insurance system without extra GP benefits for providing counseling or other kinds of mental health treatment. Since the year 2000, mental health care within primary care has been reinforced by government measures promoting the

What is known?

- Most patients with mental health problems are exclusively treated in primary care settings. Little is known about the specific treatment they receive.

What is new?

- Medication is the most frequently observed kind of treatment in the Netherlands. A small proportion of patients with mental problems are referred. About 20% receive prolonged attention from the GP.
- There is not much variation in treatment between different diagnoses.

deployment of psychologists and mental health nurses for short-term treatment. These primary care mental health services are to a certain extent reimbursed within the national insurance system. Dutch policy regarding mental health care aims at a substantial shift from secondary mental health care to primary care. A good understanding of treatment of mental disorder in general practice during the past years is needed when discussing such a shift. Therefore, this paper aims at the volume and nature of mental health treatment delivered by general practitioners from 2004 to 2008 and its associated patient characteristics. The following questions will be answered:

- Did diagnosis, treatment, and referral of patients with mental disorders change between 2004 and 2008?
- What treatment is provided to patients who were diagnosed by their GP as suffering from mental symptoms or disorder?
- To what extent is treatment determined by the patient's characteristics of age, gender, and socioeconomic status?

Material and methods

Population at risk and case definition

Data are derived from routinely kept electronic medical records (EMRs) in 92 practices (350,000 listed patients) participating in the Netherlands Information Network of General Practice (LINH). In the Netherlands, every non-institutionalized inhabitant has the legal obligation to register with a general practice. Dutch GPs are main health care providers in primary care and have a gatekeeping role in the health care system. With regard to primary mental health referrals, social workers and primary care psychologists are directly accessible.

The listed patient population is representative of the Dutch population regarding gender and age. Participating GPs are representative of Dutch GPs according to gender, age, number of working hours per week, urbanization level, and geographical distribution [14]. Anonymized data extracted from the EMRs include (symptom) diagnoses, coded according to the International Classification for Primary Care (ICPC) [15]; drug prescriptions coded according to the Anatomic Therapeutic Chemical (ATC) [16] classification; and referrals to secondary care specialists and other primary care providers. Data regarding the patients' gender and age were also derived from the EMRs. Whether patients were living in a deprived area was established on the basis of the postal code of their home address.

Cases are defined as an episode of care labeled with a (symptom) diagnosis coded within ICPC chapter "P" (Psychological) for the period 2004–2008. All contacts, prescriptions, and referrals regarding the same mental health problem were clustered into episodes of care; this method is described extensively elsewhere [17].

Analyses were conducted for the total group of patients with any (symptom) diagnosis of a mental health problem (coded within ICPC chapter P), and separately for the diagnoses mentioned in Table I.

Data from LINH are organized in a relational database with separate tables on diagnoses, drug prescriptions, and referrals. For each type of data, the information is tested for completeness and reliability. The number of practices/listed patients in Table I refer to diagnostic and drug prescription data. The number of practices providing reliable referral data was lower: 37 practices with complete and reliable figures in 2004; 49 practices in 2008. Consequently, when results on referral or combined with referral are presented they are based on data from 60% to 85% of the participating practices.

Treatment: prolonged attention

Prolonged attention is defined as having a series of at least five consultations within a six-month period after the first contact of an episode of care. The Dutch GP guidelines for depression recommend a series of supportive contacts, the number of which should depend on the degree of suffering and dysfunction of the patient, as one of the treatment options for depression [18].

Treatment: drug prescription

When psychopharmacological drugs were prescribed during the care episode it was considered as

Table I. Absolute numbers and (within parentheses) prevalence/1000 registered patients.

	2004	2005	2006	2007	2008
No. of practices	43	42	69	81	82
No. of listed patients	174130	169932	277396	327505	315120
Any P-diagnosis	19,294 (115)	17719 (107)	29791 (113.6)	31436 (100.5)	37336 (124)
Anxiety symptoms/disorder	4484 (26.7)	3856 (23.3)	6536 (24.9)	6591 (21.1)	7582 (25.2)
Depressive symptoms/disorder	5201 (31.0)	4646 (28)	7563 (28.8)	7634 (24.4)	8572 (28.5)
Emotional distress	2450 (14.6)	2319 (14)	3383 (12.9)	3567 (11.4)	4275 (14.2)
Alcohol abuse/dependence	387 (2.3)	393 (2.4)	681 (2.6)	760 (2.4)	1039 (3.5)
Dementia	252 (1.5)	284 (1.7)	537 (2.0)	591 (1.9)	735 (2.4)
Psychotic disorder	406 (2.4)	395 (2.4)	681 (2.6)	799 (2.6)	952 (3.2)
Other symptoms and disorders among which sleeping problems, tobacco/drugs abuse, child problems	6356 (36.5)	5967 (35.2)	11040 (39.8)	12019 (36.7)	14811(47.0)

pharmacological treatment. Specific drugs that were analyzed are defined in Table IV.

Treatment: referral

Referral was defined as cases where patients were referred to a mental health care provider or organization (including social work) at any time during the episode. For referrals, the specifications named in Table IV are used.

Statistical analyses

Trends in prolonged attention, medication, and referrals in patients with any mental (symptom) diagnosis, or with a diagnosis of depression or anxiety between 2004 and 2008 were analyzed with multivariate multilevel logistic regression analyses using a compound-symmetry model (1) (two-level hierarchical structured data: patients/general practices).

Logistic multilevel regression analyses were conducted with three-level hierarchical structured data (occasions/patients/practices), using MLWin 2.02 software [19]. The model was adjusted for age and gender and the practice's length of recording. The significance level was set at $p < 0.05$ for all analyses.

The effects of patient characteristics on treatment in 2008 were analyzed using multivariate multilevel logistic regression analyses with a two-level hierarchical structured data (patients/ practices).

Results

Trends 2004–2008

Psychological diagnoses. Table I presents the prevalence of psychological symptoms and disorders as they were diagnosed in Dutch general practice from 2004 to 2008.

The prevalence of mental health problems fluctuates between 10% of the registered population in 2007 and 12.5% in 2008. The most frequently diagnosed disorders were depression, anxiety, and emotional distress.

Table II. Percentage of patients with a psychological symptom or diagnosis that received a certain treatment combination.

	2004	2005	2006	2007	2008
No. of patients with psychological symptom or diagnosis	12,038	15,295	13,055	13,009	17,911
No treatment	23.4	25.2	25.6	25.2	24.4
Prolonged attention only	0.7	0.6	0.7	0.9	1.3
Medication only	48.3	51.4	48.2	48.4	46
Referral only	3.4	3.9	5.4	5.3	6.1
Prolonged attention + medication	18.8	13.6	14	14.6	15.6
Prolonged attention + referral	0.1	0.1	0.2	0.1	0.3
Medication + referral	3.2	3.8	3.9	3.7	4
Prolonged attention + medication + referral	2.2	1.5	2.2	1.8	2.3
Prolonged attention total	21.8	15.8	17.1	17.4	19.5
Medication total	72.5	70.3	68.3	68.5	67.9
Referral total	8.9	9.3	11.7	10.9	12.7

Table III. Statistics for multivariate multi-level test of the effects of age, sex, socioeconomic status, and disorder on prolonged attention, medication, and referral in 2008.

	Prolonged attention		Medication		Referral	
	OR	95% CI	OR	95% CI	OR	95% CI
Constant	.04	0.02–0.07	0.12	0.08–0.17	0.50	0.36–0.69
Sex female[1]	1.09	0.99–1.21	1.20	1.07–1.33	0.87	0.78–0.98
Low SES[2]	1.18	0.97–1.43	0.87	0.72–1.06	1.22	0.99–1.51
Age: 18–24[3]	1.70	0.93–3.09	4.86	3.31–7.16	0.69	0.49–0.96
25–44	3.55	2.09–6.06	17.37	12.19–24.77	0.40	0.30–0.53
45–64	4.46	2.62–7.58	36.05	25.24–51.51	0.19	0.14–0.25
65–74	6.15	3.58–10.59	55.48	37.19–82.75	0.09	0.06–0.13
75 +	7.17	4.17–12.32	51.78	34.92–76.78	0.07	0.05–0.11
Disorder: depression[4]	1.56	1.41–1.73	2.33	2.07–2.62	1.42	1.26–1.62
Emotional distress	0.87	0.75–1.01	0.43	0.38–0.49	1.88	1.62–2.18
Alcohol	2.06	1.67–2.54	0.66	0.53–0.83	1.78	1.39–2.28
Dementia	0.95	0.72–1.25	.21	0.16–0.28	1.92	1.18–3.13
Psychotic	2.21	1.79–2.73	2.66	1.98–3.59	0.79	0.58–1.08

Notes: [1]Reference group: male. [2]Reference group: average SES. [3]Reference group: 0–17 years. [4]Reference group: anxiety.

Mental health care in general practice

Table II shows the prevalence of treatment types in the period 2004–2008.

Medication as the only treatment was the most frequently observed treatment type throughout the years. Multilevel analysis showed a slight linear decrease in time (chi-squared $= 9,14$; $p < 0.01$).

Prolonged attention was hardly observed as a stand-alone therapy. In combination it was observed in approximately 20% of cases with a decline since 2004 (chi-squared $= 13.62$, chi-squared $= 6.64$, chi-squared $= 5.92$; $p < 0.01$) and a rise again in 2008 (chi-squared $= 6.99$; $p < 0.01$). The number of referrals increased linearly from 9% in 2004 to 13% in 2008 (chi-squared $= 17.94$; $p < 0.001$), by the same percentage to both primary and secondary mental health care.

For depression and anxiety, the same trends over time were observed as for the total group of cases.

Patient characteristics. Table III shows the effects of patients' characteristics and disorder characteristics on treatment type in 2008. With increasing age, an increase in prolonged attention, a sharp rise in medication, and a decline in referrals can be observed. Women have a higher chance than men of receiving medication but men are more likely to be referred. The patient's socioeconomic status was not significantly related to prolonged attention, medication, or referral.

Compared with anxiety, patients with depression have higher odds for all kinds of treatment; patients with emotional distress have lower odds for medication but higher odds for referral; patients with alcohol problems receive more prolonged attention, less medication, and more referral; demented patients get less medication and more referral; psychotic patients get more prolonged attention and more medication.

Pharmacotherapy

Antidepressants (especially SSRIs), anxiolytics, and hypnotics/sedatives were the most frequently prescribed psychopharmacological medication in 2008 (Table IV).

Antidepressants were also frequently prescribed for other diagnoses than depression, including emotional distress for which a reserved approach to medication is recommended [17]. Anxiolytics were frequently prescribed in all cases. Hypnotics/sedative drugs were prescribed to approximately 20% of each symptom/diagnosis subgroup.

For both depression and anxiety, it made little difference if the GP diagnosed symptoms (P01, P03) or a disorder (P74, P76); in all cases the majority of patients were treated with medication.

Referrals

The lower part of Table IV presents the referral rates of the approximately 13% of patients with different psychological diagnoses in 2008. Two-thirds of referrals in general practice are referrals to specialized mental health care and one-third to another primary mental health care provider.

The diagnostic categories for which patients were most frequently referred were emotional distress and alcohol abuse/dependence; 16% of patients with depression or anxiety were referred. Patients with symptoms of depression only were referred more often than patients with a diagnosis of depression.

Table IV. Proportion of patients with a psychological disorder (total and specified) who received a specific psychopharmacological prescription or were referred (2008).

	Total psychological disorder	Anxiety	Depression	Emotional distress	Alcohol	Dementia	Psychotic
Prescriptions							
No. of patients	38,511	8592	9306	4360	1035	729	908
All psychopharm.	60.1%	73.8%	81.9%	53.5%	60.4%	59.4%	78.6%
Antipsychotic	6.3%	4.5%	7.7%	2.6%	8.9%	28.5%	66.0%
Anxiolytic	26.3%	53.3%	29.4%	34.3%	39.8%	14.4%	30.6%
Hypnotic/sedative	23.4%	17.8%	20.8%	19.6%	18.2%	16.9%	22.8%
Anti-depressant	28.0%	33.8%	70.4%	20.6%	26.3%	21.8%	25.1%
– TCA	6.0%	6.3%	10.9%	4.9%	4.8%	4.5%	6.6%
– SSRI	17.4%	22.6%	47.2%	11.9%	16.0%	14.0%	12.9%
– other AD	6.5%	7.8%	17.7%	5.4%	8.1%	4.8%	8.0%
Dementia medication	0.5%	0.2%	0.4%	0.1%	0.2%	16.7%	0.8%
Alcohol medication	0.6%	0.4%	0.5%	0.2%	17.4%	–	0.8%
Referrals							
No. of patients	24,649	5634	5800	2764	638	439	597
Primary care total	3.4%	4.6%	4.3%	7.5%	2.4%	0%	0.3%
Social work	0,7%	1.1%	1.1%	1.9%	1.3%	0%	0.2%
PC psychologist	2,6%	3.4%	3.4%	5.4%	0.9%	0%	0.2%
Soc. psych. Nurse	0,1%	0.2%	0.2%	0.3%	0.2%	0%	0%
Specialized care total	10,4%	11.3%	12.7%	14.7%	16.9%	8.2%	10.6%
Psychotherapy	3,8%	4.3%	4.6%	7.1%	2.4%	0.7%	0.3%
Psychiatrist	4.2%	4.7%	5.9%	5.1%	4.4%	3.6%	6.0%
Ambulatory MHC institution	2.1%	2.5%	2.4%	2.9%	1.9%	2.3%	3.9%
Addiction institution	0.5%	0.2%	0.2%	0.2%	8.5%	0%	0.3%
Psychogeriatric	0.1%	0%	0.1%	0%	0%	1.8%	0.3%

Patients with dementia and psychotic disorders had the lowest referral rates.

Discussion and conclusion

Summary

Over 90% of the patients diagnosed with psychological symptoms or disorder in primary care were exclusively managed in primary care, mostly by the GP by means of medication. However, from 2004 there is a trend to refer more patients to secondary mental health care. Within general practice, psychotropic drug prescription rates showed a slight decrease between 2004 and 2008, while the proportion of prolonged attention decreased after 2004 but rose in 2008 to the level of 2004. The kind of treatment in primary care depends on age (prolonged attention and medication increase with age, referrals decrease) and sex (men are more easily referred, women have higher chances of receiving medication).

Strengths and limitations

LINH is representative of the Dutch population and of Dutch GPs regarding gender and age. GPs are trained in coding. Data are checked on a yearly basis for completeness and reliability. Caution is needed for mental health referrals within primary care:

although instructed to be registered, they are sometimes considered a recommendation rather than a referral and might be slightly underreported.

Not all practices participated in all years. When we repeated our analysis on treatment (see Table II) for only the 17 practices that contributed data for all five years, comparable figures and trends can be reported.

Our analysis is restricted to patients whose psychological symptoms or disorders were identified by the GP and recorded as such. Patients with psychological problems who do not seek help or are not recognized by the GP remain beyond our scope. Patients who present social problems (interpersonal relationships, work) are not considered in this study either.

The data are collected within Dutch general practice. Our results could be generalized to countries where GPs fulfill comparable roles to the Dutch GPs (having fixed, personalized lists, being a gatekeeper) such as Denmark and the UK. They are less comparable with countries where GPs have different task assignments or where more or less mental health services are directly available.

Clinical implications

A relatively large proportion of patients with a psychological problem (12% of the population) come to

the attention of the general practitioner. Johansen et al. [20] reported 8.8% of all diagnoses as psychological in a Norwegian area. This attention seems suboptimal, however.

We found high prescription rates also for mild symptoms (emotional distress, symptoms of depression, and anxiety) where prescription is not obvious, and according to Dutch [17] guidelines pharmacotherapy is almost the only treatment in the elderly. Negative beliefs of GPs regarding therapeutic possibilities for the elderly [21] are reflected in the almost exclusive use of psychopharmacological treatment when patients' age exceeds 65. In the light of strong preferences among healthy patients [22] as well as patients with a mental disorder [23,24] for counseling above medication, the ratio of medication to prolonged attention does not seem quite right. Finally, we observed an increase in referral, which is mostly secondary care referral. These referrals frequently concern cases where it is not indicated: the relatively less severe problems of emotional distress and depressive symptoms. Apparently, policy to increase awareness of the large amount of untreated psychological problems has been successful but has not led to a larger problem-solving capacity in general practice or primary care.

Health policy implications

A formal recognition of counseling techniques in the reimbursement scheme for GPs might increase GPs' share of psychological treatment [25]. Other ways to promote a shift to primary mental health care might be the deployment of mental health workers in primary care [26], support assistance within general practice [27] case management, and collaborative or integrated care arrangements [28–32].

Conditions for such a shift are availability of sufficient support within general practice, close collaboration with other primary mental health care services, and a preparedness for active engagement in mental health care.

Conditions of close collaboration and preparedness for active engagement in mental health care appear to be suboptimal currently, given the limited number of referrals, the low amount of prolonged attention, and the overrepresentation of referral of milder cases and the amount of prescribing where restraint is recommended.

Conclusion

We conclude that most of the actual treatment for psychological disorder is delivered in primary care. It is delivered in a way that needs improvement, preferably by means of extra support. This will not automatically imply that more patients will be treated in primary care, unless the gateway to secondary care is adequately blocked or limited or bypassed to primary care.

Declaration of interest

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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