

Does Specializing in Family Medicine Improve the Detection and Diagnosis of Mental Health Problems?

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ABSTRACT

Background: Approximately half the patients seeking mental health (MH) treatment consult primary care practitioners (PCPs). Previous research indicates that patients often do not receive correct MH diagnoses or appropriate treatment from PCPs. The present study examines whether a specialization in family medicine compared to other or no PCP residency programs enhances physicians' ability to detect, diagnose and treat MH problems.

Methods: Face-to-face interviews with 49 physicians in eight clinics in Israel. Two case vignettes and questionnaires assess MH awareness and factors influencing treatment.

Results: Significantly more family practitioners (FPs) compared to others correctly diagnosed depression and anxiety vignettes were aware of patients' MH problems and prescribed psychotropic drugs.

Limitations: Small sample size, indirect examination of PCPs' skills using vignettes and the absence of psychotherapy options.

Conclusions: FPs are more likely than other PCPs to detect, diagnose and treat MH problems. To improve MH detection among a broad range of PCPs, an expanded MH curriculum should be encouraged. Additional MH training should be available for all PCPs.

INTRODUCTION

The prevalence of mental disorders among primary care patients in Europe, the United States and Israel is 20% or more (1-4). World Health Organization (WHO) data reveal that a quarter of the visits to primary care physicians (PCPs) are for mental health (MH) problems (5), and in Israel this percentage is even higher - a third of all visits (3). Research in Israel and elsewhere indicates that many patients suffering from MH problems choose not to seek care from a MH professional (6-8), but rather from a PCP (9). In Israel, this is unlikely to be related to financial reasons as both services are free of charge. General health care is delivered through four non-profit health maintenance organizations (HMOs) according to the 1995 National Health Insurance (NHI) Law (10), while mental health services are provided by the State (9) in specialty mental health clinics. A pending reform will add MH services to the mandatory basket of services provided to all residents by the HMOs. This is expected to produce an increased demand; PCPs will presumably be involved in responding to the anticipated increases in demand.

In addition to the high prevalence of MH problems in primary care clinics, previous research reveals that these problems are under-diagnosed by PCPs in Israel (3, 11) as well as in other Western countries (2, 12). There are numerous reasons for this, some of which are related to patients' characteristics, such as age, ethnic origin and other demographic characteristics. For example, a study conducted in South-East London found that ethnicity (Black Africans compared to Black Caribbeans

and White English) and other demographic variables such as age (young adults), gender (female patients) and employment (full-time employment) were associated with decreased detection of psychological problems by PCPs (13). Another factor that might be associated with under-diagnosis is the finding that PCPs avoid raising mental health issues in the physician-patient encounter. In a survey conducted in 2007 in Israel, it was found that in most cases (60%) when a mental issue was discussed between patient and PCP, it was raised by the patient. Only a third of the patients with MH distress reported that the doctor initiated a discussion (14). Another factor that potentially influences the detection of mental problems is the professional background of the physician. Family medicine residency programs devote significantly more time to psychosocial issues than other PCP residency programs (15, 16). A recent study revealed that Family Practitioners (FPs) in the U.S.A. were indeed more likely to diagnose a mental health problem compared to internists (17).

In the last two decades, there has been an increasing tendency in the U.S., Canada and Europe, to include the MH subjects in the curriculum of residents specializing in family medicine, with each country differing in the subjects emphasized and the quantity of time invested (15, 16, 18-20). In Israel, the curriculum of family medicine residency also includes the topic of MH which is taught through weekly didactic courses on MH during the residency, with a strong emphasis on MH issues during clinical work. Until 2011 the residency included a required rotation of three months in a MH clinic; subsequently, a reduced rotation of two months became an elective (21). These academic experiences are designed to increase the skills and detection abilities of family physicians working in primary care settings.

In Western countries including the U.S., almost all PCPs have some specialization. Data from the AMA Physician Masterfile for 2010 (22) indicate that in the U.S. about 50% of PCPs specialized in family medicine. In the European countries such as Germany and Norway, about 50% of PCPs also specialized in family medicine (23). The same percentage is found in Israel (24), but, in contrast to the U.S. and European countries, the majority of PCPs who did not specialize in family medicine do not have any other specialization. They are considered general practitioners. The primary reason for this is the massive immigration of Jews from the Former Soviet Union (FSU) during the early 1990s when over 15,000 physicians arrived in Israel. Those with a specialization in

a field that was already “saturated” were offered retraining courses to enter disciplines where there was a shortage of specialists (25). Alternatively, they received only a general medical license which enabled them to enter the less prestigious field of primary care (26).

The aim of the present study was to examine whether a specialization in family medicine enhances the ability to accurately detect, diagnose and treat primary care patients suffering from MH problems. This was accomplished by comparing FPs and other PCPs (non-specialists or specialists in other medical fields) with regard to their awareness and treatment of MH problems.

METHODS

SAMPLE

The present study is part of a larger study designed to assess the relationship between the use of medical services and psychopathology in primary care (1). In the present study, we analyzed specifically the population of PCPs (family practitioners, internists, geriatricians, some other specialists and non-specialists) who, at the time of the study (2002-2003), practiced medicine in one of eight selected clinics in Israel's largest Clalit Health Services HMO during the year prior to the interview. The clinics were selected so that their catchment population represents a cross-section of the Israeli population on the basis of geographic, socioeconomic and ethnic diversity, including clinics with a high percentage of new immigrants or Israeli Arabs. The full nature of the study was explained to the 50 PCPs from the participating clinics and all but one signed informed consent forms (N=49). PCPs were interviewed face-to-face by specially trained interviewers in the clinics. The study protocol and instruments were reviewed and approved by the Institutional Review Board (IRB) of the HMO.

MEASURES

The PCPs were asked about their medical background: A) place of medical education: “Israel”; “FSU”; “Other.” B) Length of time since MD graduation: 25 or more years; less than 25 years (25 years was the median as well as the mean for the interviewed PCPs). C) Medical practice specialty: FP; other PCP (internist, geriatrician or other specialist and non-specialists).

The PCPs' awareness and practices concerning MH problems were assessed using two specially designed case vignettes supplemented by a questionnaire. Specifically,

the vignettes were used to clarify the PCP's ability to accurately diagnose MH problems (depression – ICD-10, F32 – in one vignette and anxiety – ICD-10, F41 – in the second) and the factors they consider in their recommended treatment. The case vignettes were created for this study and pre-evaluated by three MH professionals and a PCP. The two vignettes were the following: 1) Mrs. A, a 36-year-old married woman with two children, visits the doctor for the second time this month with complaints about increased fatigability and loss of interest. She does not sleep well at night and has no appetite and complains about lack of energy in the last month, to the point where she has missed work because of an inability to get up in the morning. The results of her blood tests were normal. 2) Mr. B, a 26-year-old student, single, visits the doctor, complaining of heart palpitations and nausea which have affected him recently. He is so preoccupied by this that he finds it difficult to concentrate on his studies. He also reports that he is smoking a great deal and is extremely tense and nervous.

For each vignette the PCP was asked what (s)he would do. The responses were open-ended and could be grouped into one of two major categories: (a) prescribing psychotropic drugs or (b) referring to a MH specialist. If the PCPs did not spontaneously indicate either drug treatment or referral, they were specifically asked about each possibility.

The decision of the PCP to treat depression and anxiety by prescribing psychotropic drugs was defined as a three-category variable: “No”: in both vignettes the PCP did not prescribe psychotropic drugs – neither spontaneously nor prompted; “Sometimes”: in one vignette only the PCP prescribed psychotropic drugs – spontaneously or prompted; “Yes”: in both vignettes the PCP prescribed psychotropic drugs – either spontaneously or prompted.

The decision of the PCP to refer the patients to MH specialists was defined as a three-category variable: “No,” meaning that in both vignettes the PCP did not recommend referral – neither spontaneously nor prompted; “Sometimes,” meaning that in one vignette only the PCP recommended referral – spontaneously or prompted; “Yes,” indicating that in both vignettes the PCP recommended referral – either spontaneously or prompted.

Finally, the PCPs were asked what diagnosis they would give for each of the vignettes. The PCPs' diagnostic accuracy was defined as a three category variable: “Incorrect for both,” indicating an incorrect diagnosis in both vignettes; “One correct,” indicating only one correct diagnosis; “Both correct,” meaning correct diagnosis for

both vignettes.

The PCPs were then given a list of factors that may have an effect on treatment decisions and they were asked if they considered these factors in their recommendations in the case of each vignette. The list included: patient's age; patient's gender; patient's family/social status; patient's extent of suffering; rules of clinic or HMO; lawsuit possibility; accessibility to MH services in the region. Each one of the seven factors was defined as a three-category variable: “No” – in both vignettes the PCP did not consider the factor as affecting his decision; “Sometimes” – in one vignette only the PCP considered the factor as affecting his decision; “Yes” – in both vignettes the PCP considered the factor as affecting his decision.

The PCPs were asked to estimate the percentage of their patients suffering from depression or anxiety. Their answers were than grouped into 3 categories: “Up to 10%”; “10-20%”; “Over 20%.” They were also asked for what kind of disorders they prescribe psychotropic drugs. The responses were open-ended and they led to a new dichotomic variable, “prescribing psychotropic drugs (antidepressants and/or anxiolytics) for patients suffering from depression and/or anxiety” (yes or no).

The PCPs were told that there is a claim that there are physicians who avoid giving a psychiatric diagnosis for different reasons. The PCPs were than asked if this could be due to the stigma attached to MH; to lack of knowledge about MH; and/or to lack of time, i.e., the limited duration of each visit, which precludes a comprehensive evaluation of MH problems. Each one of these three factors was defined as a dichotomic variable (yes or no).

Finally, the PCPs were asked whether they would be interested to receive continuing education about diagnosis and treatment of psychiatric disorders in the framework of their work (yes or no).

DATA ANALYSIS

All variables were assessed for their association with medical practice specialty (FP or other PCP). Data analyses were performed using SPSS/PC version 19.0 (SPSS Inc, Chicago, IL). Two-sided tests of significance were used in all analyses ($p \leq .05$).

RESULTS

As presented in Table 1, half of the PCPs specialized in family medicine. Among the other PCPs, 21% were internists; 8% geriatricians; 8% specialists in another

Table 1. Personal characteristics of the primary care physicians (PCPs) by medical specialty.

		Total		FPs ¹		Other-PCPs ²		χ^2	df	p
		N	%	N	%	N	%			
Total		49	100.0	25	51.0	24	49.0			
Gender	Male	17	34.7	9	36.0	8	33.3	.04	1	NS
	Female	32	65.3	16	64.0	16	66.7			
Place of Medical Education	Israel	14	28.6	12	48.0	2	8.3	9.55	2	.008
	FSU ³	28	57.1	10	40.0	18	75.0			
	Other	7	14.3	3	12.0	4	16.7			
Length of Time Since Graduation (years)	≥25	25	51.0	8	32.0	17	70.8	7.39	1	.007
	<25	24	49.0	17	68.0	7	29.2			

¹ Family Practitioners

² Internists, geriatricians or other specialists and non-specialists

³ Former Soviet Union

area and 63% without any specialization. The percentage of female PCPs was 65%. The majority (57%) of PCPs received medical education in the FSU, while only 29% received their medical education in Israel. The percentage of PCPs specializing in family medicine was significantly higher among those educated in Israel 86% (12/14) than among those educated in the other countries 37% (13/35). The length of time in medical practice for half the PCPs was less than 25 years. Of these, 71% (17/24) specialized in family medicine, as compared to only 32% (8/25) among those whose practice lasted more than 25 years, a significant difference.

As presented in Table 2, the responses of the PCPs to the vignettes indicate that a) 43% diagnosed correctly both of the cases of anxiety and depression, another 31% diagnosed correctly only one of the cases and diagnostic accuracy had a significant positive association with specialization in family medicine ($p=.046$). The same trend was observed when each diagnosis was examined separately (for anxiety, the diagnostic accuracy was 72% among FPs and 37.5% among other PCPs and for depression 72% among FPs and 50% among other PCPs; b) approximately 70% of the PCPs decided to treat the patients with psychotropic drugs, with no significant differences between FPs and other PCPs, although there was a trend for more FPs to prescribe psychotropic drugs compared to other PCPs (76% vs. 62.5% respectively). The same was true for each diagnosis separately; c) approximately half of the PCPs stated in at least one case that they would refer the patient to MH specialists, again with no significant differences between FPs and other PCPs. The same was true for each diagnosis separately;

d) almost all the PCPs stated that the characteristics of the patients in the vignettes (gender, age, family status) and the extent of suffering influenced their treatment decisions, with no significant differences between FPs and other PCPs. Only 29% of the PCPs specified that the rules of the clinic or HMO influenced their treatment decisions at least in one vignette; 55% of them mentioned the influence of the accessibility to MH services, with no significant differences between FPs and other PCPs; 51% of PCPs stated that potential lawsuits influenced their treatment decisions, with no significant differences between FPs and other PCPs, although the possibility of a lawsuit was a less influential factor for FPs (36%) than other PCPs (66%). The same trend was observed when each vignette was examined separately but was significant only for depression (20% vs. 54% $p=.013$).

As shown in Table 3, diagnostic accuracy (73% of the PCPs diagnosed correctly at least one of the cases of anxiety or depression in the vignettes) was significantly associated with medical specialty (88% of the FPs vs. 58% of the other PCPs, $p=.019$). There is also a significant association between diagnostic accuracy and length of time since graduation. The diagnostic accuracy was significantly greater among the PCPs who graduated less than 25 years ago (88%) than among those who graduated 25 or more years ago (60%) ($p=.029$). A significant association was also found between diagnostic accuracy and place of medical education. The diagnostic accuracy was significantly greater among the PCPs who graduated in Israel (100%) than among those who graduated outside of Israel (63%) ($p=.008$). Overall, the highest rate of diagnostic accuracy was among PCPs who

Table 2: Response of primary care physicians (PCPs) to vignettes and Influencing Factor by medical specialty

		Total		FPs ¹		Other-PCPs ²		$\chi^2(2)$	p
		N	%	N	%	N	%		
Total		49	100.0	25	51.0	24	49.0		
Responses to Vignettes									
Diagnostic Accuracy	Incorrect for both	13	26.5	3	12.0	10	41.7	6.15	.046
	One correct	15	30.6	8	32.0	7	29.2		
	Both correct	21	42.9	14	56.0	7	29.2		
Psychotropic Drug Treatment by PCPs	No	15	30.6	6	24.0	9	37.5	1.17	NS
	Sometimes	17	34.7	9	36.0	8	33.3		
	Yes	17	34.7	10	40.0	7	29.2		
Referrals to MH Specialists	No	23	46.9	13	52.0	10	41.7	0.53	NS
	Sometimes	11	22.4	5	20.0	6	25.0		
	Yes	15	30.6	7	28.0	8	33.3		
Factors Influencing Responses									
Patient's Age	No ³	3	6.1	0	0.0	3	12.5	3.36	NS
	Sometimes ⁴	4	8.2	2	8.0	2	8.3		
	Yes ⁵	42	85.7	23	92.0	19	79.2		
Patient's Gender	No ³	7	14.3	4	16.0	3	12.5	0.55	NS
	Sometimes ⁴	14	28.6	8	32.0	6	25.0		
	Yes ⁵	28	57.1	13	52.0	15	62.5		
Patient's Family/Social Status	No ³	2	4.1	0	0.0	2	8.3	2.41	NS
	Sometimes ⁴	10	20.4	6	24.0	4	16.7		
	Yes ⁵	37	75.5	19	76.0	18	75.0		
Patient's Extent of Suffering	No ³	1	2.0	0	0.0	1	4.2	2.34	NS
	Sometimes ⁴	4	8.2	1	4.0	3	12.5		
	Yes ⁵	44	89.8	24	96.0	20	83.3		
Rules of Clinic or HMO	No ³	35	71.4	20	80.0	15	62.5	3.67	NS
	Sometimes ⁴	5	10.2	3	12.0	2	8.3		
	Yes ⁵	9	18.4	2	8.0	7	29.2		
Lawsuit Possibility	No ³	24	49.0	16	64.0	8	33.3	5.01	NS
	Sometimes ⁴	9	18.4	4	16.0	5	20.8		
	Yes ⁵	16	32.7	5	20.0	11	45.8		
Accessibility to Services	No ³	22	44.9	12	48.0	10	41.7	0.71	NS
	Sometimes ⁴	8	16.3	3	12.0	5	20.8		
	Yes ⁵	19	38.8	10	40.0	9	37.5		

¹ Family Practitioners² Internists, geriatricians or other specialists and non-specialists³ In both vignettes the PCP did not consider the factor as affecting the decision⁴ In only one vignette the PCP considered the factor as affecting the decision⁵ In both vignettes the PCP considered the factor as affecting the decision

Table 3: Diagnostic accuracy¹ by medical specialty and length of time since graduation or place of medical education.

		Total		FPs ²		Other-PCPs ³		$\chi^2(1)$	p
		N/Total ⁴	%	N/Total ⁴	%	N/Total ⁴	%		
Total		36/49	73.5	22/25	88.0	14/24	58.3	5.53	.019
Length of Time Since Graduation (years)	<25	21/24	87.5	15/17	88.2	6/7	85.7	0.03	NS
	≥25	15/25	60.0	7/8	87.5	8/17	47.1	3.71	NS
	$\chi^2(1); p$	4.75; .029		0.01; NS		3.05; NS			
Place of Medical Education	Israel	14/14	100.0	12/12	100.0	2/2	100.0	-	-
	Outside of Israel	22/35	62.9	10/13	76.9	12/22	54.5	1.75	NS
	$\chi^2(1); p$	7.08; .008		3.15; NS		1.56; NS			

¹ Correct diagnosis for at least one vignette

² Family Practitioners

³ Internists, geriatricians or other specialists and non-specialists

⁴ The number of PCPs with correct diagnosis of at least one vignette out of the total number of PCPs in the category.

Table 4: Mental health (MH) practices of primary care physicians (PCPs) by medical specialty.

		Total		FPs ¹		Other-PCPs ²		χ^2	df	p
		N	%	N	%	N	%			
Total		49	100.0	25	51.0	24	49.0			
PCPs' Evaluation of the PCPs' Clinical Practice in MH										
PCPs' Estimate of the % of their Patients with Depression or Anxiety	Up to 10	12	24.5	4	16.0	8	33.3	8.19	2	.017
	10-20	19	38.8	7	28.0	12	50.0			
	Over 20	18	36.7	14	56.0	4	16.7			
Prescription of Psychotropic Drugs	No	16	32.7	5	20.0	11	45.8	3.72	1	NS
	Yes	33	67.3	20	80.0	13	54.2			
Reason for PCPs Avoiding Psychiatric Diagnoses:										
Stigma	No	15	30.6	7	28.0	8	33.3	0.16	1	NS
	Yes	34	69.4	18	72.0	16	66.7			
Lack of Knowledge	No	20	40.8	15	60.0	5	20.8	7.78	1	.005
	Yes	29	59.2	10	40.0	19	79.2			
Lack of Time	No	12	24.5	8	32.0	4	16.7	1.56	1	ns
	Yes	37	75.5	17	68.0	20	83.3			
Interest in Continuing MH Education	No	7	14.9	4	16.0	3	13.6	0.05	1	ns
	Yes	40	85.1	21	84.0	19	86.4			

¹ Family Practitioners

² Internists, geriatricians or other specialists and non-specialists

studied medicine in Israel (14/14=100%) for whom the majority (80%) were FPs and graduated more recently, while the lowest rate was among other PCPs for whom time since graduation was 25 or more years and who received medical education outside of Israel (7/16=44%) ($\chi^2(1)=11.25; p=.001$).

As presented in Table 4, two aspects of the PCPs' evaluation of their own clinical practice were found to

be associated with specialization 1) significantly more FPs than other PCPs estimated that more than 20% of their patients suffered from depression or anxiety (56% vs. 17%, $p=.017$); 2) 80% of the FPs indicated that they prescribe psychotropic drugs compared to 54% of other PCPs ($p=.054$).

Overall, three quarters of the PCPs indicated that lack of time was a reason for avoiding psychiatric diagnosis,

70% indicated stigma and 60% lack of knowledge. Lack of knowledge was found to be associated with specialization: 40% of FPs compared to 80% of other PCPs indicated lack of knowledge ($p=.005$). The majority of the PCPs (85%) expressed interest in continuing education regarding MH in the framework of their work.

DISCUSSION

The current research reveals the importance of a specialization in family medicine, which includes teaching and training in mental health areas, in terms of diagnostic accuracy and treatment decisions. Responses to the vignettes showed the preference of FPs to prescribe psychotropic drugs while the other PCPs are more likely to refer patients to MH services. In addition, FPs compared to others reported a higher percentage of their patients with depression and/or anxiety symptoms. This difference is consistent with previous research showing that FPs are more aware of MH problems among their patients than other PCPs, and that they tend to detect MH problems more than internal medicine specialists (17). This suggests that FPs are more willing than others to take treatment responsibility for MH problems rather than referring them to MH specialists (27) which may be consistent with having more therapeutic confidence (28). Furthermore, the enhanced confidence of FPs may be related to the trend for them to be less concerned about possible malpractice lawsuits compared to other PCPs.

Additionally, a higher percentage of other PCPs indicated a lack of knowledge regarding MH issues as a reason for not making a psychiatric diagnosis. This could be related to the fact that family medicine programs devote significantly more time to psychosocial issues than other PCP residency programs (15, 16). Indeed, the majority of PCPs in this study, similar to other studies, felt that MH training is very important and expressed interest in furthering their education in these issues (19, 29).

In the present research, only 50% of PCPs were FPs, similar to other Western countries (22, 23). However, in contrast to these countries, in Israel the majority of other PCPs had no specialization recognized by the Israeli Medical Association, as described previously (24).

Two other factors related to improved diagnostic accuracy include receiving medical education in Israel and more recent graduation. Most physicians not educated in Israel came from the FSU in the early 1990s. Since there were cultural and political stigmas attached to MH problems (30), a reasonable assumption is that MH issues

received little or no attention in medical curricula. The positive effect of more recent education may reflect the emphasis on MH in curricula during the last decades.

One of the limitations of the study is the small sample size which allows only bivariate analyses. Another limitation is that PCPs' actual skills in diagnosis and treatment, were not examined directly but indirectly through questionnaires and vignettes. An additional limitation is that PCPs were asked only about two options, prescribing psychotropic drugs or referring to a MH specialist. The option of CBT or any other psychological intervention was not offered. Despite these limitations, the results are important since the effect of specialization in family medicine on the ability to detect, diagnose and treat MH problems is seldom addressed.

CONCLUSION

The results of the present study confirm that FPs compared to other PCPs are more likely to detect, diagnose and treat MH problems. This is consistent with the curricula for family medicine specialization giving significantly more attention to MH than curricula for other specializations (15, 16). Accordingly, specialization in family medicine should be encouraged. Moreover, additional MH training should be available for all PCPs.

Declaration of competing interests

The authors have no conflict of interest to report.

Ethical approval

The study protocol and instruments were reviewed and approved by the Institutional Review Board (IRB).

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References

1. Cwikel J, Zilber N, Feinson M, Lerner Y. Prevalence and risk factors of threshold and sub-threshold psychiatric disorders in primary care. *Soc Psychiatry Psychiatr Epidemiol* 2008;43:184-191.
2. Kessler D, Bennewith O, Lewis G, Sharp D. Detection of depression and anxiety in primary care: follow up study. *BMJ* 2002;325:1016-1017.
3. Laufer N, Zilber N, Jecsmien P, Maoz B, Grupper D, Hermesh H, et al. Mental disorders in primary care in Israel: Prevalence and risk factors. *Soc Psychiatry Psychiatr Epidemiol* 2013;1-16.
4. Serrano-Blanco A, Palao DJ, Luciano JV, Pinto-Meza A, Luján L, Fernández A, et al. Prevalence of mental disorders in primary care: Results from the diagnosis and treatment of mental disorders in primary care study (DASMAP). *Soc Psychiatry Psychiatr Epidemiol* 2010;45:201-210.
5. The World Health Report. Mental health: New understanding, new hope. Geneva; 2001.

6. Alonso J, Lepine JP. Overview of key data from the European study of the epidemiology of mental disorders (ESEMeD). *J Clin Psychiatry* 2007;68:3-9.
7. Levinson D, Lerner Y, Zilber N, Grinshpoon A, Levav I. Twelve-month service utilization rates for mental health reasons: Data from the Israel national health survey. *Isr J Psychiatry Relat Sci* 2007;44:114-125.
8. Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC. Twelve-month use of mental health services in the United States: Results from the national comorbidity survey replication. *Arch Gen Psychiatry* 2005;62:629-640.
9. Lerner Y, Levinson D. Who gets mental health treatment from the GP? Results from the Israel National Epidemiological Mental Health Survey. *Fam Pract* 2012;29:561-566.
10. The State of Israel. [The National Health Insurance Law of 1994 (NHI)]. 1995 [in Hebrew].
11. Shiber A, Maoz B, Antonovsky A, Antonovsky H. Detection of emotional problems in the primary care clinic. *Fam Pract* 1990;7:195-200.
12. Wittchen HU, Höfler M, Meister W. Prevalence and recognition of depressive syndromes in German primary care settings: Poorly recognized and treated? *Int Clin Psychopharmacol* 2001;16:121-135.
13. Maginn S, Boardman AP, Craig TKJ, Haddad M, Heath G, Stott J. The detection of psychological problems by general practitioners. *Soc Psychiatry Psychiatr Epidemiol* 2004;39:464-471.
14. Gross R, Brammli-Greenberg S, Rosen B, Nirel N, Waitzberg R. Mental distress and patterns of getting help prior to the transfer of responsibility for mental health to the health plans: A service consumers' perspective. Research report. Jerusalem: Myers-JDC-Brookdale Institute, 2009 [in Hebrew].
15. Gaufberg EH, Joseph RC, Pels RJ, Wyshak G, Wieman D, Nadelson CC. Psychosocial training in U.S. internal medicine and family practice residency programs. *Acad Med* 2001;76:738-742.
16. Leigh H, Stewart D, Mallios R. Mental health and psychiatry training in primary care residency programs. Part I. Who teaches, where, when and how satisfied? *Gen Hosp Psychiatry* 2006;28:189-194.
17. Shackelton-Piccolo R, McKinlay JB, Marceau LD, Goroll AH, Link CL. Differences between internists and family practitioners in the diagnosis and management of the same patient with coronary heart disease. *Med Care Res Rev* 2011;68:650-666.
18. Bethune C, Worrall G, Freake D, Church E. No psychiatry? Assessment of family medicine residents' training in mental health issues. *Can Fam Physician* 1999;45:2636-2641.
19. Chin PH, Guillermo G, Prakken S, Eisendrath S. Psychiatric training in primary care medicine residency programs: A national survey. *Psychosomatics* 2000;41:412-417.
20. Onion DK, Berrington RM. Comparisons of UK general practice and US family practice. *J Am Board Fam Pract* 1999;12:162-172.
21. Specializing in family medicine, Residency program, Syllabus. In: Scientific Council, editor: Israeli Medical Association, 2011 [in Hebrew].
22. The number of practicing primary care physicians in the United States: Primary care workforce facts and stats no. 1. 2011 October [cited 2013 24 June]; Agency for healthcare research and quality, Rockville, Maryland: Available from: <http://www.ahrq.gov/research/findings/factsheets/primary/pcwork1/index.html>
23. European forum for primary care: EFPC Member Column. 2013 March [cited 2013 24 June]; Available from: <http://nvl007.nivel.nl/euprimarycare/efpc-member-column>
24. Shemesh AA, Smetannikov E, Dor M, Sherf M, Shalev V, Rosenblum Y, et al. Physicians in the community: sociodemographic and professional characteristics. Planning Surveys and Evaluation, editor: Health Economics Division, Ministry of Health, Jerusalem, Israel, 2007 [in Hebrew].
25. Chernichovsky D, Doron C. Community medicine in Israel: Reform of primary care and renaissance of family medicine. In: Garcia C, Munoz O, Duran L, Vazquez F, editors. Family medicine at the dawn of the 21st Century. Mexico City, Mexico: Mexican Institute of Social Security, 2005: pp. 349-370.
26. Remennick L. Professional identities in transit: Factors shaping immigrant labour market success. *Int Migr* 2012;51:152-168.
27. Gallo JJ, Meredith LS, Gonzales J, Cooper LA, Nutting P, Ford DE, et al. Do family physicians and internists differ in knowledge, attitudes, and self-reported approaches for depression? *Int J Psychiatry Med* 2002;32:1-20.
28. Kravitz RL, Franks P, Feldman M, Meredith LS, Hinton L, Franz C, et al. What drives referral from primary care physicians to mental health specialists? A randomized trial using actors portraying depressive symptoms. *Int J Gen Med* 2006;21:584-589.
29. Goldfracht M, Shalit C, Peled O, Levin D, Munitz H. Attitudes of Israeli primary care physicians towards mental health care/commentary - attitudes. *Isr J Psychiatry Relat Sci* 2007;44:225-230.
30. Brodsky B. Mental health attitudes and practices of Soviet Jewish immigrants. *Health Soc Work* 1988;13:130-136.