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Mental health and psychiatry training in primary care residency programs☆ Part II. What skills and diagnoses are taught, how adequate, and what affects training directors' satisfaction?

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Abstract

Objective: The purpose of this study is to describe the psychiatric skills and diagnostic categories taught in primary care training programs, their adequacy, the perceived needs and desires for curriculum enhancement and the factors affecting training directors' satisfaction.
Method: All 1365 directors of accredited residency training programs in Internal Medicine (IM), Family Practice (FP), Obstetrics and Gynecology (Ob/Gyn), Pediatrics (Peds) and psychiatry received a 16-item anonymous questionnaire about psychiatry training in their program.

Responses to the questionnaire to items concerning the skills and diagnostic categories taught, assessment of adequacy of teaching and desires for curriculum enhancement for specific skills and diagnostic categories were analyzed. The factors affecting training directors' satisfaction were explored.
Results: Interviewing skills were taught by a majority of all training programs and were considered adequate by 81% of FP and 54% of IM programs, in contrast to less than a majority of Ob/Gyn and Peds programs ($P<.001$). A majority provided diagnostic interviewing and counseling training, but only FP considered it adequate. A majority taught psychopharmacology and various psychiatric diagnoses, but only in FP did a majority consider them adequate. Both Peds and FP programs teach child psychiatry; significantly, more Peds compared to FP consider their training to be adequate. A vast majority of IM, Ob/Gyn and Peds programs, and 50% of FP programs desired more training in interviewing techniques and diagnostic interview. A majority of all programs desired more counseling and psychopharmacology training and more training in disorders of childhood and adolescence.

The overall satisfaction rate for psychiatric training across specialties was 46% ($n=657$). Sixty-four percent of FP programs were satisfied compared to 31% of non-FP programs. Satisfaction was associated with increased amount of psychiatric training, diversity of training formats, venues, faculty and settings, the amount of contribution to teaching by psychiatry departments and the presence of current teaching in interviewing skills. There were specialty-specific differences in factors associated with satisfaction. In general, a smaller size of residency program was associated with satisfaction except in IM, where larger size was associated with satisfaction. Satisfaction was associated with the opinion that primary care physician should be ready and willing to treat more psychiatric conditions.
Conclusion: Most primary care training programs currently offer training in most psychiatric skills and disorders, but a majority of training directors are dissatisfied with their psychiatry training. There is a difference in the estimation of adequacy concerning training between FP, which consistently rates their teaching to be adequate, and all other primary care programs, which consider their teaching inadequate. This difference may be partly due to actual differences in amount and diversity of training as well as differences in the threshold for satisfaction. A vast majority of primary care training programs desire more training in almost all aspects of psychiatry, and there may be specialty-specific needs and areas of curriculum enhancement. To enhance satisfaction, we should improve the quality as well as the quantity of training, as well as the diversity in training formats, venues and faculty.

Keywords: Mental health; Psychiatry; Internal Medicine; Psychiatric education; Primary care; Training director satisfaction; Family Practice; Obstetrics and Gynecology; Pediatrics

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1. Introduction

In the current era of cost containment, most tightly organized medical delivery systems have placed tight restraints on specialty referrals. Such restrictions have been particularly tightened for psychiatric referrals, with an emphasis on treatment of routine psychiatric disorders at the primary care level. This, coupled with an ongoing shortage and maldistribution of psychiatrists, underscores the need for effective training of primary care physicians who can provide effective treatment of psychiatric disorders [1]. The need to train primary care physicians in mental health has been widely recognized, including the Accreditation Council for Graduate Medical Education, which requires behavioral science/mental health training in Internal Medicine (IM), family practice (FP), obstetrics and gynecology (Ob/Gyn) and Pediatrics (Peds) residencies. A number of proposals and model curricula have been published to enhance mental health training in primary care programs [2–7]. What is, then, the current status of mental health training in primary care training programs? Two national surveys have been published since 1990, when the practice environment of medicine began to change dramatically. One of the studies dealt with IM exclusively [8], and the other surveyed IM and FP programs [9], but there are no studies surveying all four primary care programs. Accreditation Council for Graduate Medical Education requires behavioral science training in all four types of residencies, but the contents of the training requirements are unspecified. Have the training programs in each specialty developed different curricula to meet their needs?

We conducted a survey of the current directors of residency training in IM, FP, Ob/Gyn, Peds and psychiatry concerning the status of mental health training in their programs, the skills and diagnostic categories taught, their satisfaction with the teaching and their perceived needs and desires for curriculum enhancement.

We report the contents of their current teaching, whether they consider the specific teaching to be adequate and what they consider to be desirable about the specific psychiatric skills or diagnoses.

We also report the factors associated with training directors' satisfaction with psychiatric training.

We reported previously that, in spite of curricular requirements, a majority of primary care residency training directors consider their psychiatry training to be minimal or suboptimal (Leigh et al., this issue). A large majority of training directors of IM, Ob/Gyn and Peds were also dissatisfied with their psychiatry training (see Table 1). Family Practice was, however, an exception in that a majority of FP training directors were satisfied with their program and rated their psychiatry training to be optimal to extensive. What does FP do that others do not? Are there specific psychiatric techniques and knowledge base that, if taught, are associated with satisfaction in FP but not in other primary care specialties? What are the factors that influence a training director's satisfaction, regardless of specialty, with the psychiatry training in that program? These are some of the questions we sought to answer by identifying various factors (type of faculty, training venues and the skills and content taught) that might influence the residency training director's satisfaction with his or her program.

Table 1
Overall satisfaction by specialty

	Satisfied (*n*)	Dissatisfied (*n*)	*P*
All	46% (305)	54% (352)	
FP	64% (200)	36% (114)	
IM	35% (57)	65% (105)	
Ob/Gyn	31% (26)	69% (59)	
Peds	23% (22)	77% (74)	.001

2. Method

2.1. The subjects

The list of 1365 directors of accredited residency training programs in IM, FP, Ob/Gyn, Peds and psychiatry was obtained from the American Medical Association (see Table 1 in Part I of this paper).

2.2. The questionnaire

The authors developed a 16-item questionnaire that included the amount of psychiatric/mental health training residents received, degree of satisfaction with the training, training venues, faculty, current training, adequacy and desirability for more training in various psychiatric skills and diagnoses, their feelings about the role of primary care physician in treating mental illness and the type of institution/facility the program was based. The questionnaire was pretested with several programs, revised and finalized. The questionnaire allowed the respondent to remain anonymous.

Following institutional review board approval, the training directors were invited to participate in the study via web site or hard-copy questionnaire. The study concluded in October 2002.

2.3. Data analysis

Questionnaire responses were entered into a Microsoft Access database and Excel spreadsheets. We then dichotomized all respondents as "Satisfieds" and "Dissatisfieds" on the basis of their response to the question, "Are you satisfied with the psychiatric training your residents receive?" We then compared the Satisfieds and the Dissatisfieds on all the rest of the items in the questionnaire utilizing ANOVA, χ^2 and Student's t tests. Continuous variables were analyzed utilizing the independent samples t test and categorical variables with the χ^2 test for independence.

Table 2
Current training percentage, adequate (second line), desire more (third line)

	FP	IM	Ob/Gyn	Peds	*P*
Interviewing	98	73	62	63	
technique	81	54	41	34	
	50	77	69	85	
Dx interview	95	68	51	47	
	73	47	29	19	
	54	73	71	91	
Counseling	94	60	67	57	
	61	29	34	21	
	66	80	70	89	
Psychotherapy	59	24	19	17	
	59	37	31	26	
	45	43	46	70	
Psychopharmacology	98	80	60	64	
	65	43	31	18	
	72	79	77	90	<.01
[Diagnosis and	99	92	82	73	
Treatment of	86	53	44	29	
disorders] mood	45	74	71	84	
Psychotic	94	78	50	57	
	64	44	39	21	
	59	66	52	85	
Dementia/delirium	98	93	45	35	
	81	72	43	26	
	50	52	43	71	<.01
Anxiety	99	90	75	72	
	82	53	38	24	
	50	73	75	85	
PTSD	94	70	49	59	
	69	46	36	20	
	58	65	50	85	
Substance use	99	91	80	91	
	66	53	47	34	
	65	65	70	81	NS
Personality disorders	95	66	41	37	
	63	38	35	18	
	62	71	56	80	<.01
Somatoform/pain	99	84	67	67	
	65	41	33	22	
	66	78	71	81	<.05
Psychological factors	99	78	64	71	
	72	42	32	30	
	57	76	70	79	
Physical factors	94	72	49	62	
	70	48	39	34	
	56	66	66	79	<.005
Adjustment disorders	98	75	49	70	
	75	40	28	29	
	54	76	69	79	
Eating disorders	92	70	63	90	
	50	41	38	42	NS
	73	77	70	71	NS
Grief/bereavement	97	81	79	83	
	76	51	50	46	
	50	69	69	68	
Dying patient	98	90	70	86	
	75	69	48	46	
	55	63	62	71	NS
General behavior,	91	33	43	98	FP vs. Peds,
childhood					*P*<.05
	52	34	50	67	.05
	77	64	63	66	NS
General behavior,	91	62	39	98	.05
adolescence	52	39	38	69	.01
	79	81	75	68	NS
ADHD	96	50	15	99	NS
	68	24	67	71	NS
	61	81	50	52	NS
Mental retardation	69	42	8	93	.001
	40	22	50	66	.001
	74	81	63	61	.05
Developmental	83	42	42	99	.001
disorders	44	28	67	71	.001
	75	69	50	62	.05
Conduct disorders	82	44	8	84	NS
	49	20	50	31	NS
	73	80	63	79	NS

All interspecialty differences are significant at $P<.001$ level except as noted.

When appropriate, Bonferroni adjustments were applied to multiple comparisons.

3. Results

3.1. Questionnaire response

The overall response rate was 58%. Notably, only 85 (18%) of the 733 program directors who responded used the web site. Family Practice programs had the best response rate, followed by Peds, IM and Ob/Gyn. Ninety-three programs had either closed or the director could not be reached.

3.2. Skills being taught

3.2.1. Interviewing

Interviewing skills were taught most often by FP (98%) and least often in Ob/Gyn (62%) ($P<.001$) (Table 2). Interviewing skill training was considered adequate by 81% of FP, 54% of IM, 41% of Ob/Gyn and 34% of Peds program directors ($P<.001$) (Fig. 1). Satisfied FP training directors endorsed more current training in interviewing techniques (Table 3). Regardless of specialty, satisfied training directors rated their training to be adequate. Conversely, the dissatisfied training directors, regardless of specialty, desired more training in interviewing than the Satisfieds.

3.3. Diagnostic interview and counseling

There were similar patterns of responses to the skill of diagnostic interview and counseling, but far fewer programs (less than a majority of IM, Ob/Gyn and Peds programs) considered the teaching of these skills adequate. In all specialties, satisfaction was associated with having current adequate training in diagnostic interview, and dissatisfied training directors desired more training. As for counseling, satisfaction was associated with more current training and

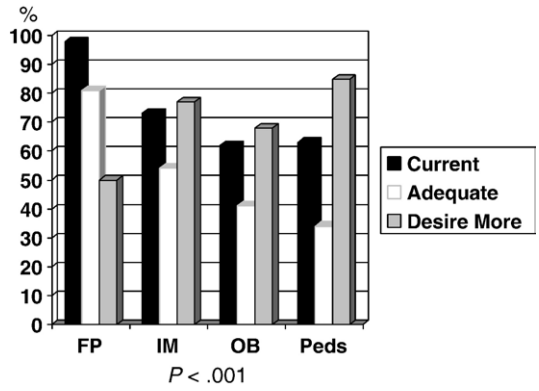

Fig. 1. Interviewing techniques.

adequacy except for Peds, where it was provided more or less equally. In all specialties, dissatisfaction was associated with desire to have more training (Table 3).

3.4. Psychotherapy

Far fewer than a majority (24%, 17%, 19%, respectively) of IM, Ob/Gyn and Peds programs taught psychotherapy. Only in FP did a majority rate its training adequate. Satisfaction was associated with more current psychotherapy training in all except Peds (Table 3).

3.5. Psychopharmacology

A great majority (98–60%) of programs in all specialties taught psychopharmacology. Although a sizable majority of FP (65%) programs considered their training of psychopharmacology adequate, only a minority of IM, Ob/Gyn and Peds programs (43%, 31% and 18%, respectively) did so. Regardless of specialty, satisfaction was associated with adequacy in training. Dissatisfaction was associated with a desire for more training except in Peds (Table 3).

3.6. Diagnosis and treatment of psychiatric disorders

Mood disorders, psychotic disorders, anxiety disorders, PTSD, substance abuse disorders, somatoform/pain disorders, psychological factors affecting physical condition/psychosomatic disorders, eating disorder, grief/bereavement and the dying patient were currently endorsed as being taught by a majority of all primary care training programs (Table 2). However, a majority of the training programs, except for FP, deemed training in these diagnostic categories inadequate. Likewise, a majority of IM, Ob/Gyn and Peds programs considered training in the following inadequate: psychotic disorders, PTSD, personality disorders, somatoform/pain disorders, psychological factors affecting physical condition/psychosomatic disorders, physical factors affecting psychological condition and adjustment disorders. As for eating disorder, a majority of IM, Ob/Gyn and Peds, and 50% of FP considered its training to be inadequate. A majority of Ob/Gyn and Peds programs considered training in delirium/dementia, substance use disorders, anxiety disorders and the dying patient to be inadequate.

Table 3
Satisfaction and teaching of specific skills and techniques

	FP			IM			Ob/Gyn			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
Interviewing technique												
Current	100	94	.002	81	68	NS	71	58	NS	73	60	NS
Adequate	91	61	.001	75	40	.001	67	28	.006	64	23	.001
Desire more	35	70	.001	68	87	.001	43	81	.004	62	90	.02
Diagnostic interview												
Current	98	90	.001	79	62	.044	71	42	.04	73	38	.007
Adequate	86	46	.001	72	31	.001	55	16	.003	46	9	.001
Desire more	42	76	.001	50	84	.001	42	71	.002	69	95	.016
Counseling												
Current	96	90	.04	77	51	.003	86	59	.03	68	54	NS
Adequate	74	35	.001	60	11	.001	65	18	.001	50	12	.001
Desire more	55	81	.001	63	87	.003	37	84	.001	69	93	.03
Psychotherapy												
Current	64	51	.04	38	17	.007	38	12	.02	27	14	NS
Adequate	70	40	.001	61	23	.001	48	22	NS	32	25	NS
Desire more	34	61	.001	26	52	.01	31	51	NS	69	77	NS
Psychopharmacology												
Current	100	94	.002	89	76	NS	91	47	.001	77	61	NS
Adequate	79	39	.001	71	29	.001	64	14	.001	40	11	.007
Desire more	62	87	.001	61	88	.001	58	85	.03	78	94	NS

Table 4
Diagnosis and treatment of specific disorders and satisfaction

	FP			IM			Ob/Gyn			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
Mood disorders												
Current	100	98	NS	98	89	NS	84	81	NS	75	72	NS
Adequate	96	65	.001	83	33	.001	78	30	.001	63	19	.001
Desire more	35	62	.001	44	87	.001	35	81	.001	54	90	.006
Psychotic disorders												
Current	98	87	.001	86	75	NS	89	36	.001	60	55	NS
Adequate	78	37	.001	73	26	.001	65	29	.02	44	14	.02
Desire more	46	78	.001	42	76	.001	38	58	NS	60	92	.007
Dementia/delirium												
Current	100	96	NS	98	90	NS	77	34	.004	50	30	NS
Adequate	92	62	.001	92	60	.001	56	37	NS	47	20	.056
Desire more	38	66	.001	30	62	.001	27	50	NS	43	79	.02
Anxiety disorders												
Current	100	98	NS	98	86	.022	94	68	.03	80	68	NS
Adequate	95	55	.001	89	31	.001	82	21	.001	61	12	.001
Desire more	38	69	.001	39	87	.001	25	93	.001	50	93	.001
PTSD												
Current	97	91	.05	88	62	.001	61	45	NS	65	59	NS
Adequate	82	44	.001	74	31	.001	67	26	.01	50	11	.001
Desire more	46	76	.001	47	72	.014	13	63	.002	53	93	.001
Substance use disorders												
Current	100	98	NS	98	89	NS	100	73	.008	90	92	NS
Adequate	78	47	.001	86	36	.001	67	39	.057	47	28	NS
Desire more	56	78	.001	40	74	.001	40	80	.007	64	86	NS
Personality disorders												
Current	98	89	.001	86	57	.001	59	35	NS	50	33	NS
Adequate	79	35	.001	71	20	.001	56	26	NS	41	11	.01
Desire more	51	79	.001	56	80	.01	15	70	.001	46	88	.003
Somatoform/pain disorders												
Current	100	97	NS	94	79	.029	78	62	NS	90	60	.02
Adequate	78	39	.001	71	24	.001	63	22	.006	39	16	.056
Desire more	56	84	.001	56	88	.001	46	80	.03	64	85	NS
Psychological factors affecting physical condition												
Current	100	96	.02	92	72	.005	89	55	.01	95	64	.01
Adequate	85	48	.001	69	28	.001	71	16	.001	53	23	.03
Desire more	46	75	.001	62	83	.012	31	83	.001	54	85	.02
Physical disease affecting emotional condition												
Current	96	89	.02	87	64	.003	61	44	NS	68	60	NS
Adequate	80	49	.001	77	31	.001	69	28	.007	50	30	NS
Desire more	46	73	.001	50	75	.001	33	77	.01	67	82	NS
Adjustment disorders												
Current	100	94	.009	90	68	.004	69	43	NS	90	65	.05
Adequate	87	52	.001	67	25	.001	50	19	.03	53	22	.03
Desire more	42	73	.001	59	85	.003	25	83	.001	60	83	NS
Eating disorders												
Current	95	86	.005	80	64	NS	84	55	.03	90	90	NS
Adequate	64	24	.001	64	26	.001	67	26	.004	70	33	.008
Desire more	64	88	.001	60	86	.002	23	85	.001	50	76	NS

(*continued on next page*)

Table 4 (*continued*)

	FP			IM			Ob/Gyn			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
Grief/bereavement												
Current	97	97	NS	88	77	NS	95	73	.055	90	80	NS
Adequate	86	57	.001	75	36	.001	72	41	.05	58	42	NS
Desire more	38	67	.001	50	77	.006	54	73	NS	55	70	NS
Dying patient												
Current	99	97	NS	94	88	NS	89	63	NS	95	83	NS
Adequate	85	58	.001	84	59	.002	65	41	NS	55	41	NS
Desire more	46	70	.001	42	72	.002	47	68	NS	64	72	NS

	FP			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*
General behavioral/emotional problems of childhood						
Current	94	85	NS	100	97	NS
Adequate	64	30	.001	95	59	.002
Desire more	69	89	.001	36	71	.04
General behavioral/emotional problems of adolescence						
Current	96	83	.001	100	97	NS
Adequate	67	25	.001	84	65	NS
Desire more	71	91	.001	55	70	NS
ADHD						
Current	97	95	NS	100	99	NS
Adequate	80	43	.001	90	65	.05
Desire more	53	76	.001	25	56	NS
Mental retardation						
Current	75	50	.005	90	93	NS
Adequate	47	25	.001	84	59	.058
Desire more	68	84	.003	36	65	NS
Developmental disorders						
Current	85	79	NS	100	99	NS
Adequate	54	25	.001	90	65	.05
Desire more	70	85	.008	50	64	NS
Conduct disorders						
Current	85	75	.04	90	82	NS
Adequate	59	28	.001	63	33	.03
Desire more	66	86	.001	53	85	.01

In general, satisfaction was associated with perceived adequacy of their psychiatric training. A very high percentage of all programs offered current training regardless of satisfaction (Table 4), but for some specific disorders, presence of current training was associated with satisfaction. For example, current training in psychotic disorders was associated with satisfaction in FP and Ob/Gyn, dementia/delirium in Ob/Gyn, anxiety disorders in IM and Ob/Gyn, PTSD in FP and IM, etc. For practically all disorders, regardless of specialty, dissatisfied training directors considered the adequacy of training to be poor and desired more training.

3.7. Psychiatric conditions of childhood and adolescence

As expected, a much smaller number of programs in all except Peds and FP currently teach their trainees about the diagnosis and treatment of psychiatric conditions of childhood and adolescence. Therefore, we compared the status of training in these conditions in Peds with that of FP (Table 4). Significantly more Peds programs than FP programs taught these subjects, and significantly, more Peds programs felt their training to be adequate than FP programs, although a majority of both types of programs considered their training to be adequate in the behavioral/emotional problems of childhood and adolescence and ADHD. Interestingly, a majority of FP programs considered their training in mental retardation and developmental disorders to be inadequate. A majority of both FP and Peds programs rated their training in Conduct Disorders to be inadequate, and surprisingly, only 39% of Peds programs considered it to be adequate as compared to 49% of FP programs.

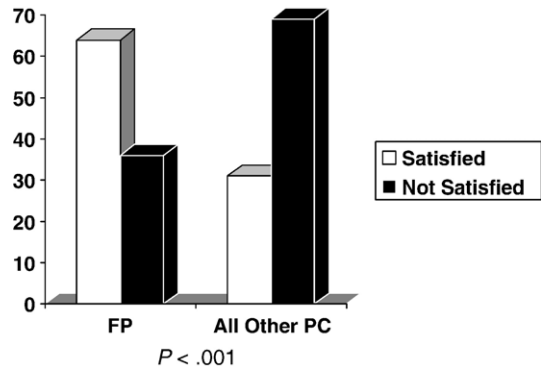

Fig. 2. Satisfaction with psychiatry training: FP vs. all other PC.

3.8. What training is desired?

A vast majority of IM, Ob/Gyn and Peds, and about 50% of FP programs desired more training in interviewing techniques and diagnostic interview. A decided majority of all programs desired more counseling and psychopharmacology skills. A large majority of Peds programs (70%) but only a minority of FP, IM and Ob/Gyn programs desired more psychotherapy training.

As for diagnosis and treatment of psychiatric disorders of adulthood, a majority of all programs desired more training in all the disorders, with the exception of mood disorders for which only a minority of FP programs desired more. A majority of all desired more training in disorders of childhood and adolescence.

3.9. General factors associated with training directors' satisfaction

3.9.1. Overall satisfaction by specialty

When all specialties are combined, a majority of the program directors (54%) were dissatisfied with their psychiatric training. Excluding FP, more than two thirds (69%) of primary care program directors were dissatisfied with the psychiatry training in their residencies (see Fig. 2 and Table 1). As previously reported, FP was the exception in that 64% of the program directors were satisfied.

3.10. Amount of training

There was a significant association between ratings of satisfaction and optimal or extensive psychiatric training. Similarly, dissatisfaction was associated with the perception of suboptimal or minimal training in all specialties.

3.11. Diversity in training formats, faculty, settings and satisfaction

When considered as a whole, training directors' satisfaction was associated with diversity in training formats, faculty and settings ($P<.001$). For pediatric programs, diversity of training formats as well as faculty was associated with satisfaction ($P<.001$), whereas diversity of settings was associated with satisfaction for FP programs ($P<.001$). In general, dissatisfied program directors, regardless of specialty, wished more training in all formats, including didactic, and in clinical settings.

3.12. Satisfaction and specific training formats and PGY year

Didactic teaching was utilized by most programs, regardless of satisfaction (Table 5). Teaching in case conferences and clinical rounds, and the presence of specific psychiatry courses were associated with satisfaction in FP programs but not in others. Individual supervision was associated with satisfaction in both FP and IM programs. Integration of psychiatry teaching with primary care courses was associated with satisfaction only in IM programs. The postgraduate year in which psychiatry was taught was not associated with satisfaction except in Peds, where training in the first year was associated with satisfaction.

3.13. Teaching faculty

There were considerable differences among different specialty training programs in their satisfaction with who does the psychiatry teaching (Table 6). Obstetrics and Gynecology training directors' satisfaction was associated with primary care faculty doing psychiatry teaching, whereas FP training directors' satisfaction was associated with psychiatrists from psychiatry department doing the teaching. Internal Medicine training directors, on the other

Table 5
Training formats, PGY year, faculty and satisfaction

	FP			IM			Ob/Gyn			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
Training occurs in didactics	99	95	NS	96	88	NS	96	87	NS	95	97	NS
Case conference/clinical rounds	85	64	.001	74	63	NS	50	42	NS	77	69	NS
Individual supervision	83	64	.001	49	31	.029	27	25	NS	55	31	NS
Specific psychiatry courses	36	18	.001	16	10	NS	8	2	NS	5	4	NS
Integrated with PC courses	54	45	NS	53	33	019	38	36	NS	46	32	NS
Joint rounds with psychiatrist	47	24	.001	32	16	028	12	4	NS	23	8	NS
First year residency	78	75	NS	67	55	NS	35	22	NS	91	64	.02
Second year residency	88	84	NS	62	42	NS	31	36	NS	68	60	NS
Third year residency	77	72	NS	68	58	NS	31	34	NS	68	62	NA

Table 6
Who does the teaching?

	FP			IM			Ob/Gyn			Peds		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
PC faculty	84	80	NS	65	58	NS	73	46	.03	64	51	NS
Psychiatrist from psychiatry department	60	48	.05	83	74	NS	58	49	NS	77	74	NS
Psychiatrist with joint appointment with PC	12	7	NS	21	8	.022	15	5	NS	18	19	NS
Psychiatrist hired by PC department	22	19	NS	5	4	NS	1	0	NS	14	1	.037
Mental health professional hired by PC department	86	76	.05	25	10	.019	35	15	NS	59	42	NS
Mental health professional from psychiatry department	17	8	.05	16	12	NS	19	14	NS	46	18	.01

hand, were more satisfied when psychiatrists with joint appointments did the teaching. For Peds, satisfaction was associated with having psychiatrists hired by the primary care department. As to mental health professionals (social workers, psychologists, etc.), both IM and FP directors' satisfaction was associated with such professionals hired by the primary care department. Both FP and Peds satisfaction were also associated with mental health professionals hired by psychiatry department.

3.14. Psychiatry department's contribution

Satisfaction was associated with more variety of psychiatry department contributions overall, especially in FP programs (Table 7). For FP training directors, psychiatry department providing didactics without cost and having residents rotate to psychiatry were associated with satisfaction (Table 8). Dissatisfied FP directors had more wish to have their residents rotate to psychiatry. Interestingly, Peds satisfaction was associated with having their residents rotate to psychiatry at cost.

3.15. Satisfaction and the size of residency

Taken as a whole, satisfaction was associated with a smaller size of the residency program. Internal Medicine, however, was an exception in that larger size was associated with satisfaction (Table 9).

Table 7
Overall variety of psychiatry department's contribution to primary care training program and satisfaction with training

	Satisfied	Dissatisfied	*P*
All	1.45 (1.04)	1.22 (0.94)	.001
FP	1.45 (1.07)	1.11 (0.99)	.016
IM	1.04 (0.77)	0.75 (0.69)	NS
Ob/Gyn	1.45 (1.07)	1.11 (0.99)	.016
Peds	1.59 (1.01)	1.34 (0.83)	NS

The variety score is based on the number of different contributions the psychiatry department makes on a scale of 0–5.

3.16. Satisfaction and the role of primary care physician

Interestingly, overall, satisfaction was associated with the opinion that primary care physician should be ready and willing to treat more psychiatric conditions (Table 10).

4. Discussion

The aim of this study was to document the status of training in various psychiatric skills and knowledge in the primary care training programs and to specify areas that need augmentation. To the best of our knowledge, ours is the first study to document this type of training in all psychiatric disorders, as compared to previous studies that document limited aspects [5,8–10]. Our results concerning what is desired by primary care training programs may serve as a need assessment called for by Hodges et al. [10].

Our findings, in general, document that most primary care training programs, regardless of category, currently offer training in most psychiatric skills and disorders. Notable exceptions are for delirium/dementia and personality disorders, which only a minority of Ob/Gyn and Peds programs offered. We have not found evidence that specialties have developed behavioral science curricula that are particularly suited for them; rather, it seems that the programs are teaching more or less a broad spectrum of psychiatric skills and conditions. That only a minority of Ob/Gyn programs provide training in delirium/dementia is alarming, as these conditions are not uncommon in the Ob/Gyn population. Likewise, considering the importance of childhood in the formation of personality disorders, one would have expected a greater emphasis on it in Peds programs.

The current study also confirms and, perhaps, explains our earlier impression that there is a difference in the degree of satisfaction (or esteem of adequacy) concerning training between FP and all the rest of primary care training programs. We find that in a number of categories of skills and disorders, comparable numbers of FP and other

Table 8
Specific contribution to training by psychiatry department

	FP			IM			Ob/Gyn			Ped		
	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*	Sat%	Dis%	*P*
Provides psychiatrists/mental health professionals without cost to PC department	43	32	NS	63	49	NS	50	31	NS	59	62	NS
Provides didactic courses without cost to PC department	43	31	.05	56	51	NS	46	34	NS	50	39	NS
Provides didactic courses at cost	10	10	NS	12	8	NS	4	8	NS	9	1	NS
PC residents rotate to psychiatry department without cost to PC department	45	38	NS	34	32	NS	4	2	NS	32	31	NS
PC residents rotate to psychiatry department at cost	5	1	NS	0	3	NS	0	0	NS	9	0	.05
Do PC residents rotate to psychiatry	54	38	.05	32	31	NS	8	4	NS	33	27	NS

specialties provide current training, but FP's assessment of the adequacy of training is significantly better than all the other specialties. This may reflect that the training in these categories in FP programs may be qualitatively and quantitatively superior to the training in other programs. Supporting this notion is our finding that, across specialties, satisfaction is associated with the amount of training as well as diversity and variety in training formats, venues and faculty. Family Practice programs overall, and, particularly, the satisfied ones have more of all the above factors. On the other hand, FP programs may also have a somewhat lower threshold for being satisfied with less than full mastery of the subject by the trainees as they have to be knowledgeable with so many different skills and treatments that are in the domain of many specialties. The psychiatry department's contribution to training is also associated with satisfaction, and in this regard, FP, often not housed in an institution that also has a psychiatry department, seems to hire their own mental health workers to teach, which is also seen to be a satisfactory solution.

Our current study reveals that a vast majority of primary care training programs desire more training in practically all the interviewing, diagnostic and therapeutic skills in all psychiatric disorders, and that a vast majority of IM, Ob/Gyn and Peds programs consider their current training inadequate. It is especially of note that training in eating disorders and most child and adolescent disorders was considered particularly inadequate by all categories of training except for Peds. Although both FP and Peds programs provide some training in child psychiatry, our findings indicate that Peds programs provide more and feel more adequate in these areas than in FP. As for Conduct Disorder category, which more than 80% of both programs currently offer training, though not reaching statistical significance, only 39% of Peds as opposed to 49% of FP programs consider their training adequate.

Our findings indicate that, at minimum, to increase the level of satisfaction of training directors, there should be more psychiatric training in most primary care programs, perhaps through increased participation of psychiatry departments. There should be an increase in the diversity of training faculty, venues and training formats such as individual supervision and integration with primary care curriculum as has already occurred in FP programs.

Table 9
Number of residents in the program

	Satisfied (S.D.)	Dissatisfied (S.D.)	*P*
All	31 (22.5)	35 (25.7)	.03
FP	24 (14.73)	24 (10.94)	NS
IM	58 (30.14)	45 (35.35)	.02
Ob/Gyn	20 (9.88)	22 (9.78)	NS
Peds	39 (20.69)	48 (24.66)	NS

Table 10
The role of primary care physician in treating psychiatric disorders

Opinions about (1–5 scale)			
Any psych problems should be referred to a psychiatrist			
	Satisfied	Dissatisfied	*P*
All	2.11 (1.22)	1.76 (1.18)	.001
FP	1.41 (0.90)	1.57 (0.98)	NS
IM	1.93 (1.29)	2.05 (1.10)	NS
Ob/Gyn	3.09 (1.31)	2.81 (1.40)	NS
Ped	2.77 (1.31)	2.51 (0.86)	NS
PC should treat most psychiatric conditions			
All	3.01 (1.08)	3.34 (1.15)	.001
FP	3.58 (1.11)	3.40 (1.01)	NS
IM	3.11 (1.16)	3.06 (1.15)	NS
Ob/Gyn	2.82 (1.03)	2.60 (1.03)	NS
Peds	2.27 (0.94)	2.51 (0.86)	NS
PC should be able to treat uncomplicated psychiatric conditions			
All	4.27 (1.10)	4.09 (1.11)	.034
FP	4.44 (1.09)	4.29 (1.13)	NS
IM	4.17 (0.97)	4.32 (0.94)	NS
Ob/Gyn	3.70 (1.11)	3.67 (1.07)	NS
Peds	3.82 (1.18)	3.75 (1.16)	NS
PC should attempt to treat most psychiatric conditions before referring to psychiatrist			
All	2.84 (1.08)	3.18 (1.07)	.001
FP	3.33 (1.05)	3.14 (1.05)	NS
IM	2.98 (0.98)	2.92 (1.13)	NS
Ob/Gyn	3.14 (1.21)	2.47 (1.01)	NS
Peds	2.36 (1.09)	2.47 (0.88)	NS
PC should treat some psychiatric conditions but not others			
All	4.12 (1.04)	3.98 (1.10)	NS
FP	4.00 (1.09)	3.96 (1.18)	NS
IM	3.95 (1.22)	4.29 (0.89)	.01
Ob/Gyn	4.00 (0.98)	4.05 (1.05)	NS
Peds	3.91 (1.15)	4.19 (0.93)	NS

There is a need for more training in interviewing skills in all programs as evidenced by the fact that, irrespective of specialty, current training in these skills are associated with satisfaction. The fact that, for almost all categories, perceived adequacy of training rather than existence of current training is associated with satisfaction calls for an improvement in the quality of training in specific psychiatric disorders. The fact that larger program size in IM was associated with satisfaction may indicate that larger IM programs are more likely university programs with higher quality of training, whereas for other fields, smaller size may indicate more personalized attention to training.

Our finding that there are specialty-specific differences in satisfaction indicates that not all primary care programs have same needs, and that there may be a need to develop specialty-specific primary care psychiatry training programs. For example, the need to train IM residents to recognize delirium and dementia may be different from that for Peds or Ob/Gyn residents. Obstetrics and Gynecology program directors who currently gave training in psychopharmacology, delirium/dementia, psychosis, anxiety disorders, eating disorders, among others, were more likely to be satisfied than those who did not. Therefore, an emphasis on these conditions may be indicated for Ob/Gyn training programs.

What should be the goal of training primary care physicians in psychiatry? Our findings suggest that there may be differential needs for each primary care specialties, and that specialty-specific curricula should be designed to meet the specific needs of the programs. For example, FP programs may need a psychiatry training program that aims at diagnosing and treating more common psychiatric disorders, whereas Ob/Gyn programs may emphasize diagnosis and referral, and treatment of specific conditions such as delirium/dementia, postpartum psychosis and eating disorders. Pediatrics programs may need to pay more attention to Conduct Disorders and other precursors of personality disorders.

Our inferences for training needs are based on the training directors' self-reported satisfaction or dissatisfaction. To our knowledge, there have been no published studies that assess primary care residency training directors' satisfaction with the status of their psychiatry training, though there are some publications concerning factors for general satisfaction as training directors [11,12]. Our use of the satisfaction measure as a proxy for quality of training has obvious limitations, but there is to date no generally applicable measure of quality of psychiatry training for primary care residencies. Objective measures of quality should be developed for primary care training programs in general as well as for specific primary care specialties. Perhaps there could be a set of questions that may be embedded into the primary care in-training examinations, in general, and another set that might be specific to FP, IM, Ob/Gyn and Peds. There might also be standardized videotaped interviews that might be used in assessing the quality of psychiatry training.

In conclusion, our findings suggest that there are general and specific factors in psychiatry training that affect primary care training directors' satisfaction with training, and call for improvement in the psychiatry training curricula for primary care training programs, in general, and for specific specialty training. There is a need for the development of objective measurements of the outcomes of such training. Training in mental health for primary care programs should be enhanced in two parallel tracks — content and context. We already made the recommendation in our previous report that one approach might be to provide more diversity of faculty, venues and training settings especially for IM, Ob/Gyn and Peds programs, somewhat akin to FP (Leigh et al., this issue). Our current study indicates that specialty-specific skill and content enhancement are needed for the diagnosis and treatment of psychiatric disorders.

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