

SENSITIVITY TO PATIENTS' PSYCHOSOCIAL CONCERNS: RELATIONSHIPS AMONG RATINGS BY PRIMARY CARE AND TRADITIONAL INTERNAL MEDICINE HOUSE OFFICERS AND PATIENT SELF-ASSESSMENTS

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Abstract—This study examined house officers' sensitivity to patients' psychosocial concerns. Primary care house officers, traditionally trained internal medicine house officers, a social worker, and 104 ambulatory care patients independently completed an assessment instrument to indicate the extent to which a set of 20 defined psychosocial issues concerned the patients. We examined the magnitude of difference and extent of correlation in the independent reports of the patient, house officer, and social worker. These analyses were conducted on both the individual psychosocial issues and on sets of concerns derived from an oblique rotation factor analysis of the patients' responses. Primary care trainees' assessments of their patients' concerns correlated more frequently with the independent assessments of the patients and a social worker than did the judgments of the traditionally trained house officers. The factor analysis identified six factors that accounted for 64.4% of the variance in patients' responses. The correlations between the primary care trainees' and patients' assessments were statistically significant on five of these six factors; the correlations between the traditionally trained residents' and patients' assessments were statistically significant on two of the factors. These results provide evidence of the primary care house officer training program's achievement of the goal of enhanced physician awareness of patients' psychosocial concerns. The results also support training efforts aimed at increasing physicians' ability to assess their patients' psychosocial concerns.

Key words—physician-patient relations, medical education, clinical competence, ambulatory care

INTRODUCTION

Patients' psychosocial problems are acknowledged as factors affecting their experience of illness and ability to seek and benefit from professional medical care [1-5]. Physicians' apparent inattention to these issues has been implicated as a source of patient dissatisfaction [6-9]. Given that psychosocial problems have been associated with deleterious health outcomes, discordance between patients' and clinicians' assessment of patients' psychosocial problems might be expected to effect significant consequences [10].

The establishment of federally funded primary care training programs represents an effort to provide training environments that would better prepare physicians to recognize and respond to patients' psychosocial concerns [11, 12]. The American Board of Internal Medicine [13] describes the ability to render such humanistic care as an inextricable component of clinical competence. Determining the extent of physicians' sensitivity to their patients' concerns would help to assess the impact of these programs and focus continuing training efforts.

Evaluation of clinicians' sensitivity to patients' concerns needs to consider these behaviors in the context in which they occur. Although existing studies have documented limits in physicians' recognition of patients' concerns [14], we have yet to create an understanding of what level of sensitivity might be discerned in the clinical context. La Duca [15] discusses the limited utility of traditional attempts to

define medical professional competence as behavior isolated from the context in which it occurs. Ajzen and Fishbein [16] have documented the inability of these approaches to predict subsequent behavior. Studies concerned with enhancing the theoretical understanding and empirical rigor of the measurement of clinical competence converge on the need to incorporate elements of the situation in which the medical behavior occurs [17-21]. La Duca [15] stresses the need to study clinical competence from the perspective of a relational model, in which clinical competence is defined in the clinical situation. Approaches to the study of professional competence in the practice situation reflect a trend in social science research toward inclusion of the context in studies evaluating behavior [16, 22-25].

One attempt to assess directly primary care residents' ability to detect their patients' level of distress was conducted by Thompson *et al.* [26]. As evidence of psychosocial sensitivity, these investigators compared the number of significant correlations between primary care internists' and patients' ratings to the number of significant correlations between non-primary care physicians and their patients. The study failed, however, to explore the potential differences between the clinic patient populations in terms of the magnitude of concern patients experienced. Further, the study lacked corroborating evidence (e.g. a third source of ratings) of the level of concern that a clinician focusing on psychosocial concerns might have been able to detect.

This study focused on clinicians' sensitivity to the psychosocial concerns of patients in an ambulatory medical clinic. We sought to elicit and analyze patients' own reports of concerns as a basis on which to assess physicians' sensitivity. The objective of this study was to assess house officers' sensitivity to patients' concerns based on their participation in a primary care residency training program or in a traditional internal medicine program in the same clinical setting. A social worker's independent assessment of the patients' level of distress provided a further perspective from which to evaluate the extent of consensus between clinical and patient judgments of concern. Huntington [27] found that social workers in an ambulatory clinic spent four times as much time with patients than did primary care physicians; the entire focus of their encounters is on the patient's psychosocial assessment. In this study, drawing upon a social worker's assessment offered a source for considering the degree to which patients' psychosocial concerns might be identified in the clinic setting. In addition, we sought to extend the characterization of house officers' sensitivity to individual psychosocial issues with an examination of the relationships among ratings of empirically (factor-analytically) grouped sets of patient concerns. This study explores the following questions:

1. How well do house officers' ratings of the magnitude of their patients' concerns on a defined set of psychosocial issues compare to their patients' self-assessments?
2. What is the extent of correlation among patients', house officers', and social workers' assessments of patients' psychosocial concerns?
3. Do house officers trained in a primary care program (PCP) more consistently identify the psychosocial issues on which their patients report concern than do trainees from a traditional program (TP)?
4. On which psychosocial issues might physicians benefit from additional training?
5. What is the extent of correlation among patient and house officer ratings of concern on factor-analytically derived sets of psychosocial concerns?

METHODOLOGY

Description of measures

We conducted open-ended interviews with patients in the ambulatory care clinic and reviewed published studies of adult ambulatory care settings and primary care training programs to identify psychosocial issues of concern to patients. We developed two psychosocial assessment instruments from these investigations. The first asked patients to rate how concerned they were currently about 20 psychosocial issues. The second asked clinicians to rate the extent they considered each of these issues as a problem for their patient. These instruments used a 5-point response format, with higher values indicating more concern. An additional response category on the clinician's form allowed the clinician to report that

there was "not sufficient information to make a judgment."

Subjects

The patient population eligible for the study consisted of individuals seeking care for the first time at the university-affiliated primary care (PCP) and traditional general (TP) internal medicine outpatient clinics. Patients were randomly selected from the clinic appointment schedules for inclusion in this study. One-hundred and four patients participated in the study. The distributions of patients in the PCP and TP clinic settings were not statistically different with respect to age, sex, religion, or ethnic affiliation. Statistically significant differences did emerge on comparing patients' marital status. Although the majority of patient-subjects in both clinics were married, the PCP clinic included more single and widowed patients, while the TP clinic had more divorced patients. The results of analysis of variance of mean level of psychosocial concern reported by patients in different marital status groups, however, indicated that there were no significant differences among these groups; the comparable magnitude of concern was considered justification for combining patients from different sociodemographic groups.

Physician residents included in the study consisted of all 11 primary care program (PCP) trainees, and 12 internal medicine trainees from the traditional program (TP), who were randomly selected for study inclusion from the group of 70 internal medicine house officers. PCP physicians were responsible for the care of 61 (58.7%) of the 104 study patients; TP house officers saw the remaining 43 (41.3%) patients. A social worker assigned to the internal medicine clinic participated in the study, providing an additional source for assessing patients' psychosocial concerns.

Procedure

The clinic clerk requested and obtained informed consent at the time of the patients' registration for each patient who participated in the study. Patients completed the self-assessment questionnaire prior to their clinic visit. A social worker then conducted a routine 10–15 min assessment of each patient and immediately completed a Clinician Assessment form. The house officers were not aware that patients were participating in the study until after their encounter with the patient was completed. At that time, the house officers were asked to complete the Clinician Assessment form.

Data analysis

The data analyses addressing the first study question—the magnitude of concern patients and house officers discern—included the frequency distribution, mean, and standard deviation for each psychosocial issue. Potential differences between PCP and TP groups, in terms of the magnitude of concern patients reported for psychosocial factors, were assessed with independent *t*-tests. Paired *t*-tests were used to compare the patient and house officer assignment of concern on a particular patient. Kendall's coefficient of concordance was computed to identify the relative ranking of issues among patients and physicians and

the extent of agreement within these rankings. The coefficient of concordance can vary from 0, indicating no congruence between raters' rankings, to 1, indicating complete agreement among raters.

The data analyses focusing on the second study question concerned the extent of correlation among ratings of concern. Correlations were calculated to examine the extent to which raters made comparable judgments about the psychosocial concerns. Fisher's r to z transformations of the correlations were calculated to test the hypothesis (in response to the third study question) that the correlations between PCP house officers' and patients' assessments would be significantly higher than the correlations between the TP house officers' and patients' assessments.

The data analysis in response to the fourth study question consisted of chi-square analyses, examining the relative frequency of PCP and TP trainees' use of 'insufficient information' responses. In addition, chi-square analysis identified the context—in terms of the magnitude of patients' self-assessment of concern—in which their house officer considered there was 'insufficient information' to assess the patients' concern. The Kolmogorov-Smirnov test was calculated to determine the significance of potential differences in the proportion of PCP and TP trainees' ratings of insufficient information when patients reported high levels of concern.

The analyses addressing the fifth study question involved the identification and comparison of factor analytically derived sets of psychosocial concerns. These procedures included: (1) performing a factor analysis of the 104 patients' responses to the individual items; (2) computing unit factor scores; and (3) calculating the Pearson product-moment correlation coefficients between PCP and TP trainees and their patients on the (factor-analytically derived) psychosocial factor scores. Factor analysis was used to investigate which individual psychosocial variables appeared to measure the same construct. An oblique factor rotation method, appropriate

for analysis of factors that might be correlated, determined the number of underlying dimensions (factors). Factor loadings are reported as a measure of the extent to which the individual psychosocial items are reflected on the factors. A conservative criterion, that considers only factor loadings of 0.40 or greater as warranting interpretation [28], was used to consider the scope of explanation provided by the factor.

RESULTS

Magnitude of perceived patient concern on psychosocial issues

Table 1 contains the frequency distribution among the combined (PCP and TP) patients' self-assessments of the extent of their concern. The issues that elicited highest levels of self-assessed concern from the greatest proportion of patients were: responsibility for a significant other; somatic complaints; leisure use; depression; and religion. A small proportion of patients reported distress with general life satisfaction, their work environment, the quality of their relationship with a significant other, their living situation, alcohol use, drug use, and suicide.

Table 2 depicts the means and standard deviations representing the relative concern patients and house officers in the primary care (PCP) and general medicine (TP) clinics reported. The consistency in the relative ranking of issues among house officer and social worker groups was, on the basis of Kendall's Coefficient of Concordance, statistically significant. In comparing the magnitude of concern patients reported, the results of independent t -tests indicated that the PCP and TP patients differed significantly only on the issue of depression, with TP patients reporting more concern with depression. In contrast, there were considerably more differences on comparing the magnitude of concern the house officers and their patients reported.

Table 1. Distribution¹ of patients' reported extent² of concern on identified psychosocial issues

Psychosocial issue	Mean	SD	Frequency distribution											
			Not problematic		1		2		3		Extremely problematic		5	
			<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Responsibility for significant other	3.50	1.25	10	(10)	8	(8)	35	(34)	22	(21)	29	(28)		
Somatic concerns	3.41	1.03	3	(3)	13	(13)	46	(44)	22	(21)	20	(19)		
Leisure use	3.38	1.40	14	(13)	15	(14)	23	(22)	20	(19)	31	(30)		
Depression	3.29	0.92	2	(2)	10	(10)	43	(41)	34	(33)	15	(14)		
Religion	3.09	0.92	3	(3)	23	(22)	31	(30)	37	(36)	9	(9)		
Financial status	3.04	1.06	8	(8)	15	(14)	42	(40)	26	(25)	13	(13)		
Social network	2.84	0.71	1	(1)	35	(34)	44	(42)	18	(17)	6	(6)		
Anxiety	2.67	0.81	3	(3)	29	(28)	48	(46)	31	(30)	3	(3)		
Expressive ability	2.42	1.13	28	(27)	24	(23)	38	(36)	8	(8)	6	(6)		
Educational level	2.58	1.12	21	(20)	27	(26)	37	(36)	13	(13)	6	(6)		
Sexual activity	2.44	1.06	19	(18)	25	(24)	31	(30)	14	(13)	5	(5)		
Loss signif. other	2.44	1.83	66	(63)	0	(0)	0	(0)	0	(0)	37	(36)		
Family relationships	2.26	1.14	37	(36)	20	(19)	34	(33)	9	(9)	4	(4)		
General life satisfaction	2.06	0.91	32	(31)	43	(41)	19	(18)	0	(0)	7	(7)		
Work environment	2.01	0.72	11	(11)	18	(17)	18	(17)	5	(5)	0	(0)		
Significant other	1.93	0.93	37	(36)	28	(27)	8	(8)	4	(4)	4	(4)		
Living situation	1.93	0.93	31	(30)	41	(40)	20	(19)	7	(7)	2	(2)		
Alcohol use	1.66	0.67	70	(67)	21	(20)	7	(7)	4	(4)	2	(2)		
Drug use	1.64	0.67	44	(42)	49	(47)	9	(9)	0	(0)	1	(1)		
Suicide	1.47	0.84	61	(59)	31	(30)	5	(5)	3	(3)	3	(3)		

¹Based on responses of 104 patient-subjects.

²Response on a scale which ranged from 1 to 5, with higher values indicating greater concern.

Table 2. Comparison of house officers' and patients' rating¹ of patients' concern on individual psychosocial issues

Psychosocial issues	Primary care clinic				Traditional internal medicine clinic			
	Patient		House officer		Patient		House officer	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Responsibility for	3.42**	1.20	1.64	1.13	3.37**	1.35	1.94	1.28
Somatic concerns	3.30**	1.02	2.52	1.46	3.66**	0.96	2.90	1.50
Leisure use	3.22**	1.42	1.80	1.11	3.41**	1.52	2.26	1.40
Depression	3.10**	0.74	2.12	1.44	3.56**	1.06	2.51	1.57
Religion	2.98**	1.06	1.35	0.71	2.92**	0.96	1.42	0.78
Financial status	2.99**	0.93	1.98	1.29	3.09**	1.24	2.45	1.36
Social network	2.81**	0.75	1.89	1.19	2.98**	0.74	2.03	1.40
Anxiety	2.67	0.78	2.48	1.54	2.75	0.87	2.58	1.50
Expressive ability	2.63**	1.16	1.83	1.04	2.32	1.12	2.10	1.31
Educational level	2.41**	1.04	1.35	0.59	2.75**	1.17	1.78	1.10
Sexual activity	2.40	1.01	1.96	1.34	2.48*	1.16	1.79	0.93
Loss of significant other	2.67**	2.00	1.67	1.21	2.33	1.92	1.76	1.20
Family relationships	2.12*	0.98	1.68	1.10	2.23	1.26	1.97	1.27
General life satisfaction	2.10	0.91	1.96	1.31	2.13	0.96	2.44	1.44
Work environment	2.02	0.76	2.11	1.45	2.04	0.67	1.75	1.07
Significant other	2.04	1.12	1.68	1.18	1.87	1.12	1.77	1.04
Living situation	1.82	0.84	1.60	1.09	2.03	1.02	2.18	1.47
Alcohol use	1.66**	0.87	1.18	0.68	1.67	1.05	1.58	0.92
Drug use	1.64**	0.72	1.14	0.52	1.67	0.64	1.36	0.74
Suicide	1.56*	0.92	1.26	0.83	1.35	0.72	1.54	0.96

¹Mean scale which ranged from 1 to 5, with higher values indicating greater concern.

*Statistically significant difference between patients' and house officers' mean ratings, $P < 0.05$.

**Statistically significant difference between patients' and house officers' mean ratings, $P < 0.01$.

Strength of association between assessments

Table 3 contains the Pearson product-moment correlations between the house officers' and patients' assessments of the relative presence or absence of the patients' concern. Statistically significant correlations occurred in both PCP and TP trainees' assessments of their patients' concerns. In terms of relative proficiency, the PCP trainees were more often able to assess the relative presence of their patients' concerns. The correlations between the PCP trainees' and patients' ratings were significantly greater than zero on 15 of the 20 psychosocial issues assessed; the correlations between the TP trainees' and patients' ratings were significant on 8 of the 20 issues. On the issues of sexual activity, drug use, and expressive

ability, the correlations between TP trainees' and patients' ratings were negative (i.e. inversely related); these negative correlations were not, however, statistically significant.

PCP trainees' correlations were significantly higher than those of the TP trainees' on the issues of patients' financial concerns, relationship with a significant other, sexual activity, religion, loss of a significant other, depression, and somatic concerns. In contrast, the TP trainees' and patients' correlations were significantly higher than that of the PCP assessments on the issues of alcohol use and depression.

Table 3 also contains the correlations between the social worker and patient assessments. Although the assessment of a single social worker cannot be

Table 3. Correlation between independent assessment sources on individual psychosocial issues

Individual psychosocial issues	Primary care clinic			(Traditional) internal medicine clinic		
	Patient/house officer	Patient/social worker	House officer/social worker	Patient/house officer	Patient/social worker	House officer/social worker
Financial status	0.61**	0.62**	0.62**	0.41**	0.73**	0.26
Work environment	0.26*	0.61**	0.46**	0.29	0.46*	0.38**
Educational level	0.24*	0.38**	0.0	0.21	0.46**	0.13
Significant other	0.48**	0.66**	0.52**	0.29	0.67**	0.36*
Sexual activity	0.35*	0.60**	0.44**	-0.11	0.70**	-0.05
Religion	0.23	0.56**	-0.02	0.02	0.61**	-0.10
Home environment	0.40**	0.55**	0.38**	0.49**	0.48**	0.30*
Alcohol use	0.06	0.45**	0.08	0.69**	0.69**	0.56**
Drug use	0.04	0.50**	0.12	-0.06	0.46**	-0.05
Responsibility for significant other	0.05	0.52**	0.32*	0.25	0.68**	0.37*
Loss	0.51**	0.82**	0.60**	0.25	0.82**	0.26
Depression	0.52**	0.65**	0.38**	0.29*	0.67**	0.49**
Suicide	0.33**	0.74**	0.52**	0.40**	0.73**	0.56**
Anxiety	0.30*	0.53**	0.52**	0.35*	0.57**	0.39**
Somatic concerns	0.37**	0.69**	0.55**	0.05	0.26*	0.21
Expressive ability	0.35**	0.22*	0.30*	-0.26	0.50**	0.05
Leisure	0.276*	0.38**	0.49**	0.26	0.27*	0.17
Social network	0.32*	0.45**	0.68**	0.25	0.51**	0.36*
Family relationships	0.24	0.31**	0.28*	0.30*	0.60**	0.29*
Gen. life satisfaction	0.39**	0.56**	0.60**	0.39**	0.59**	0.62**

*Indicates the magnitude of correlation was significant at the $P < 0.05$ level.

**Indicates the magnitude of correlation was significant at the $P < 0.01$ level.

considered to represent the variation present in the group data of the house officers, the social worker data does provide an indication of the assessment that could be rendered in the clinic were the focus 'only' on patients' psychosocial assessment.

Deferring assessment

House officers infrequently cited 'insufficient information to assess' their patients' concern. PCP trainees more often used the response than did TP trainees. PCP trainees' reporting of insufficient information occurred only in the context of issues that represented the lowest level of patients' self-assessed concern. In contrast, TP trainees' attribution of 'insufficient information' included cases where the patients' reported more concern.

Factor-analytically derived patient concerns

In this study, we drew on the use of factor-analytically derived measures as a means for extending the characterization of sensitivity to individual psychosocial concerns. Table 4 presents the primary factor pattern values from the oblique rotation factor analysis. The factor analysis of patients' psychosocial concerns identified six factors that accounted for 64.6% of the variance in patients' assessments of their psychosocial concerns. The item loadings in Table 4 have high loadings on the factor on which they are most clearly identified, and low loadings on other factors. The factor analysis can be considered to have resulted in distinct factors. The factor pattern correlations ranged from -0.11 to $+0.55$, corroborating the choice of an oblique rotation.

The first factor included patients' concerns about their financial status, their living (home) and work environment, their educational status, suicidal

concerns, and anxiety. Perceptions of the adequacy of one's financial status, living and work environment constitute external measures of one's security; concerns with suicide and anxiety convey one's emotional insecurity. The second factor contained psychosocial items addressing drug use, depression, concern about one's responsibility for a significant other, and somatic complaints. These issues share the status of factors that impinge on one's ability to function. Drug use, depression, and somatic complaints raise questions of one's personal physical vulnerability. The issue of responsibility for a significant other echoes this concern of vulnerability, with a focus on the extent to which others are dependent on one's functional integrity. The third factor included items pertaining to one's social network, family relationships, and expressive ability. These issues address the perception of the quality of social relationships; this factor tied perceptions of relationships with family and friends to the ability to express oneself.

Concerns about one's significant other, sexual activity, and overall life satisfaction all had high loadings on factor 4. The loading of general life satisfaction, however, is markedly lower than the loadings on this factor by variables concerning the relationship with one's significant other and sexual activity. Life satisfaction emerged as an issue on both factor 1 (that contained items reflecting perceived social and emotional security) and factor 3 (that represented quality of social relationship issues). The items associated with the fifth and sixth factors are associated uniquely with these factors. Items dealing with concerns about alcohol and leisure use are represented on factor five. Items addressing concerns about religion and the loss of a significant other drew common patterns of responses.

Table 4. Pattern matrix factor loadings after oblique rotation of patients' assessments of their psychosocial concerns

Psychosocial issue	Pattern matrix factor loadings						Factor intercorrelations					
	F1	F2	F3	F4	F5	F6	F1	F2	F3	F4	F5	F6
<i>Security</i>							1.00					
Financial status	0.74	0.11	-0.07	0.07	-0.13	0.09						
Living situation	0.73	-0.13	0.15	-0.16	0.22	-0.04						
Work environment	0.53	-0.10	0.13	-0.11	0.01	0.38						
Educational level	0.48	0.40	0.23	0.10	-0.31	-0.05						
Suicide	0.46	0.16	-0.02	-0.15	0.41	-0.08						
Anxiety	0.40	0.34	-0.13	-0.34	0.01	0.03						
<i>Functional ability</i>							0.23	1.00				
Drug use	-0.13	0.78	-0.04	0.11	0.12	-0.11						
Depression	0.08	0.77	0.04	-0.16	-0.10	-0.05						
Responsibility	-0.05	0.65	0.12	0.04	0.14	0.28						
Somatic concerns	0.21	0.60	0.02	0.02	-0.20	0.04						
<i>Social interaction</i>							0.20	0.55	1.00			
Social network	-0.01	0.07	0.76	0.01	-0.14	0.26						
Family rltshps	0.32	-0.06	0.73	0.03	0.11	-0.14						
Expressive ability	-0.23	0.11	0.70	-0.32	-0.02	-0.03						
<i>Satisfaction</i>							-0.24	-0.11	-0.19	1.00		
Significant other	-0.11	-0.02	0.02	0.84	0.22	-0.03						
Sexual activity	0.11	-0.08	-0.01	0.84	-0.13	-0.02						
Life satisfaction	0.37	0.01	0.35	0.46	-0.06	0.15						
Alcohol	0.09	0.00	-0.04	0.00	0.78	0.21	-0.02	-0.11	0.07	-0.03	1.00	
Leisure use	0.27	0.04	-0.02	-0.06	0.53	0.45						
Religion	0.04	-0.02	0.21	0.14	0.24	0.80	0.20	0.18	0.08	-0.16	-0.06	1.00
Loss	-0.07	0.16	-0.29	-0.30	-0.10	0.52						
Eigenvalue	5.4	2.4	1.4	1.3	1.3	1.2						
% of Variance accounted for by factor	26.8	11.9	6.9	6.6	6.5	5.9						

Table 5. Correlation among patient, social worker and house officers' assessments of factor-analytically derived sets of patients' concerns

Psychosocial factor	Primary care clinic ¹			Traditional internal medicine clinic ²		
	Patient/ house officer	Patient/ social worker	Social worker/ house officer	Patient/ house officer	Patient/ social worker	Social worker/ house officer
Social and emotional security	0.38*	0.64**	0.27 ²	0.76**	0.82**	0.61 ^{2**}
Functional ability	0.29*	0.55**	0.36 ^{2*}	0.08	0.48**	0.36*
Extent of social interaction	0.52**	0.35**	0.63 ^{2**}	0.13	0.62**	0.26 ²
Satisfaction with social relations	0.47*	0.71**	0.67**	0.32	0.80**	0.45 ^{2*}
Alcohol/leisure use	0.04	0.28**	0.28*	0.36*	0.44**	0.52**
Religion/loss sig. other	0.54**	0.79**	0.45 ^{2*}	0.20	0.70**	0.21 ²

¹Based on the responses of 61 sets of patient-physician-social worker assessments.

²Based on the responses of 43 sets of patient-physician-social worker assessments.

*Magnitude of correlation coefficient statistically significant at $P < 0.05$.

**Magnitude of correlation coefficient statistically significant at $P < 0.01$.

Relationships among ratings of factor-analytically derived factors

Table 5 presents the Pearson product-moment correlation coefficients comparing patient, social worker, and house officer assessments of psychosocial concern factors in the PCP and TP clinics. The strength of the (linear) association between the patients' and clinicians' assessments of concern varied among individual psychosocial issues and clinician groups. As indicated in Table 5, patients' and social worker's assessments exhibited the greatest strength of linear association. The extent of variability for which these social worker-patient correlations account ranges from 67 to 38%, which represents a relatively high proportion of the variability in psychosocial assessments.

In contrast, the correlations between the TP trainees and patients are lower. With the exception of the psychosocial factor of social and emotional security, all of the correlations between the TP trainees and their patients are lower than the lowest correlation between the social worker and TP patients. Only two of the correlation coefficients (associated with social and emotional security, and alcohol and leisure use factors) between the ratings of the TP trainees and patients were significantly greater than zero.

Table 5 also includes the correlations among PCP patient, social worker, and house officer assessments of psychosocial concern factors. As was the case in the TP clinic, the entire set of correlations of the PCP patients' and social worker's ratings was statistically significant. The extent of variability in psychosocial factor assessment these correlations accounted for ranged from 62 to 30%. The correlations between the ratings of the PCP trainees and patients were statistically significant on five of the six psychosocial factors. The correlation between the PCP trainees' and patients' assessments on the psychosocial concern factor reflecting the use of alcohol and leisure was, however, quite low.

DISCUSSION

Relation of results to study questions

The first research question considered the relationship between house officers', social worker's, and patients' assessment of the magnitude of patients' concern. Clearly, patients consistently assign larger values than do their physicians in characterizing the

extent of their concern. Rather than positing this disparity in magnitude as evidence of physicians' insensitivity, the design of this study evaluated congruity between clinicians' and patients' assessments from multiple perspectives. In this study, the house officers' use of lower values to characterize their patients' concern could be considered from the perspective of the social worker's assessment of the same patient. The house officers and social worker consistently used comparable magnitudes to represent the extent of their patients' concern. Simply establishing the absence of quantitative differences between the clinicians' characterizations of concern is not, however, an adequate criterion for assessing clinical performance. For example, differences in mean values would not have ruled out the possibility that the groups drew on different metrics; a house officer might have considered extreme scale values of a paper-and-pencil measure of distress as an unlikely occurrence in the ambulatory care context, while still recognizing that their patient was experiencing some measure of concern on that issue.

The second research question considered the extent to which the patient and house officer expressed comparable judgments about the relative presence or absence of concern on defined psychosocial issues; the third research question focused on the comparative ability of PCP and TP house officers to identify their patients' psychosocial concerns. The correlation between TP trainees' and patients' judgments of concern was rarely greater than chance, and the strength of the association tended to be low. In comparison to the TP trainees, the PCP trainees were more consistently able to discern the relative presence of concern their patients reported. The magnitude of the correlations obtained in comparing the assessments of PCP house officers with their patients was statistically significant on most of the individual psychosocial issues. In contrast, the social worker's assessments correlated significantly with the concern reported by the patient on each of the psychosocial factors in both the PCP and TP patient populations.

The fourth study question considered an additional source for identifying specific psychosocial issues in which there might be limits in the ability of the physician to assess accurately their patients' concern. This source consisted of the presence of a response category indicating that the clinician considered that there was 'insufficient information' to make a judgment about whether a given issue was considered to

be a problem for the patient. In keeping with the emphasis on approaching the assessment of competence in the context of the 'special social circumstances' to which the house officers have adapted in the clinic, it was reasonable to expect that the house officers would recognize a need to maintain the flow of patients through the clinic [30]; in addition, existing research has indicated the house officer might perceive limits in the patients' tolerance of a thorough exploration of their psychosocial concerns on the initial visit [31]. In this study's findings, it was reassuring to see that the PCP trainees were willing to recognize that the initial encounter had not generated sufficient information to render a judgment of magnitude of concern. Further, the PCP trainees' assessment of 'insufficient information' occurred only in instances in which the patient reported low levels of self-assessed concern; the PCP trainees did not use the 'insufficient information' response option to avoid facing issues troubling to the patient.

The fifth study question focused on the relative ability of PCP and TP house officers to identify their patients' psychosocial concerns. The PCP and TP house officer groups exhibited different patterns in judging the relative presence or absence of patients' concern. The PCP trainees were able to discern the relative presence of concern their patients reported more consistently than the TP trainees. The magnitude of the correlations obtained in comparing the assessments of PCP trainees with their patients were statistically significant on five of six psychosocial factors. The failure to find a strong measure of association on the psychosocial factor that contained items relating to the use of leisure and alcohol indicates the need to focus on this critical issue in further program training efforts.

In an effort to integrate the clinic setting constraints into the evaluation of clinical competence, studies of the potential impact of primary care training programs have compared the performance of the primary care trainee to other trainees operating within comparable constraints, but who have not participated in a primary care focused training program. For example, Thompson [26] assessed the impact of a clinic-based psychiatric liaison program by comparing the correlations representing agreement on psychosocial issues reported by patients and physicians who had participated in the psychiatric liaison-clinic to the correlations obtained in comparing the assessments of patients with physicians who had not trained in the setting with the psychiatric liaison. Thompson's conclusion of program impact (i.e. the psychiatric liaison had enhanced physicians' sensitivity to patients' concerns) relied on the outcome of obtaining a greater number of statistically significant patient-physician correlations in the psychiatric liaison group. The findings of the present study replicated this outcome of the primary care trainees' assessments more frequently attaining statistically significant correlations. Such clinic-based assessments of differential responses to individual psychosocial issues offers insight into such training issues as identifying psychosocial issues that clinicians most readily discerned, and those that were more elusive.

From a methodological stance, however, reliance on tabulating the frequency of statistically significant correlations remains problematic. Validating the accuracy of the clinical assessments of patients' concerns remains as a critical issue. This validation question extends to establishing empirically both the general sensitivity of physicians to psychosocial issues and the particular psychosocial issues that seem most elusive for physicians to detect. Differences between clinic sites in the mean and range of patients' reported values could account for subsequent differences in clinic-based correlations. In the Thompson study, the omission of patients' mean values of concern in the different clinic sites makes it difficult to exclude this possibility. While the analyses incorporated in the present study ruled out this specific issue, further issues centering on the interpretation of competent assessment remain. Establishing statistically significant correlation coefficients indicates that the magnitude of the correlation is greater than might be expected on the basis of chance variation; in contrast, the standardized correlation coefficients among a trainee group can be compared formally. The use of standard score transformations of correlations helps to minimize the reactivity of the correlation coefficient to larger sample sizes or greater heterogeneity in the dependent variable. More critically, the expectations for the extent of impact of primary care training programs would seem to warrant questions of enhanced sensitivity against the standards of other clinicians. In this study, the use of standardized transformations of the correlation coefficients provided a criterion from which to assess the relative competence of house officers in assessing their patients' concerns. In addition, our use of psychosocial factors, rather than individual items, minimized our chance of obtaining spurious significance on items eliciting common patterns of response.

Limitations

The interpretation of this study's findings requires recognition that the research relied on raters independently assessing levels of concerns. Clearly, the study's design limits the ability to attribute differences in assessments to physicians' 'insensitivity', given that a difference could reflect the failure of either the patient to acknowledge the concern or the house officers to elicit the concern. The methods used in this study reflected the resolve to interfere minimally with the care training program. Recognizing the constraint this method might pose, we have sought to use the social worker assessment as a measure of concurrent validity for assessing the accuracy of the house officers' assessments.

Unlike studies that have examined, for example, practitioners' ability to recognize specific psychiatric disorders [29], we can only speculate about the 'real' severity of concerns troubling patients. The objective of this study, however, was to assess house officers' sensitivity to patients' reported psychosocial concerns, whether or not these concerns constitute manifestations of formal diagnostic categories of behavioral and mental disorders. This focus was in keeping with the training objective of the primary care residency program to increase physicians' humanistic consideration of their patients' concerns.

Implications

One implication of this study could have an impact on clinicians' perception of what happens when they raise questions about patients' psychosocial concerns. Studies that have focused on physicians' inability to detect their patients' concerns have emphasized the number of issues troubling these patients. Physicians might fear that taking the initiative in asking patients questions regarding their psychosocial concerns might open a Pandora's box of unending problems. The identification of patterns that organize patients' reporting of their concerns can help to dispel this fear. This study found that patients' concerns about discrete issues could be represented in terms of a relatively small number of related factors. These underlying factors were drawn from patients' own empirical responses; the factors were not imposed from a preconceived framework of issues that patients 'should' experience as related.

The study results suggest that patients' reports could focus, rather than diffuse, clinical attention. The basis of this premise draws from the consistency of rankings emerging from patients' rating of issues. The few patients who differ in their rating of rare but serious issues (notably the issue of suicide) are, then, recognized more readily. Lin *et al.* [32] note that the majority of persons who commit suicide had visited a primary care physician in the year preceding their death; this recognition raised hopes that primary care physicians might identify and care for those vulnerable to suicide. Lin found, however, that the data currently entered into the medical record does not reveal those patients. Lin concludes that attempts to involve primary care physicians in suicide prevention would be served best by training and engaging physicians in the recognition and monitoring of the patients' overall affective health in relation to their interpersonal problems over time. We propose that systematic inclusion of patients' self-reports might provide a means for communicating to the patient the clinician's interest in patients' affective health and a means for empirically identifying problems.

Conclusions

The implications of the study include its support for clinic-based assessments in the evaluation of clinicians' sensitivity to their patients' psychosocial concerns. Clinic-based assessments that depend on comparing the magnitude of values might seem to confirm the disparity between clinical and patient perspectives. Challenging that assumption is this study's documentation of the correlation between house officers' and their patients' assessments. The study results contribute to the support for the use of evaluation criteria beyond 'mere' increased attention to psychosocial concerns. Ashworth *et al.* [33] found that physicians differed in their beliefs about the importance of patients' psychosocial concerns; physicians also differed about the extent that they or their patients would consider that physician involvement in patients' psychosocial issues was appropriate. Gropper [34] attempted to study the impact of the inclusion of psychosocial training on family medicine physicians' knowledge of psychosocial issues; he was, however, unable to find significant differences in

the performance of family practitioners compared to other primary care practitioners on a paper-and-pencil test of psychosocial care issues. In this study, the approach to the evaluation of house officers' sensitivity focused on house officers' assessments of patients for whom they had clinical responsibility; the study involved the house officers in generating the evidence of their achieved sensitivity in the clinical setting. This study offers encouragement that more demanding standards for primary care trainees' psychosocial assessment skills have an established foundation upon which to build.

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