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Using clinical vignettes to assess doctors' and medical students' ability to identify sociocultural factors affecting health and health care

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Abstract

Background: Methods are needed for assessing clinicians' cultural knowledge frameworks.

Method: We used a mail survey containing four short clinical vignettes to explore respondents' ability to identify sociocultural factors affecting health and health care. Participants included 299 physicians working at the University Hospitals of Geneva, 156 private physicians, and all 134 local medical students in their clinical years. Twenty-one sociocultural "domains" were identified through inductive coding of responses. For each vignette, we obtained the sum of codes as a measure of the respondent's awareness of sociocultural factors that might affect care in this particular situation. As internal consistency was reasonably high (0.68), we computed a single total score as the sum of responses given to all four vignettes.

Results: Reponses correlated with factors that might be expected to impact clinicians' awareness of sociocultural factors affecting care. Medical students, females, respondents who had received cultural competence training, those with greater interest in caring for immigrant patients, and those with high self-assessed skills at exploring psychosocial and migration-related issues scored higher on the vignettes.

Conclusions: Brief clinical vignettes appear to be a relevant and feasible method for exploring physicians' knowledge of social and cultural factors affecting health and health care.

Introduction

Clinical cultural competence is generally defined as the ability of health care professionals to insure quality care to patients from diverse social, cultural, and linguistic backgrounds. In order to foster clinical cultural competence, most training approaches focus on increasing clinicians' respect and tolerance for cultural differences, their awareness of their own culture and biases, and their ability to identify and address social and cultural factors affecting care (AIR 2002; Betancourt 2003; Crandall et al. 2003; Tervalon 2003).

However, the way in which the different components of cultural competence are operationalized and assessed has varied widely. Early efforts often focused on teaching health professionals about the beliefs, values, and behaviors of specific cultural groups (Geissler 1998). The underlying assumption of this approach was that cultural incompetence was due to clinicians' lack of familiarity with the cultures of their patients. Correspondingly, some assessment instruments attempt to measure clinicians' knowledge of cultural "facts" (Kumas-Tan et al. 2007).

While learning about specific patient population groups can be helpful to clinicians, there is growing recognition that a categorical approach to cultural knowledge can encourage stereotyping and oversimplification of both culture and intercultural interactions. Many programs now focus on

Practice points

- Methods commonly used for assessing clinical cultural competence have been associated with a number of problems.
- Our results indicate that brief clinical vignettes are a relevant and feasible alternative method for exploring physicians' knowledge of social and cultural factors affecting health and health care.
- Additional methods may be needed to assess other aspects of cultural competence.

building clinicians' general knowledge of social and cultural barriers to care and common sources of cross-cultural misunderstanding. Combined with the teaching of clinical ethnography and intercultural communication skills, this more nuanced approach aims to encourage clinicians to identify individual manifestations of core cultural issues rather than assume adherence to cultural group characteristics related to race or ethnicity, and to explore a wide range of social and cultural factors that may influence a patient's health and health care (Carrillo et al. 1999; Green et al. 2002; Kleinman & Benson 2006; Jirwe et al. 2009; Teal & Street 2009; Betancourt & Green 2010; Ho et al. 2010).

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Although definitions and operationalization of cultural competence have evolved, developing appropriate methods to assess clinicians' ability to identify social and cultural factors affecting care remains difficult. For example, multiple-choice questions, used in many contexts to measure knowledge, may oversimplify culture and lead to stereotyping (Núñez 2000). Another approach is to ask respondents to indicate the degree to which they agree or disagree with statements regarding cultural information, such as "Family life and family values are similar in most cultures" (Polacek & Martinez 2009). This approach can help assess respondents' awareness of cultural diversity, but does not assess their knowledge of the range of variation of core cultural issues and their implications for patient care.

Self-assessment of cultural competence is the most widely used assessment method, but often reflects a categorical approach to cultural information (Gozu et al. 2007; Kumas-Tan et al. 2007). For example, the Modified Cultural Competence Self-Assessment Questionnaire (Godkin & Savageau 2001) asks respondents "How well do you know the greeting protocol within communities of color?", while the Cultural Self-Efficacy Scale (Bernal & Froman 1993) asks respondents to indicate their level of confidence regarding knowledge of family organization, beliefs about health, beliefs toward modesty, etc. for various ethnic/racial groups (African American, Hispanic, Asian, and Native American). Furthermore, self-ratings can be affected by social desirability effects, and self-reported confidence and comfort may not be valid indicators of cultural competence (Kumas-Tan et al. 2007). Several studies suggest that higher levels of confidence may actually reflect lower insight and awareness (St. Clair & McKenry 1999; Nokes et al. 2005; Smith-Campbell 2005).

Methods are needed for assessing clinicians' cultural knowledge frameworks (Adler et al. 2008); that is, their knowledge of social and cultural factors that *might* affect care in a specific situation and their ability to apply this knowledge during patient assessment (Mihalic et al. 2010).

Objective

In the context of a larger study (Junod Perron et al. 2009; Hudelson et al. 2010) aimed at assessing the knowledge, attitudes, and practices of physicians and medical students regarding the care of immigrant patients, we attempted to use short clinical vignettes to explore physicians' and medical students' ability to identify social and cultural factors affecting health and health care.

Methods

We conducted a mail survey of doctors and medical students in Geneva, Switzerland. A random sample of 600 physicians was selected from a list of approximately 1400 physicians working in 11 medical departments at the University Hospitals of Geneva. In addition, a random sample of 600 physicians working in private practice in Geneva was selected from a database of approximately 1800 physicians provided by the Geneva Medical Association. All 250 local medical students in their clinical years were also invited to participate in the study. Reminder mailings were sent to non-respondents 4 and 8 weeks after the initial survey.

The study was approved by the research ethics committee at the University Hospitals of Geneva, and funded by the Swiss Federal Public Health Office.

Questionnaire variables

In addition to questions about respondents' sociodemographic and professional characteristics, the self-administered questionnaire probed physicians' attitudes, opinions, and experiences related to the care of immigrant patients (level of interest in caring for immigrant patients, opinions about the relative responsibility of physician and hospital to adapt to immigrant patients' needs, and about the relative importance of different elements of care for insuring quality care for immigrant patients). For the purposes of this study, "immigrant" was defined as a person who was born and raised in a country other than Switzerland. The questionnaire also contained questions about respondents' self-evaluation of clinical skills. Most items were newly developed or adapted by us. The questionnaire was written in French.

The final section of the questionnaire included four paragraph-long written vignettes followed by an open question. Each vignette described a clinical situation in which social and cultural factors may play a role (Box 1). We will refer to the vignette by the underlying disease: tuberculosis (TB), hypertension, back pain, and diabetes. Vignettes were developed based on actual clinical situations encountered by the

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Box 1. Vignettes.

''The objective of the following vignettes is to explore your perceptions of social and cultural factors that can influence clinical communication and health-related behavior. For each vignette, please give as many answers as you can think of.''

- The doctor sees a patient from North Africa who complains of a cough, weight loss, and fatigue for the last 3 months. After conducting a medical history and physical exam, the doctor explains that he needs to do a chest x-ray to exclude *possible TB*. He organizes the x-ray, and asks the patient to return for a follow-up appointment once the X-ray has been taken. However, the patient misses his next appointment. What might explain why the patient missed his appointment?
- A young, South Asian Muslim patient is briefly hospitalized for newly diagnosed *severe hypertension*. The day before the patient is to leave the hospital, the ward doctor organizes an interview with the patient to explain his treatment. He begins by exploring the patient's illness perspectives. What particular issues should the doctor explore with the patient?
- An East European man presents to the emergency room with *acute back pain*. He speaks little French, but mentions that he works in construction. The doctor prescribes anti-inflammatory medicines, physiotherapy, and 10-day sick leave from work. He explains to the patient the importance of following his treatment recommendations to insure a speedy recovery. What factors might prevent the patient from following the doctor's advice?
- The doctor receives a female diabetic patient from the Balkans. He explains in detail the diet plan the patient should follow and provides her with a brochure on *diabetes* and its treatment, especially dietary aspects. A month later, the doctor sees the patient again, and asks her if she has followed the diet plan they discussed. The patient, visibly uncomfortable, says no. What factors may have prevented this patient from following the doctor's dietary plan?

authors, and chosen to reflect commonly encountered clinical communication issues that are particularly challenging in the presence of cultural difference (understanding missed appointments, insuring understanding of newly diagnosed disease, identifying potential barriers to compliance, and facilitating behavior change). Draft vignettes were pre-tested with several clinicians not involved in the study to check for relevance and clarity.

Respondents were invited to give as many possible answers as they could think of. The purpose of this section was to assess the respondent's knowledge of sociocultural factors that might affect health care.

Analysis of the vignettes

Twenty-one sociocultural "domains" (codes) were identified (Box 2) through inductive coding of respondents' answers and review of the literature (Carrillo et al. 1999; Green et al. 2002;

Box 2. Categorization of responses to vignettes (codes).	
Code	Examples of open-ended responses
1. Patient did not understand	*Didn't understand doctor's explanations*
2. Illness-related beliefs	*What are patient's beliefs about hypertension?*
	Believes TB is caused by witchcraft
3. Money and income	*No money to buy medicines*
	Can't afford to take time off from work
4. Work/employment	*Works illegally; no right to sick leave*
5. Dietary habits	*Diet plan not adapted to patient's cultural habits*
6. Language	*Language barrier; patient doesn't understand French*
7. Illness-related fears	*Disease-related stigma*
8. Treatment expectations	*Patient's ideas about hypertension treatment*
	Doesn't believe in physiotherapy
	Thinks diabetes should be treated with medicine
9. Family or social network	*Pressure from family to cook traditional food*
	Must send money to family back home
10. Living conditions	*What are patient's living conditions?*
	Patient's living conditions
11. Work/residence permit	*No residence permit; undocumented worker*
12. Knowledge of health system	*Doesn't know where to go for X-ray*
13. Health insurance status	*Has no insurance*
14. Education or literacy level	*Can't read the brochure; is illiterate*
15. Poor explanations from doctor	*Doctor doesn't explain well*
16. Religion	*How to take medicines during Ramadan*
17. Gender relations	*Wife has to cook what husband wants*
18. Lack of trust	*Doesn't trust doctor*
	Is afraid of being reported to police
19. Non-conventional treatments	*Prefers alternative remedies*
	Does patient use traditional medicine?
20. Psychological state	*Is depressed or worried about other things*
21. Housing conditions	*Lives in group housing, shared kitchen*
99. No response provided	*[left empty]*

Betancourt 2003; Betancourt et al. 2003; Shapiro et al. 2003; Tervalon 2003). For example, in response to the TB vignette, if a respondent wrote "patient could not leave work to attend the clinic," this was coded as "work/employment," while "preferred to seek treatment from a traditional healer" would be coded as "non-conventional treatments."

To develop the list of codes, Véronique Kolly (VK), Noelle Junod Perron (NJP), and Patricia Hudelson (PH) first read and coded separately the vignette responses of approximately 20 respondents. Coding categories were then compared, discussed, and reworked until consensus was reached.

We then tested the reliability of the coding process in 40 randomly selected records, which were coded independently by VK and NJ. We assessed between-rater agreement in two ways, using the 40 responses or the 21 codes as units of observation. First, for each vignette, 40 kappa statistics were obtained, one per respondent, by distributing the 21 codes into each 2×2 table. Mean values of these respondent-specific kappas were high: 0.85 for the TB vignette, 0.80 for the hypertension vignette, 0.89 for the back pain vignette, and 0.90 for the diabetes vignette.

Second, for each vignette, the raters could agree or disagree on the presence or absence of each code. Only codes that were used three times or more in the 40 questionnaires were analyzed; codes that were used 0–2 times were not. Code-specific kappa statistics were excellent (≥ 0.75) for seven of the nine codes used three times or more in the TB vignette (Table 1). While one code displayed low agreement in the hypertension vignette (family or social network), results were more homogenous for the back pain and diabetes vignettes (Table 1). This analysis confirms that the coding of the free-format answers was generally reliable.

For each vignette, we obtained the sum of valid codes (in theory between 0 and 21), as a measure of the respondent's awareness of sociocultural factors that might affect care in this particular situation. All codes were considered equally useful. The correlations between the four scores ranged 0.21–0.47, factor analysis confirmed a single underlying dimension, and the internal consistency coefficient (Cronbach's alpha) for the four items was 0.68. Based on these results, we computed a single total score as the sum of responses given to the four vignettes. This score captures the respondent's overall knowledge of sociocultural dimensions of health care.

We explored the construct validity of the score defined by the number of responses by computing mean values across answers to eight validation items, four of which were expected to yield a positive association, and four a negative or absent association, because they were not specific to caring for culturally diverse patients. The items that were expected to correlate positively were (1) the perceived importance for the doctor of knowing the patient's beliefs about his/her disease, (2) the perceived importance of knowing the patient's social and economic circumstances, the respondent's self-perceived competence in (3) obtaining a psychosocial history from the patient, and (4) in exploring the migratory trajectory and possible traumatic experiences of an asylum seeker. The items that were expected to have absent or negative associations were (5) the perceived importance for the doctor's prior experience with the patient's health problem, (6) perceived

Table 1. Code-specific kappa statistics for each vignette, in descending order (N = 40).

	Kappa
TB vignette codes	
Money and income	1.00
Illness-related fears	1.00
Gender relations	0.93
Lack of trust	0.93
Patient did not understand	0.85
Illness-related beliefs	0.82
Work/residence permit	0.80
Treatment expectations	0.64
Poor explanations from doctor	0.55
Hypertension vignette codes	
Money and income	0.91
Illness-related beliefs	0.89
Treatment expectations	0.76
Family or social network	0.28
Back pain vignette codes	
Money and income	1
Language	1
Patient did not understand	0.95
Health insurance status	0.93
Work/employment	0.82
Treatment expectations	0.76
Work/residence permits	0.66
Illness-related beliefs	0.61
Diabetes vignette codes	
Education or literacy level	1
Religion	1
Language	0.95
Money and income	0.94
Dietary habits	0.88
Patient did not understand	0.85
Role of patient's family and/or social network	0.71
Illness-related beliefs	0.54

importance of the availability of an effective treatment, the respondent's self-perceived competence in (7) obtaining a relevant medical history from the patient, and (8) in announcing bad news to a patient. All these items were rated on a numerical 1–5 scale (anchored by "not at all important" and "extremely important," and by "not at all competent" and "perfectly competent"). Because the lowest ratings (of 1) were very rare, we grouped these with the next category, labeled 2. P-values for linear trend were obtained for the comparison of means of the 4 ordered categories (1–2, 3, 4, and 5).

Finally, we explored the association between vignette scores and several items on the questionnaire that might influence respondents' knowledge about sociocultural factors affecting health and health care; these included respondents' sociodemographic and professional characteristics, level of interest in caring for immigrant patients, and exposure to cultural competence training. Univariate comparisons were performed using analysis of variance, and a multivariate model was constructed using the same technique. Data were analyzed with SPSS version 17 (SPSS Inc).

Results

Details of the survey participation have been reported on elsewhere (Hudelson et al. 2010). Participation was 42.7% (619 out of 1450) overall, but it was lower among doctors who were in private practice (29.8%) than among hospital doctors

(52.2%) or among medical students (54.2%, $p < 0.001$). Most respondents (86.6%) were of Swiss nationality, and of the 463 respondents who reported a medical specialty (medical students did not), the most frequent were general internal or general medicine (164, 35.4%), medical subspecialties (63, 13.6%), psychiatry (97, 21.0%), surgery (36, 7.7%), gynecology-obstetrics (29, 6.3%), anesthesiology (27, 5.8%), ophthalmology (13, 2.8%), dermatology (9, 1.9%), ear, nose and throat (9, 1.9%), geriatrics (5, 1.1%), and other (5, 1.1%).

Of the 619 survey respondents, 592 (95.6%) answered at least one vignette, and 508 (82.1%) answered all four. The sample of 592 included a majority of hospital doctors, and slightly more than half were men (Table 2). Most were less than 45 years old, and about half claimed a high or very high level of interest in caring for immigrant patients. About 30% had received some training in cultural competence.

The distributions of the 21 codes varied from one vignette to the next, reflecting the diversity of the situations that were described (Table 3). For instance, the patient's lack of understanding was hardly ever used for the hypertension vignette, whereas work-related issues were almost exclusively used for the back pain vignette, and illness-related fears for the TB vignette.

A fairly large proportion of respondents (26.3%) failed to mention any social/cultural issue in answer to the hypertension vignette; these proportions were much lower for the TB vignette (3.4%), back pain vignette (3.2%), and diabetes vignette (1.5%) (Table 3). The mean numbers of answers were 2.4 for the TB vignette, 1.4 for the hypertension vignette, 2.2 for the back pain vignette, and 2.4 for the diabetes vignette.

To see if the number of answers given to each vignette tapped the same underlying latent variable (i.e., cultural competence), we examined the dimensionality and the internal consistency of these four scores. These analyses supported the existence of a single latent variable (i.e., single factor with an eigenvalue greater than 1), but the correlations between the four items and the Cronbach's alpha coefficient (0.68) were slightly lower than we expected. Nevertheless, we computed the total number of responses as a measure of cultural competence. Overall, the total number of responses for all four vignettes ranged 0–24, with a mean of 8.5, and a standard deviation of 3.5.

Construct validity tests

All four convergent validity tests were confirmed (Table 4). Respondents who thought that knowledge of the patient's beliefs about his disease was important for the provision of high quality care to an immigrant patient gave more social/ cultural responses to the vignettes than respondents who rated this knowledge as less important. The pattern was similar for knowledge of the patient's social and economic context. Furthermore, the number of social/cultural responses was also correlated with self-assessed competence at obtaining a psycho-social history from the patient and with competence at exploring the patient's migratory trajectory. All linear trends were highly statistically significant. The difference between extreme groups was about two responses (typically, 7 versus 9), more than a half standard deviation.

Table 2. Sample characteristics (first column) and mean number of relevant answers to vignettes across subgroups, unadjusted and in multivariate model.

		Univariate comparisons		Mean adjusted for all variables in model	
	Frequencies (%)	Mean (SD)	P-value	Mean	
Status			<0.001		0.002
Doctors in private practice	156 (26.5)	7.4 (3.2)		7.5	
Hospital doctors	299 (50.8)	8.7 (3.6)		8.6	
Medical students	134 (22.8)	9.1 (3.3)		8.9	
Sex			0.002		0.022
Women	275 (46.5)	9.0 (3.4)		8.7	
Men	317 (53.5)	8.0 (3.5)		8.0	
Age group			<0.001		NS
≤24 years	57 (9.8)	9.2 (3.1)	(linear trend)		
25–44 years	347 (59.9)	8.8 (3.4)			
45–64 years	162 (28.9)	7.8 (3.6)			
≥65 years	13 (2.2)	5.7 (3.2)			
Interest in caring for migrant patients			<0.001		0.013
Absent or weak	64 (11.2)	7.0 (2.8)	(linear trend)	7.4	(linear trend)
Moderate	219 (38.9)	8.1 (3.5)		8.3	
High	223 (39.6)	9.0 (3.6)		9.0	
Very high	58 (10.3)	8.8 (3.4)		8.7	
Training in cultural competence			0.004		0.008
Yes	177 (30.2)	9.1 (3.7)		8.8	
No	409 (69.8)	8.2 (3.4)		7.9	

Table 3. Frequencies (N) of categories of explanations given by 592 respondents.

	All four vignettes	Tuberculosis	Hypertension	Back pain	Diabetes
1. Patient did not understand	660	303	2	157	198
2. Illness-related beliefs	478	143	218	41	76
3. Money and income	468	108	61	153	146
4. Work/employment	409	15	4	389	1
5. Dietary habits	394	0	35	0	359
6. Language	363	30	8	117	208
7. Illness-related fears	301	282	5	12	2
8. Treatment expectations	193	53	69	55	16
9. Family or social network	182	49	34	11	88
10. Living conditions	163	29	75	31	28
11. Work/residence permit	152	65	11	74	2
12. Knowledge of health system	138	12	94	31	1
13. Health insurance status	138	14	18	105	1
14. Education or literacy level	136	12	5	4	115
15. Poor explanations from doctor	125	79	0	19	27
16. Religion	107	11	58	2	36
17. Gender relations	91	83	1	0	7
18. Lack of trust	89	71	0	14	4
19. Non-conventional treatments	33	19	9	3	2
20. Psychological status	31	10	1	14	6
21. Housing conditions	12	0	3	2	7
Total appropriate responses	5406	1398	713	1238	1340
No response	204	20	156	19	9

The discriminant validity tests were also confirmed (Table 4). There was a strong negative correlation between the number of social/cultural responses and the perceived importance of prior clinical experience with the patient's health problem, and similarly for the perceived importance of the availability of an effective treatment – suggesting, perhaps, that as physicians become more experienced and comfortable with medical uncertainty, they also begin to become more attuned to social and cultural factors affecting care. There were no significant associations with the self-assessed competence

at obtaining a medical history, and with the ability to deliver bad news to a patient.

Association of vignette scores with other questionnaire items

In univariate analysis (Table 2), the number of answers was highest among medical students, younger respondents, women, those with a higher interest in caring for immigrants, and those who had received training in cultural competence.

Table 4. Construct validity tests of the number of relevant answers to vignettes: means across responses to validation items.						

Validation items		Importance ratings				
In your opinion, how important for a doctor are the following elements in providing good quality care to an immigrant patient?	Expected direction of association	Not at all important (1) or (2)	(3)	(4)	Extremely important (5)	*P*-value (test for linear trend)
Prior clinical experience with the patient's health problem	None or negative	9.6	8.4	8.7	7.6	0.003
Availability of an effective treatment for the patient's health problem	None or negative	9.5	8.9	8.3	7.8	<0.001
Knowledge of the patient's beliefs about his/her disease	Positive	7.1	7.1	8.2	9.2	<0.001
Knowledge of the patient's social and economic context	Positive	7.4	6.9	8.2	9.0	<0.001
		Self-assessed competence ratings				
How competent do you believe you are at the following tasks?		Not at all competent (1) or (2)	(3)	(4)	Perfectly competent (5)	
Obtain a medical history that is relevant to the patient's complaint	None or negative	8.0	7.9	8.6	8.6	0.17
Announce bad news (e.g., an unfavorable prognosis)	None or negative	9.0	8.3	8.4	8.6	0.68
Obtain a psychosocial history from the patient	Positive	7.1	7.8	9.0	9.1	<0.001
Explore the migratory trajectory and possible trau-matic experiences of an asylum seeker	Positive	7.9	8.5	8.9	9.6	0.001

All these variables except age remained significantly associated with the number of responses in multivariate analysis. An alternative model could be built that included age groups, but excluded respondent status (i.e., student versus hospital doctor or doctor in private practice).

Discussion

We developed four clinical vignettes to explore respondents' ability to probe social and cultural factors that may interfere with care. The method appears to be feasible and relevant, as respondents had no difficulty providing short answers to the vignettes, and coding of answers was straightforward and reliable.

The validity of our analysis strategy – in which we consider the number of factors or domains mentioned to be an indication of the respondent's knowledge of sociocultural factors that may affect care – is supported by the correlations between the cultural competence score and factors that might be expected to impact clinicians' awareness of sociocultural factors affecting care. For example, we found that women tended to mention a greater number of sociocultural factors. A number of studies have shown that female clinicians tend generally to engage in more patient-centered communication and explore the psychosocial aspects of care more often (Roter & Hall 2004). We also found that those who had received cultural competence training mentioned a greater number of social and cultural factors that could affect health care in the situations presented. Furthermore, self-evaluation of the ability to obtain a psychosocial history and the ability to explore a patient's migration history were positively associated with the total number of social/cultural issues mentioned in response to the vignettes. This finding is particularly encouraging because other studies have found no association or even a negative association between self-assessment and actual skills (St. Clair & McKenry 1999; Nokes et al. 2005; Smith-Campbell 2005).

We also found that medical students generally had higher scores than older doctors. This may be a sign that curriculum changes aimed at increasing students' awareness of cultural and social aspects of health are having an impact (Hudelson et al. 2010) but the difference persisted even after adjustment for training. In fact, respondents who reported having received some sort of cultural competence training performed only slightly better on the vignettes. It may be that current training activities are insufficiently focused on teaching cultural assessment skills, and that other factors are at work. One possibility is that the growing cultural diversity of medical students themselves leads to increased cultural sensitivity. A survey of first-year Geneva medical students found that 19% were of non-Swiss nationality and 45% had double nationality; two-thirds had at least one non-Swiss parent (46 different countries), and 29% spoke more than one language at home (31 different languages) (Hudelson & Stalder 2005).

Respondents who reported having a higher level of interest in caring for immigrant patients also had higher scores on the vignettes. This is perhaps not surprising, but it is unclear whether active interest in culturally diverse patients leads to increased awareness of and ability to explore social and cultural factors affecting care, or whether possessing such cross-cultural communication skills leads to less frustration and more satisfaction when working with immigrant patients.

Our study is limited by a relatively low response rate and the likelihood of higher participation of respondents with

greater interest in cross-cultural medicine. Therefore, we cannot assume that our descriptive results are fully representative of the local physician population.

A further limitation of our study is the fact that we only assessed respondents' knowledge of social and cultural factors affecting care. Knowledge of sociopolitical conditions in patients' countries of origin, the legal context of asylum in the host country, epidemiology and the manifestation of diseases in different countries and populations, effects of refugee status on health, and differential effects of treatment in various ethnic groups are also considered important for insuring clinical cultural competence (Seeleman et al. 2009; Suurmond et al. 2010). It remains to be seen whether clinical vignettes can be developed to assess these other areas of knowledge.

While our data support the existence of a single underlying construct for the vignette scores (the ability to explore sociocultural factors), the correlations between the items were somewhat less than we expected. This suggests that some doctors may be better at exploring dietary habits, others migration-related issues, etc., beyond their general ability to address sociocultural factors. Possibly, in future, domain-specific instruments may be developed to assess each of these areas more accurately. The tension between generic and domain-specific instruments exists in other areas of psychometric measurement such as health, quality of life, or educational attainment.

Nonetheless, our results suggest that brief clinical vignettes can be useful for evaluating physicians' knowledge of social and cultural factors affecting health and health care. Future research should focus on validating these results using standardized patients, and developing additional vignettes that reflect a broader range of patient and clinical characteristics. It may also be useful to further refine the coding scheme in order to assign greater weights to particularly relevant responses for specific vignettes. Finally, further research is needed to elucidate the complex relationships between knowledge of social and cultural factors affecting care, ability to identify and address these factors, and self-assessment of these skills.

Conclusion

Brief clinical vignettes are a relevant and feasible method for assessing physicians' knowledge of social and cultural factors affecting health and health care.

Ethical approval

Ethical approval was granted by the *Commission centrale d'éthique* of the Geneva University Hospitals.

Notes on contributors

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