ORIGINAL RESEARCH

Level of competencies of family physicians from patients' viewpoint in post-war Kosovo

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Abstract

Aim: Besides the health professionals' perspective, it is equally important to assess the perceptions of the users of health care services with regard to abilities, skills and competencies of their family physicians. Our aim was to assess the level of competencies of family physicians from patients' viewpoint in transitional Kosovo.

Methods: A nationwide survey was conducted in Kosovo in 2013, including a representative sample of 1340 primary health care users aged ≥18 years (49% males aged 50.7±18.4 years and 51% females aged 50.4±17.4 years; response rate: 89%). Participants were asked to assess the level of competencies of their respective family physicians regarding different domains of the medical encounter. The self-administered questionnaire included 37 items structured into six domains. Answers for each item of the instrument ranged from one ("novice" physicians) to five ("expert" physicians). An overall summary score related to family physicians' competencies was calculated for each participant [range: from 37 (minimal competencies) to 185 (maximal competencies)]. Furthermore, demographic and socioeconomic data were collected. General Linear Model was used to assess the demographic and socioeconomic correlates of the overall level of family physicians' competences according to patients' perspective.

Results: Mean value of the overall summary score for the 37-item instrument was 118.0±19.7. It was higher among the younger and the low-income participants, and in patients who reported frequent health visits and those not satisfied with the quality of the medical encounter. Conversely, no sex, or educational differences were noted.

Conclusions: Our findings indicate a relatively high level of competencies of family physicians from patients' perspective in post-war Kosovo. Future studies should comprehensively assess the main determinants of self-perceived competencies of family physicians among primary health care users in Kosovo.

Keywords: competencies, family physicians, primary health care users, quality of care.

Introduction

Recently, it has been argued that competency-based instruction is vital for professional development of health professionals (1). Hence, competency-based education enhances the abilities and skills of the health personnel to address complex and changing demands for critical services at a population level (1-3). Fostering competencies and skills of the health care workforce will lead to an increase in the satisfaction level of the users of health care services, which has been convincingly linked to a better quality of primary health care (4) and more favorable health outcomes (5,6). From this point of view, in order to meet patients' demands, quality improvement and performance evaluation have recently developed into core issues in primary health care practice (7).

We have previously argued about the need for development of useful tools for the continuous assessment of physicians' performance in order to identify potential gaps in their level of skills, abilities and competencies with the ultimate goal of improving the quality of patient care (7,8). To meet this end, we have suggested a conceptual framework and a suitable instrument which help to self-assess competency gaps among primary health care professionals (7,8). However, besides the health professionals' perspective, it is equally important to assess the perceptions of the users of health care services with regard to abilities, skills and competencies of their family physicians and the other health personnel. Thus, there is a need to develop measuring instruments for health professionals' competencies as viewed from patients' perspective.

In this line of argument, we have developed and tested an international instrument aiming at assessing the level of skills, abilities and competencies of health professionals from both family physicians' perspective (self-assessment) and from primary health care users' standpoint (8). This measuring instrument has been validated in Albania among primary health care users (9) and in general practitioners and family physicians (10). More recently, a cross-cultural adaptation of this instrument has been also conducted in Kosovo among primary health users (11) and family physicians (12).

In this framework, we aimed to assess the level of skills, abilities and competencies of family physicians from primary health care users' perspective in Kosovo, a transitional country in the Western Balkans. We used the validated version of the international instrument developed with the support of the European Community Lifelong Learning Program. This standardized tool addresses the competency levels of general practitioners and family physicians regarding different domains of quality of health care (7,8).

Methods

A nationwide cross-sectional study was conducted in Kosovo in January-December 2013.

Study population

A representative nationwide sample of 1340 primary health care users (both sexes aged ≥18 years) was included in this survey. Calculation of the sample size was made by use of WINPEPI for a number of hypotheses related to patients' socio-demographic and socioeconomic correlates such as sex, age and level of education. The significance level (two-tailed) was set at 5%, and the power of the study at 80%. Based on the most conservative calculations, the required minimal size was about 1200 individuals. We decided to recruit 1500 individuals in order to increase the power of the study.

Of the 1500 targeted individuals, 160 did not participate in the survey. Overall, 1340 primary health care users were included in our survey [661 (49%) males and 679 (51%) females;

overall response rate: 1340/1500=89.3%]. The response rate was similar in each of the regions included in the survey. In addition, respondents and non-respondents had similar sex and age distribution in all of the regions included in the survey.

Data collection
We employed an international instrument aiming at assessing the level of skills, abilities and competencies of family physicians from primary health care users' perspective. All participants included in this survey were asked to assess the level of skills, abilities and competencies of their family physicians with regard to the following six crucial domains of the quality of primary health care: (i) Patient care and safety (8 items); (ii) Effectiveness and efficiency (7 items); (iii) Equity and ethical practice (8 items); (iv) Methods and tools (5 items); (v) Leadership and management (4 items), and; (vi) Continuing professional development (5 items).
Answers for each item of each subscale ranged from 1 ("novice"= physicians have little or no knowledge/ability, or no previous experience of the competency described and need close supervision or instruction) to 5 ("expert"=physicians are the primary sources of knowledge and information in the medical field) (9-12).
An overall summary score [including 37 items; range: from 37 (minimal competencies) to 185 (maximal competencies)] was calculated for all participants included in this study.
Demographic and socioeconomic data (age and sex of participants, educational attainment, employment status and income level) and information on the overall satisfaction with the medical encounter and the number of health visits in the past year were also collected.
The study was approved by the Ethical Board of the Ministry of Health of Kosovo. All individuals who agreed to participate signed an informed consent form prior to the interview.

Statistical analysis
Cronbach's alpha was used to assess the internal consistency of the 37-item instrument measuring family physicians' competencies from primary health care users' perspective.
Conversely, Spearman's rho was used to assess the linear association (correlation) of the subscale scores (domains) of the instrument.
General linear model was employed to assess the association of the overall score of competencies of family physicians' from patients' viewpoint with their demographic and socioeconomic characteristics. Unadjusted and age-adjusted mean values, their respective 95% confidence intervals (95%CIs) and p-values were calculated.
Statistical Package for Social Sciences (SPSS), version 17.0 was used for all the statistical analyses.

Results

Background characteristics of study participants
The overall mean age of survey participants was 50.5±17.9 years – it was similar in males and females (Table 1).
On the whole, mean years of formal schooling were 9.4±4.0 years. The educational attainment was higher in males compared with female participants (mean years of formal schooling: 10.3±3.7 years vs. 8.5±4.1 years, respectively). About 20% of study participants reported a low income level (18% in males and 21% in females), whereas 7% reported a high income level (8% in males and 7% in females). The unemployment rate was quite high in this

representative sample of primary health care users in Kosovo, particularly among female participants (53% vs. 22% in males). Very few participants reported their first health visit at the primary health care services in the past year (overall N=16), about 19% reported 1-2 health visits, whereas 18% of individuals reported seven or more health visits in the past year. Remarkably, survey participants reported a high degree of satisfaction with primary health care services: 75% of individuals perceived as "good" or "very good" the medical encounter, compared to only 3.4% of individuals who rated as "poor" or "very poor" the quality of primary health care services. There were no gender differences with regard to the overall satisfaction with the quality of primary health care services (Table 1).

Table 1. Distribution of socioeconomic characteristics and satisfaction with health care services in a representative sample of primary health care users in Kosovo, in 2013

Variable	Male (N=661)	Female (N=679)	Overall (N=1340)
Age (years)	50.7±18.4[*]	50.4±17.4	50.5±17.9
Educational level (years)	10.3±3.7	8.5±4.1	9.4±4.0
Income level:			
Low	119 (18.0)[†]	146 (21.5)	265 (19.8)
Middle	491 (74.3)	485 (71.4)	976 (72.8)
High	51 (7.7)	48 (7.1)	99 (7.4)
Employment status:			
Employed	288 (43.6)	168 (24.7)	456 (34.0)
Unemployed	146 (22.1)	363 (53.5)	509 (38.0)
Students	66 (10.0)	55 (8.1)	121 (9.0)
Retired	161 (24.4)	93 (13.7)	254 (19.0)
No. health visits in the past 12 months:			
0	7 (1.1)	9 (1.3)	16 (1.2)
1-2	131 (19.8)	125 (18.4)	256 (19.1)
3-4	268 (40.5)	214 (31.5)	482 (36.0)
5-6	136 (20.6)	204 (30.0)	340 (25.4)
≥7	119 (18.0)	127 (18.7)	246 (18.4)
Overall satisfaction with health services:			
Very good/good	500 (75.6)	503 (74.1)	1003 (74.9)
Average	140 (21.2)	151 (22.2)	291 (21.7)
Poor/very poor	21 (3.2)	25 (3.7)	46 (3.4)

[*] Mean values ± standard deviations.

[†] Numbers and column percentages (in parentheses).

Instrument for measuring competencies of family physicians
Overall, reliability (internal consistency) of the whole scale (37 items) was Cronbach's alpha=0.96 (95%CI=0.96-0.97); it was similar in male and female participants (0.97 vs. 0.96, respectively) [data not shown].

Table 2 presents a correlation matrix between the subscale scores (that is domains of the measuring instrument). Spearman's correlation coefficients ranged from 0.55 (for the linear association of *"leadership and management"* with the *"patient care and safety"* and the *"equity and ethical practice"* domains) to 0.70 (for the *"effectiveness and efficiency"* and the *"patient care and safety"* subscales) – indicating a moderate linear relationship between the domains of the family physicians' competencies instrument.

Table 2. Correlational matrix of subscale scores (alias domains of the instrument)

Domain	Continuing professional development	Patient care and safety	Effectiveness and efficiency	Equity and ethical practice	Methods and tools
Patient care and safety	0.57 (<0.001)[*]	-			-
Effectiveness and efficiency	0.56 (<0.001)	0.70 (<0.001)	-	-	
Equity and ethical practice	0.58 (<0.001)	0.59 (<0.001)	0.64 (<0.001)		
Methods and tools	0.66 (<0.001)	0.62 (<0.001)	0.68 (<0.001)	0.64 (<0.001)	
Leadership and management	0.64 (<0.001)	0.55 (<0.001)	0.58 (<0.001)	0.55 (<0.001)	0.71 (<0.001)

[*] Spearman's correlation coefficients and their respective p-values (in parentheses).

Correlates of competencies of family physicians

Mean value of the overall summary score for the 37-item instrument was 118.0±19.7 [range from 37 (minimal competencies) to 185 (maximal competencies)].

Mean value of the overall summary score of the competencies of family physicians from patients' viewpoint was higher among the younger (<45 years) participants compared with their older (≥45 years) counterparts (119 vs. 117, respectively, P=0.04) [Table 3]. There was no evidence of gender-differences in the mean scores of the overall competencies of family physicians even upon age-adjustment. Furthermore, mean scores of competencies of family physicians were similar among participants with different levels of educational attainment. On the other hand, the low-income participants exhibited lower mean scores of their family physicians' overall competencies compared with the high-income group (age-adjusted overall P<0.001). Employed and unemployed individuals exhibited similar mean scores – a finding which persisted also upon age-adjustment. Patients with frequent visits in the primary health care clinics (three or more visits in the past year) displayed the lowest scores of competencies of their family physicians (age-adjusted overall P<0.001). As expected, participants who were satisfied with the medical encounter showed a higher mean score of their family physicians' competencies compared with the individuals who were less satisfied with the quality of primary health care services (overall P<0.001) [Table 3].

Table 3. Association of competencies of family physicians from patients' viewpoint with their demographic and socioeconomic characteristics; mean values from the General Linear Model

Patients' socioeconomic characteristics	Unadjusted models			Age-adjusted models		
	Mean[*]	95%CI	P	Mean[*]	95%CI	P
Age:						
Younger (≤44 years)	119.4	117.6-121.0	0.042			
Older (≥45 years)	117.1	115.8-118.4				
Gender:						
Males	118.2	116.7-119.7	0.704	118.4	116.9-119.9	0.735
Females	117.8	116.3-119.3		118.0	116.5-119.6	
Educational level:			**0.601 (2)[†]**			**0.998 (2)[†]**
Low (0-8 years)	117.4	115.9-118.9	0.371	118.2	116.5-119.9	0.992
Middle (9-12 years)	118.3	116.5-120.2	0.802	118.3	116.4-120.2	0.954
High (≥13 years)	118.7	116.3-121.1	reference	118.2	115.7-120.7	reference
Income level:			**<0.001 (2)**			**<0.001 (2)**
Low	113.4	111.1-115.8	0.037	113.9	111.5-116.3	0.077

Middle	119.2	118.0-120.4	0.649	119.3	118.1-120.6	0.527
High	118.2	114.4-122.1	reference	118.0	114.2-121.9	reference
Employment status:			**0.222 (3)**			**0.690 (3)**
Employed	118.8	117.0-120.6	0.141	118.7	116.8-120.5	0.400
Unemployed	117.4	115.7-119.1	0.564	117.7	115.9-119.5	0.758
Student	120.4	116.9-123.9	0.077	119.8	116.2-123.5	0.289
Retired	116.5	114.1-118.9	reference	117.2	114.5-120.0	reference
No. health visits in the past 12 months:			**<0.001 (2)**			**0.001 (2)**
0	126.6	117.0-136.2	0.048	126.3	116.6-135.9	0.064
1-2	122.1	119.7-124.5	<0.001	122.0	119.6-124.4	<0.001
≥3	116.9	115.7-118.0	reference	117.1	115.8-118.3	reference
Overall satisfaction with health services:			**<0.001 (2)**			**<0.001 (2)**
Very good/good	119.8	118.6-121.0	0.031	120.0	118.7-121.2	0.036
Average	112.4	110.1-114.6	0.718	112.7	110.4-114.9	0.710
Poor/very poor	113.5	107.9-119.1	reference	113.8	108.2-119.5	reference

[*] Range of the overall summary score from 37 (minimal competencies) to 185 (maximal competencies).

[†] Overall p-values and degrees of freedom (in parentheses).

Discussion

Findings from this survey provide useful information on the level of skills, abilities and competencies of family physicians from primary health care users' perspective in post-war Kosovo. The assessment instrument administered in our study sample showed a very high internal consistency, which was similar in male and female participants. As a matter of fact, the overall internal consistency in our survey (Cronbach's alpha=0.96) was higher than in a prior cross-cultural adaptation exercise conducted in Kosovo, which reported an overall Cronbach's alpha=0.88 (11). In addition, the internal consistency in the current study conducted in Kosovo was higher than in a previous validation study conducted in Albania (9). In our study, the reliability of the tool (i.e. the internal consistency) was similar in both sexes, a finding which is basically compatible with a previous report from Albania (9).

The overall level of competencies of family physicians – as assessed by the summary score of the 37-item instrument – was quite high in our study which included a nationwide representative sample of primary health care users in Kosovo. There were no sex-differences with regard to the perceived levels of family physicians' competencies according to patients' standpoint. As pointed out earlier, this finding related to a high level of family physicians' knowledge and competencies is in line with the very positive assessment of the quality of primary health care services among our study participants (13). Thus, in our study, 75% of participants perceived as "good" or "very good" the medical encounter, a finding which is quite different from a previous study conducted in Gjilan region, Kosovo, in 2010 including a representative sample of 1039 primary health care users (14). In this survey, patients' evaluation of primary health care services was assessed through EUROPEP, a 23-item instrument tapping different aspects of the medical encounter. Findings from this study indicated that considerably fewer primary health care users in Kosovo were satisfied with the overall medical encounter compared with their European counterparts (14). However, there are differences between the two studies: our survey included a nationwide representative sample in contrast with the previous study confined to Gjilan region only (14). Furthermore, we assessed only the self-perceived level of competencies of family physicians from patients'

perspective. On the other hand, the prior survey conducted in Gjilan region included other important dimensions of the quality of primary health care services which are not related to the level of knowledge, skills and competencies of health care professionals (14).

Furthermore, the overall level of competencies of family physicians in our study was higher compared to the previous validation study (cross-cultural adaptation) which was conducted in a sample of 98 primary health care users in Kosovo (11). In addition, the overall summary score in our study was particularly higher compared to prior reports from the neighboring Albania, where a similar survey employing exactly the same instrument was conducted (9,10).

In our study conducted in Kosovo, the level of skills, abilities and competencies of family physicians as assessed by patients' perspective was positively related to income level, in contrast with the Albanian study which reported lack of associations with socioeconomic characteristics of study participants (9). Nonetheless, there was no evidence of relationship with educational attainment in the current survey, too.

Future studies in Kosovo and Albania should compare primary health care users' assessment scores with the self-assessed scores of their respective family physicians in order to identify potential gaps in the perceived levels of skills and competencies. As argued earlier, primary health care users' viewpoints about the quality of health care services including the skills and competencies of their respective family physicians may vary significantly from the self-perceived level of competencies of health care professionals themselves (13). Competencies are considered as composites of individual attributes including knowledge, skills and attitudes that represent context-bound productivity (15). However, patients' viewpoint on productivity may differ considerably from providers' perspective. Hence, future studies in Albanian settings and elsewhere should explore this important issue in a robust manner.

In conclusion, findings from this nationwide survey conducted in transitional Kosovo provide useful information on the level of skills and competencies of family physicians from primary health care users' perspective. Nonetheless, findings from this survey should be replicated in future studies in Albania and Kosovo.

Source of support

Conflicts of interest: none declared.

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