Psychosocial determinants of health: A pilot study in Kosovo

Musa Qazimi[1,2], Luljeta Çakërri[2], Gentiana Qirjako[2], Jolanda Hyska[2], Zejdush Tahiri[2], Enver Roshi[2]

[1] Principal Family Medicine Center, Gjilan, Kosovo;
[2] Faculty of Medicine, Tirana University, Tirana, Albania;

Corresponding author: Musa Qazimi, MD
Address: Rr. "Avdulla Tahiri", p.n. 60000, Gjilan, Kosovo
Telephone: +381280323 066; E-mail: micro_dental@hotmail.com

Abstract

Aim: In industrialized countries, psychosocial factors have been linked to morbidity and mortality outcomes. The aim of this pilot study was to pre-test a questionnaire related to psychosocial determinants of health in the transitional population of Kosovo.
Methods: A representative sample of 87 primary health care users aged e"18 years (41 men, 46 women) was interviewed in Kosovo in November-December 2012. A structured questionnaire was administered to all participants including information on self-reported health status, psychosocial factors (hostility, reaction to transition and stress level), lifestyle/behavioral characteristics and demographic and socioeconomic factors. Binary logistic regression was used to assess the association of psychosocial factors with self-reported health status.
Results: 37% of men and 46% of women reported poor health. Hostile behavior was reported in 24% of participants, a pessimistic reaction to transition was evident in about 55% of participants, whereas about 56% of individuals reported a high level of stress. In multivariable-adjusted models, there was evidence of a positive and statistically significant association between poor self-reported health status and stress (OR=1.82, 95%CI=1.00-3.34). Conversely, the relationships of health status with hostility and reaction to transition were weak and not statistically significant.
Conclusion: Findings from this pilot study in Kosovo confirm the deleterious health effects of psychosocial factors, which is in line with previous reports from the western countries. However, the relationship of health status with psychosocial factors should be explored in more detail in future large-scale studies in Kosovo and other transitional settings.

Keywords: *health status, hostility, Kosovo, pilot study, primary health care, psychosocial determinants, reaction to transition, stress, validation.*

Introduction

In industrialized countries, psychosocial factors have been linked to several morbidity and mortality outcomes. Thus, hostility has been reported as a predisposing factor which leads to coronary heart disease (1). As a matter of fact, many studies have shown hostility, a stable personality trait (2,3), to be associated with increased risk of cardiovascular outcomes and all-cause mortality (1,4-8). Similar

evidence was also obtained from a study conducted recently in Albania (9). Another psychosocial factor namely attitudes towards the socioeconomic and political reforms have been linked to poor self-rated health in Russia (10,11) and more recently in Albania (12). Overall stress, in turn, has been arguably and consistently linked to unfavourable health outcomes in western countries (13), but also in former communist countries (14).

The evidence from Kosovo is scant. Five years ago, Kosovo emerged as an independent state after a long and devastating war with Serbia. The transition towards a new political and economic system, however, is rather difficult and poses serious challenges. Actually, Kosovo remains one of the poorest countries in Europe. Particularly, the health care system in Kosovo suffers severe problems including the lack of a social health insurance scheme. Health effects of the rapid transition have not been well-documented in Kosovo. Yet, the available evidence suggests an increase in cardiovascular morbidity and mortality.

In this context, the aim of the current pilot study was to pre-test a questionnaire related to psycho-social determinants of health in the transitional population of Kosovo.

Methods

A representative sample of 87 primary health care users aged e"18 years (41 men, 46 women) was interviewed in Kosovo in November-December 2012.

A structured questionnaire was administered to all participants including information on self-reported health status, psychosocial factors (hostility, reaction to transition and stress level), lifestyle/ behavioral characteristics and demographic and socioeconomic factors.

Participants were asked to rate their health status in the past 12 months in a scale from 1 (very poor health) to 5 (good health). In the analysis, self-reported health status was dichotomized into: *poor health* vs. *good health*.

Hostility was measured by the eight-item Cynical Distrust Scale (1,15) that was systematically derived from the Cook-Medley Hostility Scale (1,16). Response options consisted of a 4-point Likert Scale. A summary score was calculated for each participant ranging from 0 (complete absence of hostile behaviour) to 24 (highest level of hostility/ cynical distrust). In this pilot study including a small yet representative sample of primary health care users in Kosovo, Cronbach's alpha of the eight-item scale was 0.73 in men and 0.81 in women, which is higher than a prior report from Albania (9). In the analysis, hostility was dichotomized into: *hostile* behaviour (high summary score) vs. *non-hostile* behaviour (low-moderate summary score).

Reaction to political and socioeconomic aspects of transition was assessed by a three-item scale which was adapted from an instrument used in Russia (10,11) and also employed in a study conducted in Albania (12). Participants were asked to rate their agreement/ disagreement about three statements related to the current political and socioeconomic transition in Kosovo. A summary score was calculated for each individual (referred to as *overall reaction to transition*) ranging from 0 (most positive attitudes towards socioeconomic aspects of transition, alias *optimistic* approach) to 9 (most negative attitudes – *pessimistic* approach). Cronbach's alpha of the three-item scale in this pilot study in Kosovo was 0.94. In the analyses, the summary score of reaction to transition was dichotomized into: *optimistic-neutral* vs. *pessimistic* reaction to transition.

Level of stress was measured by a series of questions related to economic/ financial stress, as well as psychosocial stress. Each item consisted of a 4-point Likert Scale. A summary score was calculated for each participant ranging from 0 (no stress at all) to 15 (maximal stress). In the statistical analysis, based on the overall summary score of the stress level, each participant was classified into one of the following two categories: *stressed* (high summary score) vs. *not stressed* (low-moderate summary score).

Lifestyle/ behavioral characteristics consisted of smoking (dichotomized into: yes vs. no), alcohol consumption (also, dichotomized into: yes vs. no) and physical activity (dichotomized into: moderate-active vs. sedentary). In addition, data on demographic factors (age, sex and marital status) and socioeconomic characteristics (educational attainment, employment status and income level) were collected for each participant.

Binary logistic regression was used to assess the association of psychosocial factors (independent variables) namely hostility, reaction to transition and

stress with self-reported health status (outcome variable). Crude (unadjusted) and multivariable-adjusted odds ratios (ORs) and their respective 95% confidence intervals (CIs) were calculated. SPSS version 19.0 was used for all the statistical analyses.

Results

Table 1 presents the distribution of demographic and socioeconomic characteristics in the study sample. Overall, mean age (±SD) of study participants (47.1% men; 52.9% women) was 49.3±13.1 years. Mean (±SD) years of education were 9.2±4.3 years; about 78% of individuals were currently married; about 32% were unemployed, and; 31% of participants reported a low income level (Table 1).

In men, 37% (n=15) reported a poor health status compared with 63% (n=26) who reported a good health status. In women, these figures were 46% (n=21) and 54% (n=25), respectively (Figure 1).

Table 1. Distribution of demographic and socioeconomic characteristics in a sample of primary health care users in Kosovo

Demographic and socioeconomic factors	N=87
Age (years)	49.3±13.1*
Sex:	
Men	41 (47.1)†
Women	46 (52.9)
Educational level (years)	9.2±4.3*
Marital status:	
Married	68 (78.2)†
Single/divorced/widowed	19 (21.8)
Income level:	
Low	27 (31.0)†
Middle	49 (56.3)
High	11 (12.6)
Employment status:	
Unemployed	28 (32.2)†
Employed/students/retired	59 (67.8)

* *Mean values ± standard deviations.*

† *Numbers and column percentages (in parentheses).*

Figure 1. Self-reported health status in a representative sample (N=87) of primary health care users in Kosovo by sex

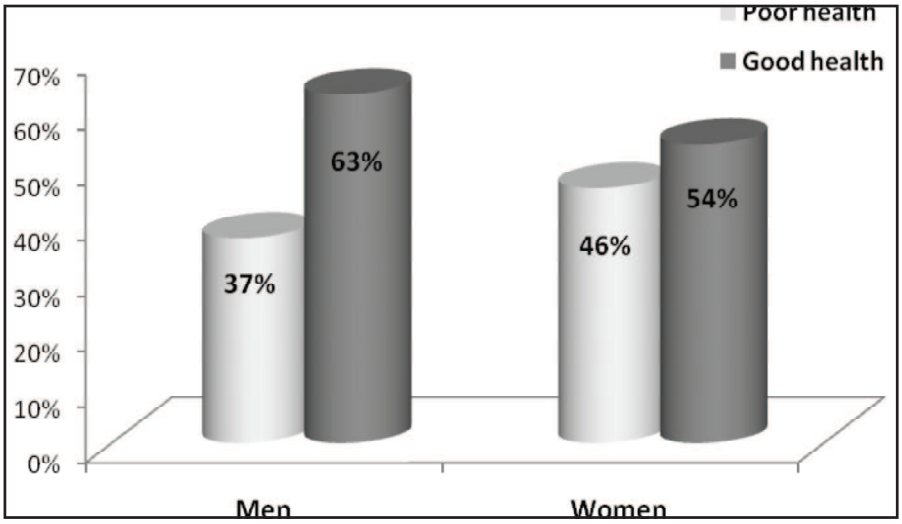

Table 2 displays the distribution of lifestyle/ behavioral characteristics and psychosocial factors among study participants. Overall, the prevalence of smoking was 30%, whereas the prevalence of alcohol consumption was 15%. About 38% of individuals reported a sedentary lifestyle. Hostile behavior was reported in 24% of participants. A pessimistic reaction to transition was evident in about 55% of participants. Finally, about 56% of individuals reported a high level of stress (Table 2).

Table 2. Distribution of lifestyle characteristics and psychosocial factors in a sample of primary health care users in Kosovo

Lifestyle and psychosocial factors	N=87
Smoking:	
Yes	26 (29.9)*
No	61 (70.1)
Alcohol consumption:	
Yes	13 (14.9)
No	74 (85.1)
Physical activity:	
Moderate-active	54 (62.1)
Sedentary	33 (37.9)
Hostility:	
Hostile behavior	21 (24.1)
Non-hostile behavior	66 (75.9)
Reaction to transition:	
Optimistic-neutral	39 (44.8)
Pessimistic	48 (55.2)
Stress level:	
Stressed (high summary score)	49 (56.3)
Not stressed (low-moderate summary score)	38 (43.7)

* *Numbers and column percentages (in parentheses).*

Table 3. Association of psychosocial factors with self-reported health status; odds ratios (ORs) from binary logistic regression

Psychosocial factors	Unadjusted models		Multivariable-adjusted models†	
	OR (95%CI)*	P	OR (95%CI)*	P
Hostility:				
Non-hostile behavior	1.00 (reference)	0.03	1.00 (reference)	0.17
Hostile behavior	1.61 (1.04-2.47)		1.38 (0.78-2.42)	
Reaction to transition:				
Optimistic-neutral	1.00 (reference)	0.09	1.00 (reference)	0.21
Pessimistic	1.57 (0.96-3.51)		1.36 (0.72-2.96)	
Stress level:				
Not stressed	1.00 (reference)	0.04	1.00 (reference)	0.05
Stressed	2.17 (1.19-3.67)		1.82 (1.00-3.34)	

* *Odds ratios (OR: poor health vs. good health) and 95% confidence intervals (in parentheses).*

† *Adjusted simultaneously for: age, sex, marital status, educational attainment, employment status, income level, smoking, alcohol consumption and physical activity.*

Table 3 presents the association of psychosocial factors with self-reported health status (dichotomized into: poor vs. good health). In crude/ unadjusted models, hostile behavior, pessimistic reaction to transition and especially stress were all associated with poor health (OR=1.61, 95%CI-=1.04-2.47; OR=1.57, 95%CI=0.96-3.51; OR=2.17, 95%CI=1.19-3.67, respectively).

Nevertheless, the association with reaction to transition was not statistically significant (P=0.09). In multivariable-adjusted models, the association with self-reported health status was attenuated and was not statistically significant for both the hostile behavior (OR= 1.38, 95%CI= 0.78-2.42) and a pessimistic reaction to transition (OR= 1.36, 95%CI=0.72-2.96). Conversely, the relationship with stress persisted strongly (albeit it was slightly attenuated) and remained statistically significant (OR= 1.82, 95%CI= 1.00-3.34) [Table 3].

Discussion

The main finding of this pilot study was the positive association of poor self-reported health status with hostility, negative reaction to transition and especially with the overall stress. Although this was a small-scale pilot study only, our findings are generally in line with the international literature pertinent to health effects of psychosocial factors.

Thus, hostility, which is characterized by negative attitudes towards others, has been shown to be associated with increased risk of cardiovascular outcomes in particular, and all-cause mortality in general (1,4-8). Upon multivariable adjustment for socioeconomic characteristics and behavioral factors, our findings related to hostile behavior were not statistically significant possibly due to the small sample included in the study. Yet, in both crude and multivariable-adjusted logistic models, notwithstanding the lack of statistical significance, hostile behavior was positively associated with poor self-reported health status.

Reaction to transition, in turn, was similarly related to self-reported health status in our study sample. Thus, individuals who displayed negative attitudes towards socioeconomic and political transition (pessimistic approach) reported a poorer health status compared with individuals who had a neutral and/ or an optimistic approach/ attitude towards transition in Kosovo. Although not statistically significant, this finding is compatible with a recent study from Albania which reported deleterious effects of pessimistic attitudes towards transition on coronary health (12). Nevertheless, underlying mechanisms of this psychosocial construct related to pessimism, remain to be investigated in more robust study designs.

On the other hand, the negative health effects of the overall stress have been arguable and consistently reported in the international literature including also the former communist countries in Europe (13,14). In this pilot study, which employed a composite construct for measurement of the overall stress, we obtained similar evidence with regard to deleterious health effects of stress. Furthermore, the positive association of the overall stress with poor self-reported health status was strong and statistically significant even after adjustment for a whole array of demographic factors (including age, sex and marital status), socioeconomic characteristics (including education, employment and income level) and behavioral/ lifestyle factors (including smoking, alcohol consumption and physical exercise).

Our study has several limitations since this was only a pilot study aiming mainly to validate a questionnaire related to health effects of selected psychosocial factors. Yet, on the face of it, the instrument operated well in this Kosovo sample.

In conclusion, our findings from this pilot study suggest a deleterious effect of psychosocial factors on self-reported health status, possibly exacerbated by the difficult circumstances of transitional Kosovo. However, the relationship of health status with psychosocial factors should be explored in more detail in future large-scale studies in Kosovo and other transitional settings.

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