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Insights into Health Consciousness in Bosnia and Herzegovina

Emir Mesanovic ^a, Selma Kadic-Maglajlic ^{a*}, Muris Cicic ^a

^a *Department of Marketing, School of Economics and Business in Sarajevo, Trg oslobođenja 1, 71000 Sarajevo, Bosnia and Herzegovina*

Abstract

The present study offers exploratory insights about the importance of health-consciousness for an adequate frequency of visits to a family doctor or specialist. The main purpose was to empirically investigate the relationship between the concepts bearing in mind the cultural background of Bosnia and Herzegovina. A total of 114 cases were used to assess the overall fit of the proposed model and to test the hypotheses using covariance-based structural equation modeling. The results support the proposed conceptual model. Therefore, the study contributes to the existing literature by offering exploratory insights that could be especially valuable for policy makers and the pharmaceutical industry. The implications and limitations of the results are discussed, and recommendations for future research are made.

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1. Introduction

Studies conducted in the past have suggested that appearance, body shape and physical control have become and are likely to stay central to an individual's sense of self-identity. These studies have shown that being well groomed, in shape, and healthy reflects individual's motivation, and his/her desire to be attractive to others (Featherstone, 1991; Domzal and Kernan, 1993; Shilling, 2003, 2007). In addition, Michaelidou and Hassan (2008) proved that health consciousness predicts a variety of health attitudes and behaviours. An individual's level of health consciousness is closely related to that person's response to health information (Basu & Dutta, 2008; Dutta & Feng, 2007). However, it is not clear what degree of readiness is needed to undertake health actions to influence the frequencies of family doctor / specialist visits. This could be seen as important information for creating health interventions and policy changes. However, this type of information is strongly culture specific. Bearing in mind that there is no available data regarding health consciousness in Bosnia and Herzegovina, exploratory research will be conducted in order to offer new insights on this subject.

*Corresponding author: Selma Kadic-Maglajlic. Tel.: +387 61 267 295
E-mail address: selma.kadic@efsa.unsa.ba

2. Theoretical Background

2.1. Health Consciousness

Health consciousness refers to the degree of readiness to undertake health actions (Becker and Maiman, 1975; Becker et al., 1977). Previous studies proved that health consciousness influences health attitudes and behaviors (Furnham & Forey, 1994; Gould, 1988, 1990; Iversen & Kraft, 2006; Jayanti & Burns, 1998; Michaelidou & Hassan, 2008; Schafer, Schafer, Bultena, & Hoiberg, 1993).

Health consciousness is conceptualized through four dimensions (Gould, 1988, 1990). The first dimension (Health Self-Consciousness) explaining that people who are more health conscious show greater concern when put near health hazards. They are also more health-responsible, and more involved with their fitness and nutrition and stress management (Kraft & Goodell, 1993). This dimension is focused on researching individuals' actual behavior in certain situations. Gould's (1988; 1990) research tells us that health consciousness is a psychological/inner state, which is independent, and directly influences one's behaviors regarding health care. This is the second dimension of health consciousness. The third dimension involves researching the correlation between health consciousness and seeking and using health information. As stated above, it is believed that health conscious persons tend to be more involved with their health, which also includes searching for and using health information. There are two points of view regarding this dimension. The first considers seeking and using health information as a part of health consciousness (Rodgers, 2007). On the other hand, Dutta-Bergman (2007) had the opinion that seeking and using health information is just the kind of behavior triggered by health consciousness. The last dimension is health self-monitoring, which is crucial part of health consciousness as it shows the intensity with which individuals value healthy conditions (Dutta-Bergman, 2004).

One of the most important health-related things any individual should do is undergo regular medical examinations, choosing adequate food, and maintaining a healthy living environment. Therefore, we argue that if a person is more health conscious he or she is more likely to get involved with his or her health by visiting doctors on a regular basis.

2.2 Adequate Frequency of Doctor/Specialist Visits

Being (feeling) ill is not the only reason to visit a doctor. Every person should regularly check in with their doctor to monitor their health and avoid any potential health problems. Some illnesses cannot be identified with a single examination. The body must be monitored over a certain period of time in order for these to be registered. Many diseases don't even produce any symptoms until they reach an advanced level. There are different medical examinations that should be undergone regularly. The question is what an adequate frequency for a medical examination is?

Smith, Cokkinides, Brawley, (2008) suggest that blood pressure should be checked every 2 years, with an exception for persons with high blood pressure (120-139 and higher) who should do blood pressure examinations every year. Physical exams should be done every 1-5 years (this includes checking height, weight, and body mass index (BMI)). In addition, cholesterol levels should be examined every 5 years for women over the age of 44 and men over the age of 34. Also, it is recommended for persons younger than the stated age to do these checks every 5 years as well (Gaziano, Manson, Ridker, 2007).

As far as dentist visits go, every person should visit their dentist at least once a year for an examination, cleaning, and potentially, intervention. People with vision or any kind of eye problems should do eye examinations every 2 years. It is recommended for persons over the age of 40 to do these exams as well, as well as every 2 years (American Diabetes Association, 2010). These are examples of some general medical examinations that should be done regularly. There is no data about the adequate frequency of visits to family doctors by citizens of Bosnia and Herzegovina, so we argue that it will depend on personal health consciousness.

3. Research Methodology

3.1. Sample and Measures

In order to fulfill the research objectives, exploratory field research was conducted in Bosnia and Herzegovina, using a highly structured questionnaire. Printed questionnaires were distributed to respondents that were visiting two public medical institutions. In order to avoid response bias additional questionnaires were distributed at the largest public university in the country. In total, 114 usable questionnaires were collected. Because the T-test did not show a significant difference between the two groups of respondents (from the university and from the medical institutions) they are treated as one sample with socio-demographical background given in table 1.

Table 1. Socio-Demographical data

Gender		Relationship status		Age		Employment status	
Male	43%	Single	14%	20-35	27%	Student	10%
Female	57%	In a relationship	21%	35-50	32%	Unemployed	19%
		Married	51%	50-65	28%	Employed	56%
		Divorced	5%	65-80	11%	Retired	15%
		Widow	9%	80+	2%		

Source: Authors

Nine items of the Health Consciousness Scale-HCS (Gould 1990) have been used to measure health consciousness and have been operationalized as a second order factor that is made of four first-order factors: (1) Health Self-Consciousness, (2) Health Alertness, (3) Health Self-Monitoring, and (4) Health Involvement. Those are four first-order factors, along with the overall HCS second-order factor, which relates to a number of self-reported, health-associated behavioral variables. The points in the original scale went from 0 to 4, while in this study grading ranged from 1-5, anchored with “strongly disagree” (1) and “strongly agree” (5). This adoption has been made because of the cultural context, because people in this region are more used to this type of measure. In addition, respondents were asked for their personal frequency of visits to general doctors and specialists.

3.2. Findings and Discussion

The data analysis was conducted following a two-stage approach (Anderson & Gerbing, 1988). First, a test of the validity and reliability of the measurement model was conducted using confirmatory factor analysis, while afterwards structural equation modeling (SEM) was used for structural model testing. The data were analyzed using the statistical software SPSS 20.0 and LISREL 8.78.

Confirmatory factor analysis of the four first-order factors of HCS (dependent variables) and frequency of general doctor and specialist visits (as dependent variable) was conducted. Goodness-of-fit statistics indicate the good fit of the model. The reliability and validity of items was also analyzed. Composite reliability (CR), as well as average variance extracted (AVE), for each factor was calculated (Table 2). The results indicate that the values are above the acceptable level of 0.6 for composite reliability (Bagozzi & Yi, 1988), and above 0.5 for average variance extracted (Fornell & Larcker, 1981). Convergent validity is also assessed. According to Anderson and Gerbing’s (1988) criterion, all t-values are statistically significant and all AVE’s for latent constructs are over the 0.5 threshold (MacKenzie, Podsakoff, & Podsakoff, 2011) indicating that convergent validity for individual indicators as well as for latent variables exists.

Table 2. Validity and Reliability test of measurement model

Items / CFA – Factors	t-value	Health Self-Consciousness	Health Involvement	Health Alertness	Health Self-Monitoring	Frequency of Doctor/Specialist Visits
N = 114						
VI - I reflect about my health a lot.	18.227	0.798				
VI - I reflect about my health a lot.	9.79					

Items / CFA – Factors	t-value	Health Self-Consciousness	Health Involvement	Health Alertness	Health Self-Monitoring	Frequency of Doctor/Specialist Visits
N = 114						
V2 - I'm very self-conscious about my health.	11.66	0.903				
V3 - I'm generally attentive to my inner feelings about my health.	fixed	0.823				
V4 - I'm constantly examining my health.	8.89		0.728			
V5 - I'm alert to changes in my health.	9.38			0.775		
V6 - I'm usually aware of my health.	fixed			0.813		
V7 - I'm aware of the state of my health as I go through the day.	8.67					
V8 - I notice how I feel physically as I go through the day.	fixed				0.859	
V9 - I'm very involved with my health.	fixed		0.847		0.713	
V10 - I visit family doctor once in a month.	4.83					0.909
V11 - I visit specialist doctor once in a month.	fixed					0.769
Cronbach's alpha		0.873	0.763	0.773	0.758	0.822
Composite reliability (ρ_c)		0.880	0.767	0.774	0.700	0.829
Average variance extracted (ρ_v)		0.710	0.624	0.631	0.541	0.709
Goodness-of-fit statistics	$\chi^2 = 40.622$, $df = 34$, p -value 0.202, CFI = 0.993, NNFI = 0.989, SRMR = 0.036					

Source: Authors

Discriminant validity is assessed with latent construct inter-correlations (MacKenzie, Podsakoff&Podsakoff, 2011). According to this criterion, low to moderate correlation is considered evidence of discriminant validity. It is evident from Table 3 that, for all the constructs that are used, low to moderate inter-correlation indicating discriminant validity is present.

Table 3. Correlation Matrix

	Health Self-Consciousness	Health Involvement	Health Alertness	Health Self-Monitoring	Health Consciousness	Frequency of Doctor/Specialist Visits
N = 114						
Health Self-Consciousness	1					
Health Involvement	.744**	1				
Health Alertness	.758**	.740**	1			
Health Consciousness	.769**	.730**	.745**	1		
Frequency of Doctor/Specialist Visits	.927**	.884**	.893**	.894**	1	
	.206*	.299**	.046	.160	.200*	1

** Correlation is significant at the 0.01 level (2-tailed), *Correlation is significant at the 0.05 level (2-tailed).

Source: Authors

The next stage of the analysis was the assessment of the paths and relationships between the proposed constructs (Second Order Health Consciousness and Frequency of family Doctor/Specialist Visits) validated through an analysis of the structural model. Table 4 shows the standardized coefficients and t-values for the proposed conceptual model.

Table 4: Tested relationships

Relationship	Hypothesis	Std. parameter	t-value
Health Consciousness → Frequency of family Doctor/Specialist Visits	H1 (+)	0.23	2.12

Goodness of fit statistics indicates good model fit: $\chi^2 = 15.021$, $df = 5$, CFI = 0.970, NNFI = 0.940, SRMR=0.472.

Source: Authors

The results (Table 4) confirm the positive relationships between the variables in the conceptual model. The relationship between second order factor health consciousness and frequency of family doctor/specialist visits value

is significant ($\gamma_{11} = 0.23$; $p < 0.001$), thus supporting the research objective. This also supports the nomological validity of health consciousness as a second order factor.

Conclusion

With this study the cultural universality of the Health Consciousness Scale - HCS (Gould 1990) has been confirmed. In addition, policy makers can see proof that health consciousness influences the frequency of family doctor / specialist visits, and is a primary step in designing effective interventions to improve and promote health attitudes and behaviors. The findings could also be beneficial for the pharmaceutical industry, because the general development of health consciousness could improve responses to health supplements and health products.

The limitation of the study is the fact that the generalization of the results is questionable, especially because it is within the limited context of Bosnia and Herzegovina. In addition, research was exploratory in nature, so for broader conclusions a larger sample would be needed.

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