

## Are Expectations about Health Care Universal? The International Evidence

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### Abstract

*Evaluating differences in international health care systems has been suggested as an approach for determining which strategies work best. Such an approach, however, is predicated on the assumption that all peoples have similar expectations about health care. This study assessed this assumption by relying on nationally representative samples of about 41% the world's population (i.e., China, Ghana, India, Mexico, the Russian Federation, and South Africa). Participants tended to rank the health care expectations evaluated as being more than moderately important. At the same time, 87 unique statistically significant differences in expectations were detected across country. Analysis indicated that country accounted for only 1 to 8% of variability in expectations—with public versus private/mixed medical financing accounting for from 60% to 96% of country level variability. These findings support the possibility of a tug-of-war between practical and statistical significance in terms of how much country matters in predicting health care expectations.*

**Keywords:** international health care; comparisons; expectations; natural laboratories

### 1. Introduction and Overview of the Literature

Several policy discussions have attempted to influence the direction of research on international healthcare systems. For example, expert panel discussions led by the Institute of Medicine (IOM) in 1992 identified research on cost containment as having the greatest potential utility in this field of study (Lohr, Yordy, Harrison, & Gelijns, 1992). Subsequent objections to the World Health Organization's (WHO, 2000) ranking of health care systems suggested an additional consideration: International health care systems should be studied, not for ranking purposes, but to exploit differences in health care systems as natural laboratories (Walshe, 2003). Under this approach, potential strategies for advancement can be evaluated prior to implementation in other countries. An entire body of literature is either explicitly or implicitly congruent with these policy recommendations. This research has considered a wide range of topics that include the consequences of shifting toward universal healthcare coverage (Cheng, 2003; Nguyen & Leung, 2013), moral hazard (Yilma, van Kempen, & de Hoop, 2012), and health care equity across payer systems (Gusmano, Weisz, & Rodwin, 2009).

This “natural laboratories” approach, however, is predicated on the assumption that peoples in each nation have the same, or at least similar, expectations about what they believe their healthcare systems should achieve. Consider the following hypothetical situation as an illustration: Suppose that research reveals that a single-payer system in Nation X provides superior cost containment. Nation Y might be unwilling to adopt a single-payer system, if this change is coupled with longer “wait times” than citizens in Nation Y expect. Hence, although the “natural laboratories” approach seems to be a logical focus for research on international health care systems, the need to compare expectations for health care across nations is also apparent.

Unfortunately, extant research that evaluates similarities in expectations for health care across nations is relatively nascent. Groenewegen, Kerssens, Sixma, van der Eijk, and Boerma (2005) have taken important first steps toward this end. They studied the expectations of 5,133 participants in 12 European countries and Israel, where expectations included respect, communication, the patient's role in decision-making, convenience (e.g., wait times), prescription drug coverage, the referral process, and provider competence. Their findings indicated that country of residence explained a modest to moderate proportion of the variability in expectations, ranging from 6% for wait time to 25% for having access to specialists.

However, findings were vulnerable to several limitations in study design. First, at least 70% of health care expenditures were publicly financed in the countries under study--except for in Italy, where public financing was about 57%, and in Greece, where public financing was about 66% (WHO, 2000). Hence, the variability in expectations detected might differ upon the inclusion of nations with wider ranges of financing approaches. Additionally, selection biases may have influenced findings because participants were not part of a nationally representative sample, but consisted of specific patient types or specific demographic groups, depending on the country under study (e.g., patients with inflammatory bowel disease [IBD], migrant populations, and the elderly). Response rates also varied considerably (i.e., from 35% among elderly in the Netherlands to 78% for the IBD samples).

Other studies compare satisfaction with health care systems' actual performances with patients' expectations for health care. Wensing et al. (2002) surveyed a sample of 15,996 general practice patients in nine European countries, where the sample was stratified by practice size and urbanization. Patients preferred small practices and full-time physicians based on ratings of appointment availability, phone access, wait time, and urgent care. However, these preferences were based on reality (i.e., ratings of services received), rather than on theory (i.e., were true expectations satisfied?). Furthermore, at least 70% of all health care expenditures in the countries under study were publicly financed—limiting the extent to which findings can be generalized. Wensing et al. (1998) and Vingerhoets, Wensing and Grol (2001) have similar constraints in study design.

The present study takes the limitations of prior research into consideration and contributes to the literature in several ways. First, it examines variability in health care expectations across nationality via nationally representative samples available through WHO's Study on Global AGEing and Adult Health (SAGE) (Chatterji & Kowal, 2013). Second, it considers variability in expectation relative to the primary source of medical expenditure by including public, private, and mixed financing systems. Third, this study considers a fuller range of developing and nonwestern countries that are commonly omitted from comparisons of international health care systems (McPake & Mills 2000). In fact, the six countries under study here (i.e., China, Ghana, India, Mexico, the Russian Federation, and South Africa) are critical to international healthcare. Together these countries house about 41% of the world's population (World Bank, 2013)—with a recent search on Scholar Google indicating that more than 2.3 million scholarly articles, excluding patents, have been written about health care in these countries.

More explicitly, this study contributes to the literature by addressing the following research questions about health care expectations via hierarchical linear modeling (HLM) (Raudenbush & Bryk, 2002):

1. Does the importance of provider respect vary by nationality?
2. Does the importance of confidentiality in health care vary by nationality?
3. Does the importance of patient convenience vary by nationality?
4. Does the importance of provider choice vary by nationality?
5. Does the importance of patient's role in decision-making vary by nationality?
6. Does the importance of the quality of medical facilities vary by nationality?
7. Does the importance of outside contact (e.g. visits from friends and family) vary by nationality?
8. Does the importance of good communication about health care vary by nationality?

The next section outlines the methods used in this study. It includes a description of participants, measures, and analytical methods. The following section provides the results ordered from univariate results to multivariate results. The last section concludes with a summary and a discussion of findings.

## **2. Methods**

### **2.1. Participants**

SAGE (Chatterji & Kowal, 2013) served as the data source for this study. This dataset offers nationally representative samples of inhabitants of Mexico, the Russian Federation, South Africa, The People's Republic of China, India, and Ghana. WHO investigators determined each sample via at least four stages of clustered random sampling, where sampling included at least two stages of geographic sampling followed by household and individual-level sampling. Household response rates ranged from 80% in South Africa to nearly 100% in the Russian Federation, and individual response rates ranged from 90% in South Africa to 100% in China. All data were collected via face-to-face structured interviews in 2003, except for in China, where data were collected via structured face-to-face interviews in 2002.

For the current study, the analytical sample consisted of all participants with completed surveys that contained no missing data related to the measures under analysis. The percentage of cases with missing data was very small (i.e., always 0.7% or less)—yielding a final analytical sample size of  $N = 62,242$ , where subsamples sizes by nation were  $n = 3,984$  for China,  $n = 3,799$  for Ghana,  $n = 9,388$  for India,  $n = 38,453$  for Mexico,  $n = 4,344$  for the Russian Federation, and  $n = 2,274$  for South Africa. Table 1 provides additional descriptive data about each sample.

**Table 1: Descriptive Data by Country**

Variable	China	Ghana	India	Mexico	Russian Federation	South Africa
Female, %	51.0	54.0	47.0	58.0	66.0	52.0
Male, %	49.0	46.0	53.0	42.0	34.0	48.0
Marital status:						
Never married, %	11.4	24.8	15.8	22.4	12.9	48.6
Married, %	81.9	59.1	75.8	56.1	47.6	35.3
Separated, %	.1	1.9	0.5	3.7	2.9	1.9
Divorced, %	.7	5.9	0.20	1.4	13.1	2.9
Widowed, %	5.8	7.0	7.0	6.6	21.1	6.2
Cohabiting, %	.1	1.3	0.70	9.8	2.4	5.1
Highest level of education completed:						
No formal education, %	10.7	31.7	40.1	0	0.6	8.9
Less than primary school, %	9.8	11.5	9.5	0	3.2	12.7
Primary school, %	24.5	45.6	15.3	13.3	4.9	20.5
High school or secondary school, %	45.5	8.4	23.7	86.2	49.5	45.0
At least college completed, %	9.5	2.8	11.3	0.5	41.8	12.9
Outpatient during the last year, % Yes	40.6	40.1	52.6	66.0	40.8	19.5
Hospital stay overnight in the last 5 years, % Yes	17.3	22.4	21.8	20.9	33.5	25.4
Self-reported health, $M(1 = \text{very bad to } 5 = \text{very good})$	3.8	4.0	3.6	3.8	3.1	4.0
$SE(M)$	0.04	0.02	0.03	0.01	0.03	0.03
Age, $M$	45.1	40.2	38.3	40.7	51.3	37.6
$SE(M)$	0.75	0.41	0.31	0.19	0.66	0.46

## 2.2. Measures

### 2.2.1. Dependent Variables

Participants ranked the importance of eight expectations for health care (i.e., respect, confidentiality, convenience, choice, involvement in decision-making, quality facilities, outside contact, and good communication) on a 5-point Likert-type scale. This scale was reverse coded for this study as follows: 5 = *extremely important*, 4 = *very important*, 3 = *moderately important*, 2 = *slightly important* and 1 = *not important*.

WHO (Chatterji & Kowal, 2013) defined these expectations for participants to enhance the consistency and reliability of each concept across nationality. Respect included both (1) being shown respect during interactions with health care providers and (2) consideration of cultural norms during physical exams. Confidentiality was defined as being able to have private conversations with providers and having personal data being kept private. Convenience consisted of short travel times to health care facilities and short wait times for consultations, hospital admissions, and use of health care facilities. Choice included not only being able to select treatment locations and providers, but also being able to obtain second opinions or consultations with specialists. Involvement in decision-making was defined as being able to control the degree of personal decision-making related to medical treatment and as having the freedom to discuss treatment alternatives. Quality facilities included having clean medical facilities that offered sufficient space, seating, and fresh air. Outside contact included having sufficient visits with family and friends, being able to contact family and friends, and having access to information about events external to the health care facility. Finally, good communication was defined as having clear explanations about health care and as having sufficient time to ask providers questions. These measures are similar to those used in several other studies (Groenewegen et al., 2005; Wensing et al., 2002).

### 2.2.2. Independent Variables at the Individual Level

Seven measures were evaluated as independent variables for each participant. These measures included a continuous measure of participant's age and a binary measure of gender (1 = *female* and 0 = *male*). Additionally, marital status was coded as a series of dummy variables (never married, separated, divorced, widowed, and cohabitating), where the reference category was currently married. Highest level of education was also coded as a series of dummy variables (no formal education completed, less than primary school completed, primary school completed, secondary school completed, and high school completed) where the reference category was at least college completion. Participant's self-reported health status was reverse coded as 5 = *very good*, 4 = *good*, 3 = *moderate*, 2 = *bad*, and 1 = *very bad*. Self-reported health care use was evaluated via two measures (1) reporting having been in the hospital (or having had a child who was in the hospital) overnight during the last five years (1 = *yes* or 0 = *no*) and (2) reporting having had outpatient care (or having had a child who had outpatient care) during the last 12-months (1 = *yes* and 0 = *no*).

### 2.2.3. Independent Variables at the Country Level

WHO (2000) was used to classify each country's health care system as publicly funded, privately funded, or having mixed-funding (i.e., having a mixture of both government and private funding). Under this classification system, the Russian Federation and China were classified as primarily publicly funded health care systems—given that the government funded about three-quarters of health care expenditures in these nations. India was classified as a privately funded system because nearly 90% of health care funding was classified as private during the period of study. The other nations under study (i.e., Ghana, Mexico, and South Africa) were classified as mixed systems because the public and private health care financing was about evenly split in these countries during time period studied.

### 2.3. Analysis

Initially, univariate analyses (i.e., *t*-tests) were used to evaluate whether there were any mean differences in health care expectations by country. A Bonferroni adjustment was made to account for serial comparisons across six countries. Subsequently, HLM (Raudenbush & Bryk, 2002) was used to ascertain the variability in each health care expectation by nationality via the following fully unconditional model (i.e., one-way ANOVA):  
 Level 1 (Participant):  $Expectation_{ij} = \beta_{0j} + r_{ij}$ , where  $r_{ij} \sim N(0, \sigma^2)$ ;  $i$  = participant;  $j$  = country. (eq. 1)

Level 2 (Country):  $\beta_{0j} = \gamma_{00} + \mu_j$ , where  $\mu_j \sim N(0, \tau_{00})$ ;  $j$  = country. (eq. 2)

The intraclass correlation coefficient (i.e., as  $\rho = \tau_{00}/[\tau_{00} + \sigma^2]$  [eq. 3]) was used to determine the amount of variability in each expectation at the country level. Subsequently, the additional explanatory power of seven measures described in 2.2.2 was evaluated at level-1 (i.e., age, gender, marital status, highest level of education completed, self-ranked health status, overnight stay in a hospital in the last 5-years, and use of outpatient services in the last 12-months), with age and self-ranked health status being group mean-centered. Additionally, funding type (i.e., public, private, or mixed) was evaluated as a series of dummy variables where the reference category was publicly funded. All analyses were weighted to yield nationally representative results and standard errors were corrected to account for complex sampling.

## 3. Results

### 3.1. Univariate Results

Overall, participants in each nation tended to rank each of the eight health care expectations as being more than moderately important, where means ranged from more than moderately important (i.e., higher than 3) to very important (i.e., 4 or higher) (Table 2). At the same time, 87 unique statistically significant differences were detected in mean responses across nations. Participants in countries with public financing (i.e., Russia and China) had no significant differences on seven out of eight of the expectations, where the significant difference detected was for provider choice ( $M_{China} = 3.87$  and  $M_{Russian Federation} = 3.58$ ). Numerically speaking, mean expectations among peoples living in nations with public financing systems were lower than those in the other nations. Mean responses among participants in nations with private financing (i.e., India) were significantly different from participants in nations with public financing, except with regard to the importance of good communication. Participants in nations with mixed public-private financing (i.e., Ghana, Mexico, and South Africa) tended to have significant mean differences compared to participants in countries with public financing. At the same time, rankings within these countries were not always similar.

Participants in Ghana reported differences from Mexico on seven out of eight expectations and from, South Africa on six out of eight expectations, whereas mean responses in Mexico and South Africa differed significantly for only two out of eight expectations (i.e., the importance of outside contact and the importance of good communication).

**Table 2: Mean and SE (Mean) for Each Health Care Expectation by Country and Financing Type by Country**

	China	Ghana	India	Mexico	Russian Federation	South Africa
	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>
	<i>SE(Mean)</i>	<i>SE(Mean)</i>	<i>SE(Mean)</i>	<i>SE(Mean)</i>	<i>SE(Mean)</i>	<i>SE(Mean)</i>
Respect	4.144 <sup>G,I,M,S</sup> 0.034	4.246 <sup>C,M,R</sup> 0.017	4.282 <sup>C,R</sup> 0.015	4.304 <sup>C,G,R</sup> 0.010	4.104 <sup>G,I,M,S</sup> 0.041	4.309 <sup>C,R</sup> 0.041
Confidentiality	3.980 <sup>G,I,M,S</sup> 0.029	4.225 <sup>C,M,R</sup> 0.022	4.144 <sup>C,M,R,S</sup> 0.027	4.317 <sup>C,G,I,R</sup> 0.010	3.943 <sup>G,I,M,S</sup> 0.043	4.330 <sup>C,I,R</sup> 0.038
Convenience	3.948 <sup>G,I,M,S</sup> 0.048	4.260 <sup>C,I,R,S</sup> 0.019	4.121 <sup>C,G,M,R</sup> 0.021	4.235 <sup>C,I,R</sup> 0.010	3.968 <sup>G,I,M,S</sup> 0.043	4.140 <sup>C,G,R</sup> 0.040
Choice	3.874 <sup>G,I,M,R,S</sup> 0.032	3.644 <sup>C,I,M,S</sup> 0.029	4.033 <sup>C,G,M,R</sup> 0.022	4.149 <sup>C,G,I,R</sup> 0.009	3.578 <sup>C,I,M,S</sup> 0.054	4.060 <sup>C,G,R</sup> 0.045
Decision-making	3.623 <sup>I,M,S</sup> 0.051	3.685 <sup>I,M,S</sup> 0.031	3.941 <sup>C,G,M,R,S</sup> 0.023	4.227 <sup>C,G,I,R</sup> 0.009	3.536 <sup>I,M,S</sup> 0.052	4.174 <sup>C,G,I,R</sup> 0.043
Quality facilities	4.006 <sup>G,I,M,S</sup> 0.044	4.384 <sup>C,I,M,R,S</sup> 0.017	4.219 <sup>C,G,R</sup> 0.026	4.290 <sup>C,G,R</sup> 0.01	3.966 <sup>G,I,M,S</sup> 0.044	4.235 <sup>C,G,R</sup> 0.043
Outside contact	3.641 <sup>G,I,M,S</sup> 0.044	3.860 <sup>C,M,R,S</sup> 0.024	3.900 <sup>C,M,R,S</sup> 0.025	4.253 <sup>C,G,I,R,S</sup> 0.008	3.714 <sup>G,I,M,S</sup> 0.047	4.125 <sup>C,G,I,M,R</sup> 0.044
Good communication	3.953 <sup>G,M,S</sup> 0.024	4.076 <sup>C,M,S</sup> 0.024	3.992 <sup>M,S</sup> 0.024	4.345 <sup>C,G,I,S</sup> 0.01	3.977 <sup>S</sup> 0.044	4.303 <sup>C,G,I,M,R</sup> 0.041
Financing type	Public	Mixed	Private	Mixed	Public	Mixed

Note. Participants ranked each expectation on a 5-point Likert-type scale as follows: 5 = extremely important, 4 = very important, 3 = moderately important, 2 = slightly important and 1 = not important. Superscripts indicate that the mean was statistically different from that of the country indicated, where C = China, G = Ghana, I = India, M = Mexico, R = Russian Federation, and S = South Africa. A Bonferroni adjustment was made (alpha = 0.00833 or .05/6 countries) to account for serial comparisons across six countries.

**3.2. Fully Unconditional Models**

The results from fully unconditional HLM models indicate that interclass correlation coefficients ranged from 0.01 (on convenience) to 0.08 (on decision-making). Hence, variability between countries explained 1% to 8% of the variability in participant’s ranking of health care expectations across countries.

**Table 3: Country-level variance ( $\tau_{00}$ ), Individual-level Variance ( $\sigma^2$ ) and Intraclass Correlation Coefficient ( $\rho$ ) for Fully Unconditional HML Models for Each Health Care Expectation**

	Respect	Confidentiality	Convenience	Choice	Decision-making	Facilities	Contact	Communication
$\tau_{00}$	0.009	0.023	0.009	0.056	0.066	0.019	0.027	0.020
$\sigma^2$	0.517	0.705	0.648	0.757	0.789	0.580	0.745	0.681
$\rho$	0.017	0.032	0.014	0.069	0.077	0.032	0.035	0.029

**3.3. Full HLM Models**

Table 4 provides results for the full HLM models. Compared to baseline or fully unconditional model, mixed or private financing system explained most variability in rankings by country. Explained variability ranged from 60% for communication to 96% for both respect and confidentiality.

At the participant level, the covariates tended to have explanatory power, with gender being significant for four expectations (respect, confidentiality, convenience, and decision-making). Age had a very modest positive correlation with each expectation, except confidentiality. A change in marital status (i.e., being separated, divorced, or widowed) tended to be negatively correlated with the expectations. Having completed less than college (especially less than a high school education) tended to have yield negative associations with the health care expectations. By contrast, (1) greater self-reported health status and (2) either an overnight stay in the hospital during the last five years or use of outpatient services during the last 12 months tended to be positively associated with the importance of the expectations. However, although these covariates tended to be significant, together they tended to explain only about 2-4% of the variability at the participant-level compared to the baseline model.

**Table 4: Estimated Coefficients, SE, Significance Levels, Country-level Variances and Individual-level Variances for Full Models by Health Care Expectation**

Variable	Respect	Confidentiality	Convenience	Choice	Decision-making	Facilities	Contact	Communication
<b>Country Level</b>								
Intercept,								
$\gamma_{00}$	<b>4.093</b>	<b>3.960</b>	<b>3.970</b>	<b>3.640</b>	<b>3.555</b>	<b>4.015</b>	<b>3.747</b>	<b>4.000</b>
SE	0.017	0.023	0.032	0.079	0.072	0.043	0.037	0.024
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mixed financing,								
$\gamma_{01}$	<b>0.214</b>	<b>0.397</b>	<b>0.250</b>	<b>0.487</b>	<b>0.647</b>	<b>0.309</b>	<b>0.432</b>	<b>0.353</b>
SE	0.024	0.032	0.047	0.119	0.108	0.064	0.054	0.034
<i>p</i> -value	0.000	0.000	0.003	0.049	0.000	0.014	0.000	0.000
Private financing,								
$\gamma_{02}$	<b>0.255</b>	<b>0.274</b>	<b>0.234</b>	<b>0.561</b>	<b>0.534</b>	<b>0.314</b>	<b>0.275</b>	<b>0.130</b>
SE	0.020	0.027	0.040	0.102	0.093	0.055	0.046	0.029
<i>p</i> -value	0.000	0.000	0.000	0.002	0.001	0.001	0.000	0.028
<b>Individual Level</b>								
Age, $\beta_1$	<b>0.003</b>	>0.000	<b>0.003</b>	<b>0.003</b>	<b>0.003</b>	<b>0.002</b>	<b>0.002</b>	<b>0.003</b>
SE	>0.000	>0.000	>0.000	>0.000	>0.000	>0.000	>0.000	>0.000
<i>p</i> -value	0.000	0.382	0.000	0.000	0.000	0.000	0.000	0.000
Female, $\beta_2$	<b>0.018</b>	<b>0.030</b>	<b>0.022</b>	0.008	<b>0.022</b>	0.001	-0.012	0.004
SE	0.006	0.007	0.007	0.007	0.008	0.006	0.007	0.007
<i>p</i> -value	0.004	0.000	0.002	0.259	0.005	0.891	0.095	0.521
Never married, $\beta_3$								
$\beta_3$	<b>0.050</b>	0.002	0.011	0.018	<b>0.031</b>	<b>0.032</b>	<b>0.032</b>	<b>0.083</b>
SE	0.009	0.010	0.010	0.010	0.011	0.009	0.010	0.010
<i>p</i> -value	0.000	0.839	0.247	0.086	0.004	0.001	0.003	0.000
Separated, $\beta_4$								
$\beta_4$	<b>-0.063</b>	-0.036	<b>-0.131</b>	-0.047	<b>-0.114</b>	<b>-0.143</b>	<b>-0.119</b>	<b>-0.207</b>
SE	0.024	0.027	0.026	0.028	0.029	0.025	0.028	0.027
<i>p</i> -value	0.008	0.188	0.000	0.101	0.000	0.000	0.000	0.000
Divorced, $\beta_5$								
$\beta_5$	<b>-0.062</b>	<b>-0.190</b>	<b>-0.166</b>	<b>-0.112</b>	<b>-0.142</b>	<b>-0.275</b>	<b>-0.303</b>	<b>-0.164</b>
SE	0.018	0.021	0.020	0.022	0.022	0.019	0.022	0.021
<i>p</i> -value	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Widowed, $\beta_6$								
$\beta_6$	<b>-0.075</b>	<b>-0.105</b>	-0.006	<b>-0.105</b>	<b>-0.095</b>	<b>-0.092</b>	0.003	-0.023
SE	0.011	0.013	0.013	0.013	0.014	0.012	0.013	0.013
<i>p</i> -value	0.000	0.000	0.612	0.000	0.000	0.000	0.847	0.075

**Table 4(Continued): Estimated Coefficients, SE, Significance Levels, Country-level Variances and Individual-level Variances for Full Models by Health Care Expectation**

Variable	Respect	Confidentiality	Convenience	Choice	Decision-making	Facilities	Contact	Communication
Cohabiting, $\beta_7$	<b>-0.051</b>	-0.013	<b>0.046</b>	0.038	<b>0.006</b>	0.008	0.035	0.021
SE	0.018	0.021	0.020	0.022	0.022	0.019	0.022	0.021
<i>p</i> -value	0.006	0.545	0.024	0.084	0.802	0.665	0.108	0.302
Health status, $\beta_8$	<b>0.084</b>	<b>0.127</b>	<b>0.090</b>	<b>0.107</b>	<b>0.110</b>	<b>0.060</b>	0.079	<b>0.083</b>
SE	0.003	0.004	0.004	0.004	0.004	0.003	0.004	0.004
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
No formal ed, $\beta_9$	<b>-0.203</b>	<b>-0.236</b>	<b>-0.251</b>	<b>-0.359</b>	<b>-0.375</b>	<b>-0.254</b>	<b>-0.280</b>	<b>-0.343</b>
SE	0.011	0.013	0.012	0.013	0.014	0.012	0.013	0.013
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
> primary ed, $\beta_{10}$	<b>-0.181</b>	<b>-0.178</b>	<b>-0.143</b>	<b>-0.270</b>	<b>-0.247</b>	<b>-0.193</b>	<b>-0.206</b>	<b>-0.236</b>
SE	0.014	0.013	0.015	0.017	0.017	0.015	0.017	0.016
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Primary ed, $\beta_{11}$	<b>-0.060</b>	<b>-0.114</b>	<b>-0.118</b>	<b>-0.226</b>	<b>-0.249</b>	<b>-0.100</b>	<b>-0.149</b>	<b>-0.203</b>
SE	0.011	0.013	0.013	0.014	0.014	0.012	0.014	0.013
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
High school, $\beta_{12}$	0.007	0.005	<b>-0.072</b>	<b>-0.100</b>	<b>-0.078</b>	-0.015	<b>-0.045</b>	<b>-0.083</b>
SE	0.009	0.011	0.010	0.011	0.011	0.010	0.011	0.011
<i>p</i> -value	0.445	0.698	0.000	0.000	0.000	0.129	0.000	0.000
Hosp. overnight, $\beta_{13}$	<b>0.047</b>	0.013	<b>0.090</b>	<b>0.101</b>	<b>0.117</b>	<b>0.030</b>	<b>0.076</b>	<b>0.075</b>
SE	0.007	0.009	0.010	0.009	0.009	0.008	0.009	0.008
<i>p</i> -value	0.000	0.125	0.000	0.000	0.000	0.000	0.000	0.000
Outpatient, $\beta_{14}$	<b>0.046</b>	<b>0.068</b>	<b>0.076</b>	<b>0.082</b>	<b>0.105</b>	<b>0.051</b>	<b>0.063</b>	<b>0.098</b>
SE	0.006	0.007	0.007	0.008	0.008	0.007	0.008	0.007
<i>p</i> -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$\tau_{00}$	<b>0.0004</b>	<b>0.001</b>	<b>0.002</b>	<b>0.011</b>	<b>0.009</b>	<b>0.003</b>	<b>0.002</b>	<b>0.008</b>
$\sigma^2$	0.504	0.675	0.634	0.732	0.760	0.565	0.727	0.660
Variability at the participant- level in baseline model accounted for	3%	4%	2%	3%	4%	3%	2%	3%
Variability at the country- level in baseline model accounted for	96%	96%	78%	80%	86%	84%	93%	60%

#### 4. Discussion and Conclusions

This study has contributed to the literature by examining variability in health care expectations across six nations that house about 41% of the world's population (i.e., China, Ghana, India, Mexico, the Russian Federation, and South Africa) (World Bank, 2013) and by considering the relationship between health care financing at a macro-level and such expectations. Overall, participants in each nation tended to rank each of the eight health care expectations under examination as being more than moderately important. At the same time, 87 unique statistically significant differences in expectations were detected across countries—with mean expectations being numerically lower in the countries where health care was publicly financed. However, HLM analysis indicated that country accounted for only 1 to 8% of the variability in participant's expectations for health care—with public versus private/mixed medical financing accounting for from 60% to 96% of that variability. Hence, at least to some extent, these findings suggest a tug-of-war between practical and statistical significance in terms of how much country really matters in predicting health care expectations.

These findings offer several implications for policy and future research. First, practically speaking, it is likely that persons tend to hold high expectations for health care, regardless of their nationality—at least in terms expectations related to respect, confidentiality, convenience, choice, decision-making, facilities, outside contact, and provider communications. This suggestion is bolstered by the fact that participants in the study were given standardized definitions for these eight expectations. Second, statistically speaking, there are differences in expectations across countries—with expectations particularly varying for public financing compared to other systems. This finding does imply that some caution should be taken when suggesting that strategies used in countries with public financing be implemented in countries that have historically had other financing systems. It also suggests that in the future, researchers should consider the bearing that medical financing from a macro perspective might have on their findings.

Country tended to account for less variability in expectations than it did in prior research. Recall that Groenewegen et al. (2005) found that country accounted for from about 6% to 25% of variability in expectations. Differences in findings may have been detected because Groenewegen et al. sampled Europe and Israel rather than the countries sampled here. However, Groenewegen et al. also relied largely on patient populations, and findings here detected a statistical difference between the expectations of those who had utilized medical care more recently compared to the expectations of the general population. Groenewegen et al. noted that, although theory might indicate the need to include a third level in their models to control for patient type, practically speaking this was not possible, given data constraints. In the future, researchers should consider such potential selection biases when selecting samples and when interpreting results.

As with all studies, the findings of this study should be considered in conjunctions with the study's limitations. In particular, only six countries were studied, which may limit the amount of variability that can be detected at the country level. At the same, the number of participants was large and the countries under study contained 41% of the world's population. However, future research should examine expectations in additional countries, particularly those that represent a wider array of public, private, and mix medical financing. Finally, it should be emphasized that the findings here relate basically to “static” rather than to “dynamic” situations. This is important because the “natural laboratory” approach to studying international health care health systems revolves about identifying components of one health care system that might be brought to another country. Although attempts were made to standardize questions about expectations across the countries studied, there is no guarantee about whether transformations in health care systems derived from one country will meet the expectations of another people. In such cases, only an ad hoc heuristic can be offered at this time: When a proposed transformation might lower the “status quo” for performance in another nation, expectations about health care may not be satisfied in the country undergoing change.



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