

# The relationship between socio-economic factors and responsiveness gaps in primary, preventative and health promotion services

Yair Zalmanovitch PhD and Dana R. Vashdi PhD

\*Senior Lecturer, Division of Public Administration and Policy, School of political Sciences, University of Haifa, Haifa, Israel

## Abstract

### Correspondence

Dana R. Vashdi PhD  
Senior Lecturer  
Division of Public Administration and Policy  
School of political Sciences  
University of Haifa  
Haifa 31905  
Israel  
E-mail: dvashdi@poli.haifa.ac.il

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**Objective** To examine whether there are individual level factors such as socio-economic status that may predict disparities in the public's experiences with and expectations of their health-care providers.

**Data sources/study setting** Primary data were collected in 2010. The sample comprised of 1211 Israeli citizens above the age of 18.

**Study design** Participants were randomly approached at one points in time and presented with statements regarding practices they experience and practices that are important to them related to primary care, preventive care and health promotion. We calculated a difference scores for each health-care area. We measured socio-economic status (SES) with three separate variables relating to income, education and living location.

**Data collection/extraction methods** Employees of a professional telephone survey firm conducted the survey. Multiple regression was used with the responsiveness gap in each of three health-care areas as the dependent variables.

**Principal findings** We found that level of education is negatively related to the extent of the responsiveness gap in both primary and preventive health care and that income is negatively related to the responsiveness gap in health promotion.

**Conclusions** Personal characteristics such as SES are related to people's perceptions about the extent of the responsiveness gap. Policy makers can now expend efforts and resources in minimizing such responsiveness gaps among specific populations.

## Introduction

The framework put forward by the World Health Organization (WHO) in 2000 highlighted health responsiveness as one of the main targets in the assessment of the performance of health-care systems.<sup>1</sup> Thus, health

systems throughout the world are exploring ways for making their services responsive to patients and the public.<sup>2</sup>

The logic for the WHO framework is based in the literature advocating the importance of health responsiveness as expressed by two main ideas: the first is straightforward, reminding us

that health systems' goals are to meet the needs of the people they serve.<sup>3</sup> The second suggests that health-care quality can be assessed by taking into account observers, namely patients' evaluations of, for example, physician conduct, service availability, confidence in the system and outcomes.<sup>4</sup> The WHO's aim is to check how well health systems meet the expectations of the population in regards to its interactions with the system, such as: dignity, autonomy and confidentiality as well as the extent to which these systems are oriented to giving clients prompt attention, high-quality basic amenities, accesses to social support and the choice of which health provider to receive services from.

The medical discourse today is influenced by two paradigms, evidence-based medicine and patient-centred medicine.<sup>5</sup> While, evidence-based medicine stresses a positivistic, biomedical perspective regarding the most adequate medical treatment, evidence stemming from measures of responsiveness converge with the patient-centred medicine paradigm which takes into account the patient perspective and tunes medical care to patients' needs and preferences. Thus, the WHO's target of responsiveness is very much in accordance with this paradigm.

This target of responsiveness concurs with democratic notions of being responsive to public needs.<sup>6-8</sup> Policy outcomes that are distant from public needs and expectations result in what political scientists term a responsiveness deficit or gap.<sup>9,10</sup> Responsiveness gaps are important because as some theorists note,<sup>11,12</sup> there are legitimacy concerns at stake when responsiveness declines overtime<sup>13,14</sup> or when policy tends to favour business leaders<sup>15</sup> or affluent individuals<sup>16</sup> over the mass public. The same may hold true when examining responsiveness gaps in any subsystem such as the health-care system.

Up until now, researchers have examined the responsiveness gap at the national level, associating it with such factors as the institutional design of the government, the operation of national legislatures, the presidency, interest organizations, political parties and

bureaucracy.<sup>17-20</sup> In a previous *paper*, we demonstrated that the responsiveness gap can be examined at the individual level by examining the gap between what people perceive they receive (i.e. policy outcomes) and what is important to them (i.e. values, needs).<sup>21</sup> In that paper, we examined the extent to which there is a responsiveness gap in three areas of health care: primary health care, preventive health care and health promotion. These three health-care dimensions were conceptualized by the OECD as core functions of any health-care system.<sup>22</sup> Having established that the responsiveness gap can be examined at the individual level, in the current study, we investigate whether individual level factors are associated with or can predict the responsiveness gap in these different health-care dimensions.

We propose that individual level factors such as socio-economic factors may help to explain the variance in health-care-related responsiveness gaps. The question then becomes for each policy area and for different aspects/dimensions of the policy area, what characterizes the public that perceives larger responsiveness gaps. In other words, policy makers/health-care administrators that target efforts to minimize responsiveness gaps will have more information regarding whom and in what areas should these efforts be concentrated on and use this important information in developing and examining alternatives in the policy formation process. In health care, this is especially important due to the overwhelmingly reported evidence affirming that meeting patients' expectations is associated with adherence to therapy, health-care utilizations, malpractice litigation, switching doctors or health plans and is a common method by which physicians and health-care systems are compared and evaluated.<sup>23</sup> Thus, forming a policy that minimizes the responsiveness gap in a specific health-care dimension or for a specific population is likely to directly impact health outcomes. In contrast to policy formation based on common sense, popular support and political ideology,<sup>24</sup> policy formation based on data regarding a

responsiveness gap is more likely to have real impact. Thus, pinpointing specific populations based on socio-economic status that perceive a responsiveness gap in a specific dimension may not only adhere to the WHO's goals but may also enable policy makers/administrators and service providers to concentrate their efforts and enlarge the probability of success.

#### Predicting the extent of the responsiveness gap

As mentioned above, the next step beyond showing that citizens can themselves perceive responsiveness gaps is to identify what factors may predict the different gaps. Such factors may include population characteristics such as socio-economic status (SES) or political ideology. Such predictors may vary depending on the specific responsiveness gap being examined.

Studies have established the relationship between SES and many health-care variables. While SES encompasses many different factors, income and education are the two most prominent factors examined in the literature.<sup>25,26</sup> Researchers have consistently found that a lower income is associated with poorer health.<sup>27–29</sup> Poorer and less educated individuals are also more likely than higher income and more educated individuals to consult their GP.<sup>30,31</sup> While it is not surprising those with poorer health are more likely to consult a GP, the question remains whether poor health is the only explanation for differences in usage of the health-care system and if these also explain differences in perceptions regarding what should and is provided. *For* example, the more educated have been shown to take responsibility for their own health, while the less educated are more dependent on their doctor.<sup>17,32</sup> Thus, these higher educated individuals adopt a more autonomous approach to health care.<sup>33</sup> Beyond actual health status, it is likely that people with higher education will expect less from the health-care system than those with a low SES as they are relatively free of disease or illness, knowledgeable, personally autonomous and informed to

control and affect their health behaviour and health status.<sup>34–37</sup> In turn, these low expectations are likely to reduce perceptions of the responsiveness gap.

Studies have also determined that SES is related to lifestyle variables associated with 'healthy' behaviours (i.e. health promotion behaviours). The existing literature on the relations between lifestyle and SES is gigantic. Hence, for the purpose of our research, we have focused on lifestyle attributes that have been shown to effect health experiences and expectations. Following Kim, Symons and Popkin<sup>38</sup> who measured lifestyle according to a lifestyle index, we have concentrated our evidence search on their four key lifestyle factors: diet, physical activity, smoking and alcohol use. Uneducated, low income people tend to eat badly, to smoke, to consume alcohol and to neglect physical activity. Contoyannis and Jones<sup>39</sup> found that those with a low socio-economic status are less likely to sleep well, eat breakfast or exercise and are more likely to be alcohol consumers and smoke. In addition, some health promotion activities require the purchase of tangible resources such as buying healthy food products or enrolling in a sports activity centre. The less affluent cannot afford such activities<sup>40</sup> and hence are likely to expect their health-care provider to supply them. Thus, we predict that when examining the extent of the gap in health promotion in particular, income will be an ample predictor.

#### Research hypotheses

1. SES measured in terms of income, education and one's place of residence will be negatively related to the extent to which the person perceives a responsiveness gap with regard to primary health care, preventive medicine and health promotion.
2. The relationship between SES and perceptions about the responsiveness gap will be different in the three health-care areas, with income more strongly related to the responsiveness gap in health promotion.

## Method

### The setting

The study was conducted in Israel, which operates under a system of universal health coverage. Under the National Health Insurance Law passed in 1995, all citizens are required to enrol in one of four not for profit health insurance funds, which compete for members. Israel's Ministry of Health regulates the system and also owns some services, including some hospitals, psychiatric health services, and maternal and child health centres. The government covers the cost of a uniform benefits package for all citizens regardless of their financial means; individuals may choose to pay for additional services and treatments not included in the basic package.

### Sampling and data collection

Employees of a professional telephone survey firm contacted a random sample of Israeli households during October and November of 2010, using computer-assisted telephone interviewing. Interviewers asked the first person they spoke to in each household who was 18 or older if they would be willing to discuss their views on health care. Interviews were conducted in Hebrew, Russian, or Arabic, according to the participant's native language. A pilot was conducted in September with 43 participants to make sure the questions were clear and that the respondents indeed could state the importance of the services in the different health-care issues.

The sample was comprised of 1211 individuals above the age of 18, with a response rate of 55%. Respondents included 636 females and 575 males, with an average age of 47.5 years. Eight hundred and three of the respondents were Jewish, and 408 were Arab.

### Measures

#### *Dependent variable: responsiveness gap*

Participants were presented with two sets of statements about practices related to primary

care (14 items), preventive care (2 items) and health promotion (3 items). The first set elicited respondents' perceptions about the practices they experience with their health-care provider, and the second elicited the practices that are *important* to them, indicating their expectations. The literature supports a possible influence of prior expectations on how one reports experience with quality of care<sup>41</sup>; thus, the experience questions were presented first. The first set was introduced as follows: 'I will read a number of sentences regarding your health-care provider. On a scale from 1 to 7, please indicate the extent to which you agree with each sentence'. The second set of statements was introduced in this way: 'As you know, healthcare providers lack resources such as manpower and money, and therefore cannot provide everything that is required. Please rate what is important to you, while thinking of your priorities (what is more and what is less important to you). Take into consideration that it is not realistic to receive the best of everything in every area. I will read the sentences again regarding your healthcare provider. Please rate to what extent each one is important to you on a scale of 1–7. Expectations regarding different elements of health care have been similarly examined in the past.<sup>42</sup>

The items regarding primary care were adopted from the Primary Care Assessment Survey<sup>43</sup> and the SERVQUAL scale, which measures perceptions of service quality.<sup>44</sup> A sample item is, 'The amount of time you wait for a scheduled appointment with your regular doctor is short'. The promotion-related items were adopted from McAvoy *et al.*<sup>45</sup> and Stott and Pill.<sup>46</sup> A sample item is, 'Your doctor is interested in your way of life, and asks question regarding your lifestyle'. The items dealing with prevention were adopted from the questionnaire developed by Hutchison *et al.*<sup>47</sup> A sample item is, 'Your doctor encourages you to get immunizations'.

As we were interested in the gap between experiences and expectations for each item, we calculated a difference score *Q*, defined as  $Q = \text{expectation} - \text{experience}$ , for a given

respondent for a given item. We then averaged the difference scores for primary care, promotion and prevention for each respondent indicating the responsiveness gap for that individual.

*Independent variable: socio-economic status*

We measured SES with three separate variables. *Income* was assessed with a question asking, 'What is the net monthly income of your household including all income sources such as salary, pension, state allowances, rent etc.?' using an 11-point scale ranging from 1 meaning no income to 11 meaning an income above NIS 24 000 (equivalent approximately to more than US \$6000). We used the categories of income and did not ask participants to indicate the exact dollar sum of their income in an attempt to minimize respondent reluctance/refusal to answer economic questions.<sup>48</sup> *Education* was assessed by asking the respondent to indicate his/her educational level on a 5-point scale ranging from 1 meaning no education to 5 meaning an academic education beyond high school. In accordance to what has previously been performed in similar studies,<sup>49–51</sup> we chose to examine the education qualification and not years of education. Finally, we asked respondents where they lived. Using the Central Bureau of Statistics data, we indicated whether the location was in the centre of the county (=1) or considered the periphery (=0).

*Control variables*

As explained by Becker,<sup>52</sup> control variables are variables that researchers include in their analysis to rule out alternative explanations or to reduce error terms and increase statistical power. As we were interested in the impact that SES has on the different responsiveness gaps above and beyond the impact of other demographic and health-related variables, we included a number of control variables – gender (1 = male, 0 = female), age (date of birth), marital status (1 = married, 0 = not married), ethnicity (1 = Jewish, 0 = Arab), number of children, religiosity (measured on a scale of 1–5 with 1 indicating extremely religious) and

health status (measured on a 1–5 scale with 5 indicating excellent health) in our analysis. In addition, we created three dummy variables capturing which of the four health insurance funds the individual belonged to. We also asked if the individual had additional coverage within or her health insurance fund (1 = yes, 0 = no), whether he/she had additional private coverage (1 = yes, 0 = no) and the extent to which the individual was satisfied with his/her health insurance fund (on a scale of 1, with 1 = very dissatisfied and 5 = very satisfied).

**Analysis**

We used multiple regressions to examine the effects of SES on each of the three responsiveness gaps. Specifically, we regressed each responsiveness gap on the SES variables in the context of a model in which we controlled for all of the control variables noted above.

**Results**

Descriptive statistics are presented in Tables 1 and 2. Before examining our hypotheses, we examined the correlations among the three responsiveness gap variables. All three responsiveness gaps were correlated with each other indicating that people who perceive a gap in one health-care area are likely to perceive one in another. However, these correlations were all moderate, ranging from 0.34 to 0.57 and indicating that there is a substantial difference in the perceptions about the different gaps.

Our first hypothesis examined whether SES would help in predicting the extent to which there is a responsiveness gap with regard to primary health care, preventive medicine and health promotion. In addition, we examined whether the prediction was different depending on the health-care area in which we were investigating the responsiveness gap. As Tables 3–5 show, when conducting a multiple regression with the responsiveness gap in each health-care area as the dependent variable, one of the variables comprising SES was significant. More specifically, level of education was negatively



**Table 1** Frequencies of variables describing the sample

	Frequency	Total
Gender		
Female	529	1007
Male	478	
Marital status		
Not Married	221	994
Married	773	
Ethnicity		
Arabs	204	1007
Jews	803	
Religiosity		
Religious	208	996
Secular	788	
Health fund		
Maccabi	271	997
Meuhedet	116	
Leumit	75	
Klalit	535	
Additional insurance in health-care fund		
Yes	745	990
No	246	
Private insurance		
Yes	73	990
No	917	
Education		
No education at all	99	999
Primary school	58	
Secondary school	143	
Full matriculation	165	
Additional non-academic studies	179	
Academic degree	446	
Residence		
Periphery	383	986
Centre	603	

related to perceptions about the extent of a responsiveness gap in both primary care and preventive health care (Tables 3 and 5;

$b = -0.05$ ,  $P < 0.05$  for primary care responsiveness gap and  $b = -0.13$ ,  $P < 0.05$  for preventive health-care responsiveness gap), indicating that those with lower levels of education perceive a bigger responsiveness gap in the provision of these two areas of health care. We found these results in a model including all of the control variables discussed above, demonstrating that this component of SES is related to these responsiveness gaps above and beyond the effect of the control variables. A model including the controls and SES variables explained 24% of the variance in the responsiveness gap in primary health care and 11% of the variance in the responsiveness gap in preventive health care. These results support our first hypothesis.

With regard to the extent of the responsiveness gap in health promotion (Table 4), income was a significant predictor above and beyond the control variables included in the model. Income was negatively related to the responsiveness gap in health promotion ( $b = -0.10$ ,  $P < 0.01$ ) with less income indicative of a bigger perceived gap. The model including the control variables and SES variables accounted for 13% of the variance in the responsiveness gap about health promotion. These results support our second hypothesis.

## Discussion

Literature on responsiveness gaps is very scarce and limited. Many leading scholars mention its significance in the literature on democratic governance<sup>17,53,54</sup> and the aspiration to not only

**Table 2** Descriptive statistics of continuous research variables

	N	Minimum	Maximum	Mean	SD
Year of birth	997	1914	1992	1960.91	15.112
Number of children	943	0	14	2.97	1.895
Health status	997	1	5	3.97	0.916
Satisfaction from health-care fund	1001	1	5	4.11	0.954
Income	741	0.00	10.00	5.6030	2.52915
Primary health-care responsiveness gap	1003	-5.62	4.86	0.6755	0.91463
Promotion health-care responsiveness gap	993	-6.00	6.00	1.1196	2.07596
Prevention health-care responsiveness gap	991	-6.00	6.00	1.2284	2.14464

**Table 3** Regression analysis with primary health-care gap as the dependent variables

Model	Unstandardized coefficients		Standardized coefficients		Significance	95.0% CI for <i>b</i>	
	<i>b</i>	SE	Beta	<i>t</i>		Lower bound	Upper bound
Constant	9.842	4.646		2.118	0.035	0.719	18.965
Gender	-0.076	0.064	-0.043	-1.190	0.234	-0.201	0.049
Year of birth	-0.004	0.002	-0.062	-1.532	0.126	-0.008	0.001
Marital status	0.006	0.084	0.003	0.077	0.939	-0.158	0.171
Ethnicity	0.008	0.104	0.003	0.073	0.942	-0.197	0.212
Religiosity	0.022	0.090	0.010	0.245	0.807	-0.155	0.199
Number of children	0.033	0.022	0.067	1.525	0.128	-0.009	0.075
Health status	-0.035	0.035	-0.038	-1.017	0.309	-0.103	0.033
Satisfaction from health-care fund	-0.384	0.032	-0.419	-11.961	0.000	-0.447	-0.321
Maccabi vs. Klalit Health-care Fund	-0.023	0.072	-0.012	-0.320	0.749	-0.165	0.119
Meuhedet vs. Klalit Health-care Fund	-0.108	0.102	-0.040	-1.062	0.289	-0.307	0.092
Leumit vs. Klalit Health-care Fund	0.314	0.118	0.096	2.658	0.008	0.082	0.546
Additional insurance in health-care fund	-0.104	0.090	-0.050	-1.150	0.251	-0.281	0.074
Private insurance	0.025	0.139	0.008	0.183	0.855	-0.247	0.298
Income	-0.017	0.015	-0.049	-1.092	0.275	-0.047	0.013
Education	-0.054	0.026	-0.082	-2.082	<b>0.038</b>	-0.104	-0.003
Periphery vs. centre	-0.045	0.065	-0.025	-0.685	0.494	-0.172	0.083

*N* = 663; *R*<sup>2</sup> = 0.24.

**Table 4** Regression analysis with health promotion gap as the dependent variables

Model	Unstandardized coefficients		Standardized coefficients		Significance	95.0% CI for <i>b</i>	
	<i>b</i>	SE	Beta	<i>t</i>		Lower bound	Upper bound
Constant	12.878	12.153		1.060	0.290	-10.987	36.744
Gender	-0.256	0.167	-0.060	-1.536	0.125	-0.583	0.071
Year of birth	-0.004	0.006	-0.031	-0.711	0.478	-0.017	0.008
Marital status	-0.146	0.220	-0.028	-0.665	0.506	-0.578	0.285
Ethnicity	0.161	0.272	0.025	0.593	0.553	-0.373	0.695
Religiosity	0.106	0.236	0.019	0.452	0.652	-0.356	0.569
Number of children	-0.020	0.056	-0.016	-0.347	0.729	-0.130	0.091
Health status	0.144	0.090	0.065	1.596	0.111	-0.033	0.321
Satisfaction from health-care fund	-0.674	0.084	-0.303	-8.045	0.000	-0.839	-0.510
Maccabi vs. Klalit Health-care Fund	-0.138	0.188	-0.030	-0.734	0.463	-0.508	0.231
Meuhedet vs. Klalit Health-care Fund	0.114	0.267	0.017	0.428	0.669	-0.410	0.639
Leumit vs. Klalit Health-care Fund	0.438	0.308	0.055	1.421	0.156	-0.167	1.043
Additional insurance in health-care fund	0.095	0.239	0.019	0.397	0.691	-0.375	0.565
Private insurance	0.397	0.364	0.050	1.091	0.276	-0.318	1.111
Income	-0.093	0.040	-0.111	-2.314	<b>0.021</b>	-0.172	-0.014
Education	-0.081	0.067	-0.051	-1.199	0.231	-0.213	0.052
Periphery vs. centre	-0.053	0.170	-0.012	-0.309	0.757	-0.387	0.282

*N* = 656; *R*<sup>2</sup> = 0.12.

identify it, but also to find ways to minimize it in order to strengthen trust and legitimacy, and even to encourage civic participation. As

mentioned above, the WHO has adopted this challenge and regards the extent of responsiveness as a performance measure health-care

**Table 5** Regression analysis with prevention health-care gap as the dependent variables

	Unstandardized coefficients		Standardized coefficients		Significance	95.0% CI for <i>b</i>	
	<i>b</i>	SE	Beta	<i>t</i>		Lower bound	Upper bound
Constant	-38.202	12.403		-3.080	0.002	-62.557	-13.848
Gender	-0.388	0.171	-0.089	-2.272	0.023	-0.722	-0.053
Year of birth	0.021	0.006	0.146	3.324	0.001	0.009	0.033
Marital status	-0.444	0.225	-0.084	-1.972	0.049	-0.886	-0.002
Ethnicity	-0.039	0.279	-0.006	-0.138	0.890	-0.586	0.509
Religiosity	-0.462	0.241	-0.083	-1.918	0.056	-0.935	0.011
Number of children	0.090	0.058	0.074	1.570	0.117	-0.023	0.203
Health status	0.255	0.092	0.112	2.763	0.006	0.074	0.436
Satisfaction from health-care fund	-0.511	0.086	-0.226	-5.973	0.000	-0.679	-0.343
Maccabi vs. Klalit Health-care Fund	0.126	0.193	0.027	0.656	0.512	-0.252	0.505
Meuhedet vs. Klalit Health-care Fund	0.220	0.272	0.033	0.810	0.418	-0.314	0.755
Leumit vs. Klalit Health-care Fund	0.562	0.318	0.069	1.766	0.078	-0.063	1.187
Additional insurance in health-care fund	0.084	0.244	0.016	0.344	0.731	-0.395	0.563
Private insurance	-0.086	0.372	-0.011	-0.230	0.818	-0.815	0.644
Income	0.048	0.041	0.056	1.173	0.241	-0.033	0.129
Education	-0.152	0.069	-0.094	-2.199	<b>0.028</b>	-0.288	-0.016
Periphery vs. centre	0.090	0.174	0.020	0.518	0.605	-0.252	0.432

*N* = 657; *R*<sup>2</sup> = 0.12.

organizations are measured by. However, little has been performed to empirically examine individual level factors which may be associated with the extent of the gaps.

This study sought to examine whether SES, an individual level variable, is related to the responsiveness gap in three health-care areas. Indeed, we found that SES is associated with responsiveness gaps in the areas assessed. In fact, our division of the health-care policies into three separate health-care dimensions proved to be significant, because discrete SES variables predicted gaps in different areas.

We found that after controlling for important factors such as health status and gender, a lower level of education predicted greater gaps both in primary and preventive health care. The association between less education and larger gaps specifically in primary and preventive health care may result from the fact that while the demand for primary and preventive care is infinite,<sup>55,56</sup> education may restrain these demands. In other words, more highly educated individuals have more realistic expectations from their primary and preventative health-care

providers and thus perceive a smaller responsiveness gap.

As can be seen in Table 6, we conducted some *post hoc* analysis to further understand the relationship between education and the gap found in primary and preventative health care. We calculated the mean and standard deviation of education level and divided the sample into those with a high level of education (i.e. those whose education level is higher than one standard deviation above the mean level of education), those with a low level of education (i.e. those whose education level is lower than one standard deviation below the mean level of education) and those with a medium level of education (i.e. those who fall between the thresholds for low and high levels of education). The table shows that in regards to the way people experience what they receive in primary health care, there is no difference between people with high, medium or low levels of education (i.e. indicated by the non-significant one-way ANOVA). The difference lays in expectations. Those with high levels of education expect less than those with low or medium levels of education.



**Table 6** Mean levels of experienced and expected primary health care, health promotion and prevention by education and income

	Education				Income			
	Low	Medium	High	One-way ANOVA significance level	Low	Medium	High	One-way ANOVA significance level
Primary health care								
Experienced	5.7	5.7	5.8	0.74	5.6	5.8	5.8	0.13
Expected	6.5	6.5	6.3	0.00	6.4	6.4	6.3	0.00
Health promotion								
Experienced	4.9	4.5	4.4	0.01	4.8	4.6	4.5	0.46
Expected	6.0	5.9	5.4	0.00	6.1	5.7	5.3	0.00
Prevention								
Experienced	4.9	4.7	4.5	0.01	5.2	4.5	4.4	0.00
Expected	6.1	6.0	5.6	0.00	6.0	6.0	5.5	0.00

These findings empirically supports our claim above that, at least in regards to primary health care, more highly educated individuals have more realistic expectations from their health-care provider. In regards to preventative health-care people with high levels of education experience less prevention from their health-care provider and expect to receive less prevention activities from their health provider. Thus, while in regards to prevention more highly educated people may have more realistic expectations, they also perceive that they are getting less than those with lower levels of education.

In addition, after controlling for important factors such as health status and gender, lower income predicted larger responsiveness gaps in health promotion. This finding shows that having a lower income not only means having less access to more healthy food and exercise facilities,<sup>39</sup> but that less wealthy individuals feel that they are not receiving what they value as important from their health-care providers. To support this claim empirically, we conducted additional *post hoc* analysis by dividing the sample according to income level in a similar manner to what we did for education. As can be seen in Table 6, the mean experience levels of health promotion activities were the same for people of low, medium and high income (i.e. indicated by the non-significant one-way ANOVA), the difference here too lays in the expectations. Those with lower levels of income

have higher expectations from their health-care provider in regards to health promotion. It seems less affluent people have higher expectations that their health-care provider will support them with programmes designed to promote healthy living such as counselling on giving up smoking and drinking, and workshops on diet and nutrition.

Thus, our data point to the direction that when it comes to health promotion, more affluent respondents have more self-awareness about their needs and accept more personal responsibility for their health. While they have lower expectations from the public health-care system, they also have the resources to take proactive measures that will promote their health.

It is important to acknowledge that citizens' degrees of satisfaction with their health-care provider proved to be related to all three responsiveness gaps. Greater satisfaction predicted narrower responsiveness gaps in the three areas measured. Future research studying explanations for responsiveness gaps should look at correlates between levels of satisfaction with health-care providers and perceptions about responsiveness gaps.

#### Theoretical and practical contribution of the study

From a theoretical point of view, we demonstrated that personal characteristics such as

SES are related to people's perceptions about the extent of the responsiveness gap. We showed that SES has an effect above and beyond such factors as health status, gender and age. Furthermore, we developed a theoretical platform on which to hypothesize about gaps in other policy areas and with regard to other personal characteristics that may predict these gaps. Future theory on responsiveness may need to acknowledge that responsiveness can be conceptualized on different levels of analysis (i.e. the individual or group) and not only as a characteristic of a society. When examining responsiveness at the individual level, theories may develop in an attempt to understand which different individual level factors are associated with the extent to which individuals perceive a responsiveness gap in different policy dimensions.

On the practical side, those interested in narrowing the gap between what the public expects or values and what it actually receives may need to do more for specific populations such as the less educated or less affluent. Doing more for these groups is easier and more practical than trying to answer or satisfy general public needs or values. Besides acting in an attempt to minimize the gap in order to adhere to the WHO's goal of responsiveness, policy makers and health-care managers may also be motivated to minimize the gap due to the overwhelmingly reported evidence affirming that meeting patients' expectations is associated with adherence to therapy, health-care utilizations, reduction in malpractice litigation and in switching doctors.<sup>23</sup>

Our conceptualization of the responsiveness gap and the approach we offer to measure it suggests three options to narrow the distances between expectations and experiences. Shrinking the gap may progress either in enhancing experiences, reducing expectations or both. Our results show that while there is room to improve the experiences people have with their health-care provider on all health-care dimensions examined in this study, what is especially high are the expectations (average expectations of all SES groups were around 6 on a scale of

1–7). Thus, besides enhancing experiences, policy makers and health-care managers may invest in actions aimed at the adjustment of expectations of specific populations. For instance, policy makers may wish to target less affluent populations and provide them with more information regarding healthy behaviours as well as find ways to motivate them to take more personal responsibility on their health. If these populations have more knowledge and motivation to behave in a healthier manner, they are likely to lower their expectation that their health-care provider will promote their health. Such conduct is also likely to help create trust as well as encourage these public groups to continue to participate in policy decision making. In addition, policy makers and health-care administrators may want to more clearly state to the less educated public the primary and prevention services that the health-care organization is able to provide in order to make their expectations more realistic.

Accordingly, it is important that future research investigate whether SES is related to gaps in other health-care areas such as secondary health care so that a fuller picture of these relationships becomes apparent to policy makers.

### Limitations

A limitation of our study concerns the generalizability of our findings. The Israeli health-care system differs from those of many other nations in important respects, particularly with regard to its feature of non-profit, non-government health-care insurance companies that manage public funds. However, while other health-care systems may plan and deploy health-care policies in other ways to answer their citizens' needs, there is no reason to expect that the relationship between SES and the responsiveness gap with regard to those policies is likely to be different. Conducting such studies in other environments will indicate whether this prediction proves to be true.

Another limitation regarding the Israeli setting leans on the fact that priority setting

process in health care is highly explicit, with extensive media coverage.<sup>57</sup> This may lower expectations as citizens are more aware of the limits of the health-care system. Thus, in other countries in which these processes are less explicit, the average level of expectations in the health policy dimensions may be higher. In addition, this may be one explanation for the finding that more highly educated people expected less in primary and preventative health care as they are likely to have consumed more public-information from this type of media discussions.<sup>58</sup> Further research may want to examine this explanation.

Finally, Baron-Epel and Kaplan<sup>59</sup> emphasize the importance of examining not only objective SES but also subjective socio-economic status (SSS) as subjective feelings individuals have regarding their position in society can explain disparities in health. Future research may want to examine whether the findings presented in the current study hold not only for objective SES measures but also for the subjective measures of position in society.

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