




# BMJ Open Preference for shared decision-making among Arabic-speaking people with chronic diseases: a cross-sectional study

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## ABSTRACT

**Objectives** To assess Arabic-speaking patients' preference for involvement in decision-making in the United Arab Emirates (UAE) and characterise people who preferred involvement in decision-making.

**Design** Cross-sectional quantitative study. The conduct and reporting of this research complied with Strengthening the Reporting of Observational Studies in Epidemiology guidelines for cross-sectional studies.

**Setting** Participants were recruited from outpatient clinics of 10 major hospitals in four cities in the UAE: Abu Dhabi, Dubai, Sharjah and Umm al Quwain.

**Participants** Adult patients with at least one chronic disease completed a cross-sectional survey consisting of 37 items in six sections measuring variables that may influence preferred involvement in decision-making.

These included health literacy, health status, unanswered questions about care and satisfaction with treatment decisions. Bivariate and multivariate analyses were performed to determine the predictors of patients' preferred involvement in decision-making.

**Results** A total of 516 participants completed the survey. One-in-four participants preferred shared decision-making. Preferred involvement in decision-making was more frequent among women, not married, unemployed, people who rarely/never had unanswered questions and participants with anxiety/depression symptoms. After adjustment, not being married (OR=1.634; 95% CI 1.049 to 2.544) remained as a predictor of preferred involvement in decision-making, while having unanswered questions (OR=0.612; 95% CI 0.393 to 0.954) and problems in self-care were predictors of a preference for paternalistic decision-making (OR=0.423; 95% CI 0.181 to 0.993).

**Conclusions** Contrary to the results from Western countries, this study showed that a majority of Arabic-speaking patients with chronic diseases preferred a paternalistic decision-making model. At the same time, some subgroups of Arabic-speaking people (eg, women, unemployed patients) had a higher preference for participation in decision-making. Physicians' support and changes in healthcare systems are required to foster Arabic-speaking patients' involvement in treatment decision-making process.

## INTRODUCTION

The inclusion of patients' preferences, needs and values in the provision of care

## Strengths and limitations of this study

- This study revealed a first portrait of patients' preferences regarding shared-decision making (SDM) in the United Arab Emirates.
- A robust sample of 516 Arabic-speaking patients with chronic diseases was recruited, providing useful information to improve healthcare provision in chronic diseases.
- Being a cross-sectional study, causality between the preference for SDM and the studied factors could not be established, calling for the need for longitudinal studies in this field.

is receiving increasing attention in many healthcare systems worldwide.<sup>1–3</sup> The WHO's global strategy on integrated people-centred health services for 2016–2026 called for a fundamental paradigm shift in clinical practice against the predominantly paternalistic model of healthcare delivery.<sup>4 5</sup> A central component of both people-centred care and patient-centred care, two highly overlapping concepts,<sup>6</sup> is the promotion of shared decision-making (SDM) in the clinical context.<sup>1 7 8</sup> SDM has been described as a process in which clinicians and patients are both involved in exchanging information, expressing treatment and disease management preferences and agreeing on a decision.<sup>9 10</sup> This approach can support better-informed decisions that are congruent with patients' preferences and values.<sup>11</sup> The evidence regarding the effectiveness of SDM to improve patient outcomes is scarce, particularly for behavioural and health outcomes.<sup>12–14</sup> However, patients who have been involved in their treatment decisions report less decisional conflict and more satisfaction with treatment decisions.<sup>12 14–17</sup>

A systematic review of global literature on patients' preference for sharing decisions with physicians showed that most patients would like to discuss options and share their opinions about treatment.<sup>18</sup> Some patients

wanted health professionals to provide evidence-based recommendations that considered their individual preferences,<sup>19 20</sup> while others preferred to leave final treatment decisions up to the doctor.<sup>18 20–22</sup> Nevertheless, physicians remained the main source of medical and health information,<sup>23</sup> and many patients preferred to rely on them for medical knowledge rather than seeking out information themselves.<sup>22</sup> Concurrently, physicians have expressed their general support for incorporating SDM into practice.<sup>24–26</sup>

Several factors may influence the extent of preference for SDM by patients, with most research on this topic being conducted in Western countries. Health literacy can be defined as the personal skills and environmental conditions that enable individuals to obtain, understand and use information to make health-related decisions and to engage in behaviours that will impact their health status.<sup>27</sup> It promotes a proactive role in encounters with healthcare professionals and institutions. Thus, higher levels of health literacy allow for greater autonomy and control over health decision-making and are significantly related to the ability of patients to participate in medical decision-making.<sup>27 28</sup> In comparison, lower literacy levels may reduce the possibility for SDM, impeding fluent communication<sup>28 29</sup> and leading to unmet information needs.<sup>30 31</sup> Furthermore, health status is also associated with preference for SDM by patients. Research indicates that patients with mental and/or physical health issues do not engage in an effective SDM process with their healthcare providers,<sup>32</sup> while those who were involved in decision-making and those wishing to be more involved had an overall better health than other groups.<sup>31</sup> Additionally, women, patients with a higher educational level and healthier individuals were more likely to prefer an active role in decision-making,<sup>22</sup> while older people were more likely to prefer physician-led decisions.<sup>19 33</sup>

Research on preference for SDM by Arabic-speaking patients has received increasing attention recently.<sup>23 26</sup> Existing studies with this population revealed that both patients and physicians had a positive attitude towards active patient participation in clinical decision-making.<sup>26 34</sup> The preference for SDM was significantly higher among male patients and those with higher level of education, whereas paternalism was higher among older patients and those with chronic health conditions.<sup>34</sup> Notwithstanding, some barriers have hindered opportunities for SDM, such as the perception of physicians that evidence negates the need for SDM, contextual/environmental factors such as sociocultural impediments and the perception of the patients' unwillingness to be involved in decisions concerning their health. The implementation of SDM is fundamental in chronic diseases, in which there are multiple possible treatments, diverse options for the management of the disease and unclear outcomes.<sup>9 11</sup> This is especially relevant in a country such as the United Arab Emirates (UAE), where there is a high prevalence of chronic diseases, namely obesity, diabetes, cancer and heart diseases.<sup>26</sup> Research about patients' preferences

regarding SDM in non-western countries is still scarce and it is essential to promote the development of healthcare systems that are responsive to people's needs. Thus, this cross-sectional study aimed to determine: (1) the proportion of Arabic-speaking patients with chronic diseases in the UAE that prefer to be involved in SDM and (2) the factors associated with preference for SDM.

## MATERIALS AND METHODS

### Study design and setting

A cross-sectional exploratory survey was conducted in the outpatient clinics (endocrinology, cardiology and internal medicine) of 10 major hospitals in four cities in the UAE: Abu Dhabi, Dubai, Sharjah and Umm al Quwain. The hospitals were purposefully selected as they are visited by large numbers of Arabic-speaking patients with chronic diseases. Data were collected from September 2017 through January 2018. The Strengthening the Reporting of Observational Studies in Epidemiology statement was followed in the conduct and reporting of this research (online supplemental appendix 1).

### Study participants

During the data collection period, research assistants directly approached all patients attending the outpatient clinics in the selected hospitals while they were waiting for their appointments. Research assistants asked patients if they were of Arabic background, spoke Arabic, had at least one chronic disease and were at least 18 years of age to determine eligibility to participate. The study's objectives were explained to eligible patients and those who agreed to participate signed an informed consent sheet. Participants self-completed the study's questionnaire.

### Questionnaire development

A scoping review of the literature was conducted and several relevant studies that assessed the extent of SDM and patient preference were identified.<sup>18 22 35–37</sup> The survey consisted of 37 items in six sections using previously validated instruments that assessed participants' preference for SDM and factors that may influence such preference. Apart from the sociodemographic variables, the authors developed an additional section to measure patients' sources of information, their interest in learning more about their condition(s) and whether (or not) they had unanswered questions about medical care.

Preferred involvement in decision-making was assessed by adapting the methods used by Levinson *et al*,<sup>22</sup> consisting of the use of three statements: (1) 'I prefer to rely on my doctor's knowledge and not try to find out about my condition on my own' (knowledge), (2) 'I don't prefer that my doctor offers me choices and asks my opinion' (options) and (3) 'I prefer to leave decisions about my medical care up to my doctor' (decision). The option statement was worded negatively to avoid respondent bias that may be caused by a statement that affirmed SDM.<sup>20</sup> Participants recorded their responses to the three

statements on a five-point Likert-type scale ranging from 'strongly agree' to 'strongly disagree'. The Arabic version of the EQ-5D-5L previously validated in the UAE was used to assess health status.<sup>38 39</sup> The EQ-5D-5L has five dimensions: pain and discomfort, anxiety and depression, mobility, usual activities and self-care. Participants indicated the level of problems they had in each of the dimensions on a five-point Likert-type scale ranging from 'no problem' (1) to 'extreme problem/inability to be functional' in each dimension (5). Health literacy was assessed using three validated items measuring the frequency of having difficulties in reading and learning about medical conditions, and the confidence in completing medical forms.<sup>40</sup> Participants recorded their responses to the three items on a five-point Likert-type scale ranging from 'always' (1) to 'never' (5), or from 'extremely' (5) to 'not at all' (1). Participants with a total score below 10 in the three items were considered to have inadequate health literacy. Participants were also asked whether they had unanswered questions about their care and their preferred sources of information. Satisfaction with treatment decisions was assessed using the six questions of the modified Satisfaction with Decisions Scale, which measures satisfaction independently of prognosis.<sup>41 42</sup>

The survey was written in Arabic and pilot tested with 10 patients with chronic diseases, two academic pharmacists, two family medicine physicians, one sociologist and one psychologist. This process ensured the face and content validity of the survey, and the clarity of all items as well as established the time needed to complete the survey by participants. Suggestions mainly concerned the wording of the questionnaire items, and changes were made as appropriate. The questionnaire is provided as online supplemental file 1.

### Sample size

Sample size was calculated using Cochran's sample size formula  $n = z^2 * p * (1-p) / e^2$ . In order to maximise the value of the minimum sample size required in the absence of an estimate for the proportion of individuals preferring SDM in a population similar to ours, the value of  $p$  in the formula was set at 50%. For a confidence level of 95%, and a maximum precision error of 5%, the calculated sample size was 385. This number was increased by 20% to compensate for missing data, yielding a minimum required sample size of 462 participants.

### Statistical analysis

The SPSS, V.25.0, was used to analyse data. Categorical variables were summarised as frequencies and percentages. The outcome variable was agreement level with the statement 'I prefer to leave decisions about my medical care up to my doctor'. Responses were recoded into two categories: disagree and agree/neutral. This recoding stemmed from the purpose of the current study to characterise participants with a clear preference to be involved in decision-making, that is, those who disagreed with leaving decisions about their medical care up to the

doctor. Bivariate analysis using the  $\chi^2$  test was carried out to study the association between the outcome variable and other categorical variables. Binary logistic regression was used to identify significant correlates of a preference for SDM. The main criterion for entering variables in the regression model was a  $p$  value less than or equal to 0.20 in the bivariate analysis, and the enter method was used. All assumptions of the regression analysis were checked prior to running the analysis. The Mahalanobis distance was used to check for multivariate outliers, and multicollinearity among the independent variables was examined using the Variance Inflation Factor and Tolerance. The independence of errors was tested using the Durbin-Watson test. The level of significance was set at 0.05.

### RESULTS

In total, 516 participants completed the study survey. Most were women (56.4%) and were between 31 and 60 years of age (68.2%) (table 1). Most participants were born in the UAE (76.4%) and were married (68.2%). Around 45% of participants held a university degree.

The most commonly reported chronic conditions were hypertension (44.2%), diabetes (41.3%) and dyslipidaemias (32.6%), and more than half of the participants had more than two chronic diseases (58.7%). With regards to health status, a majority of participants reported having a problem with pain and discomfort (50.6%), while 42.1% and 34.1% reported a problem with anxiety/depression and mobility, respectively. Approximately one-third of participants (32.8%) reported having no problems across the five dimensions of the EQ-5D-5L, while 27.1% reported having problems in three or more dimensions.

More than half of the participants had an adequate health literacy (63.0%). Approximately, one-third reported always or often requiring help in reading hospital materials (30.8%), and having problems learning about their medical conditions due to difficulty in reading hospital materials (29.1%). Moreover, nearly half of the participants (47.9%) had unanswered questions about their condition, treatment or care sometimes, and almost all (90.7%) were interested in learning more about their conditions or treatments. When asked about their most important sources of health information, participants cited physicians most frequently (82.9%), followed by the internet (50.4%), and their friends and family (38.4%).

### Preference for participating in SDM

Overall, the majority of participants (84.5%) were satisfied with their treatment decision (table 2). More specifically, 66.1% of participants reported being adequately informed about issues important to their treatment, and over 80.0% thought that the treatment decision was the best possible decision for them and were satisfied that the decisions were consistent with their personal values. Additionally, 85.1% expected to successfully continue to carry out the decision, and 82.2% were satisfied that the decisions were theirs to make.



**Table 1** Sociodemographic and clinical characteristics, health status and health literacy of study participants (N=516)

Variable		n (%)
Sex	Man	225 (43.6)
	Woman	291 (56.4)
Age (years)	18–30	89 (17.2)
	31–45	175 (33.9)
	46–60	177 (34.3)
	61–75	75 (14.5)
Country of birth	UAE	394 (76.4)
	Other Arab countries	122 (23.6)
Marital status	Married	352 (68.2)
	Unmarried	164 (31.8)
Educational level	Primary/middle school	151 (29.3)
	High school	134 (26.0)
	University degree	231 (44.8)
Employment status	Employed	270 (52.3)
	Unemployed*	246 (47.7)
Types of chronic diseases†	Hypertension	228 (44.2)
	Diabetes	213 (41.3)
	Dyslipidaemia/ atherosclerosis	168 (32.6)
	Heart failure/ arrhythmia	41 (7.9)
	Thyroid disorder	35 (6.8)
	Other‡	63 (12.2)
Number of chronic diseases	1	213 (41.3)
	≥2	303 (58.7)
Health problem dimensions†	Pain/discomfort	261 (50.6)
	Anxiety/depression	217 (42.1)
	Mobility	176 (34.1)
	Usual activities	118 (22.9)
	Self-care	49 (9.5)
Health literacy	Adequate	325 (63.0)
	Inadequate	191 (37.0)
- Need help in reading hospital materials	Always/often	159 (30.8)
	Sometimes	96 (18.6)
	Never/rarely	261 (50.6)
- Have problems learning about medical condition because of difficulty reading hospital materials	Always/often	150 (29.1)
	Sometimes	80 (15.5)
	Never/rarely	286 (55.4)

Continued

**Table 1** Continued

Variable		n (%)
- Confidence in completing forms	Extremely/quite a bit	350 (67.8)
	Somewhat	75 (14.5)
	Not at all/a little bit	91 (17.6)
Having unanswered questions regarding condition, treatment or care	Yes	247 (47.9)
	No	269 (52.1)
Interest in learning more about condition, treatment or care	Yes	468 (90.7)
	No	48 (9.3)
Sources of health information	Physicians	428 (82.9)
	Internet	260 (50.4)
	Friends/family	198 (38.4)
	Pharmacists	47 (9.1)
	Other§	13 (2.5)

\*Includes unemployed, retired and housewives.

†The total sum of the categories adds up to over 100% because multiple answers were possible.

‡Includes diseases such as hypo and hyperthyroidism, anaemia, asthma, chronic kidney failure, psoriasis, irritable bowel syndrome.

§TV, magazines or individuals with an academic background.

UAE, United Arab Emirates.

When asked about their preferred involvement in making treatment decisions, 75.4% preferred to leave decisions about their medical care up to the physician (table 3).

Nearly half of the participants (46.9%) preferred that their physician offers treatment options and asks for their opinions. However, 68.2% were neutral or agreed that they prefer to rely on their physician's knowledge. Participants who preferred involvement in decision-making were: women ( $p=0.032$ ), unmarried ( $p=0.020$ ), unemployed ( $p=0.006$ ), rarely or never had unanswered questions ( $p=0.002$ ) or had anxiety/depression symptoms ( $p=0.009$ ) (table 4).

### Correlates of preference for SDM among Arabic-speaking individuals with chronic diseases

For the logistic regression analysis, the omnibus model was statistically significant,  $\chi^2$  (df=9, N=516)=31.301,  $p<0.0005$ . Cox and Snell  $R^2=0.059$ , Nagelkerke  $R^2=0.088$  (table 5). After adjustment for the other variables, preference for SDM was more likely among participants who were unmarried (OR=1.634; 95% CI 1.049 to 2.544) and less likely among those who had unanswered questions (OR=0.612; 95% CI 0.393 to 0.954) and who reported problems in self-care (OR=0.423; 95% CI 0.181 to 0.993) (table 5).

**Table 2** Participants' satisfaction with treatment decisions (N=516)

Statement	
I am adequately informed about the issues important to my treatment decisions	Disagree
	Neutral
	Agree
The treatment decision was the best possible decision for me	Disagree
	Neutral
	Agree
I am satisfied that the decision was consistent with my personal values	Disagree
	Neutral
	Agree
I expect to successfully continue to carry out the decision	Disagree
	Neutral
	Agree
I am satisfied that this decision was mine to make	Disagree
	Neutral
	Agree
I am satisfied with the decision	Disagree
	Neutral
	Agree

## DISCUSSION

This study revealed that most Arabic-speaking patients with chronic diseases preferred to leave decisions about their medical care up to the physicians. These findings are consistent with the presence of a paternalistic model in which patients rely on physicians to make treatment decisions rather than a more collaborative process,<sup>46 79 10</sup> which demands changes in the power and knowledge hierarchies underlying the doctor–patient relationship.<sup>43</sup> However, at the same time, patients reported satisfaction with their treatment choice and felt that decisions were consistent with their personal values, which are relevant patient-reported outcomes in patient-centred healthcare services.<sup>1 2</sup> Their major source of health information was the physician, and patients felt adequately informed about important issues related to their treatment. This may reflect high levels of satisfaction with physicians and how highly regarded these professionals are within the Arab culture.<sup>44</sup> Furthermore, these results might also

reflect the societal and medical culture in the UAE, for example, patients who are very used to paternalism in healthcare might find it an uncommon idea to actively engage in decision-making regarding their own health. It could be possible that changes in healthcare delivery organisations (eg, leadership commitment to patient-centred care and SDM) and the health system at large (eg, inclusion of SDM in medical education curricula, policies and guidelines) to foster SDM also lead to changes of preferences for active engagement in decision-making of patients.<sup>45</sup>

However, almost half of the participants preferred that their physician offers treatment options and requests their opinions about them, indicating a desire for a patient-centred approach. When exploring patient preference for SDM, there is a need to distinguish between preferences for problem-solving, a role typically reserved for physicians, and participation in the decision-making process.<sup>46 47</sup> In our study, the preference to leave medical decisions to the physician may indicate that some participants understood decision-making to involve problem-solving, and, thus, may have rejected such a role due to feeling unprepared or unqualified. This is consistent with data from a review among patients with cancer from non-Western countries, showing that although patients expressed a desire to participate in decision-making with their physician, they desired that physicians make the final treatment decision.<sup>48</sup> Therefore, future research among Arabic-speaking patients should delineate the decision-making process and distinguish problem-solving from decision-making as well as specifically as about their preferred role in each using instruments such as the problem-solving–decision-making (PSDM) scale.<sup>47</sup>

Results from this study showed that women preferred involvement in decision-making more often than men. This is in line with previous studies, which found that women are more willing to engage in a collaborative style of communication with their physicians by disclosing more health information about themselves<sup>49</sup> and preferring to be more actively involved in all aspects of decision-making.<sup>22</sup> This may be connected to a gender-based role of women as healthcare decision-makers, being responsible for around 80% of the health decisions in their families in the USA.<sup>50</sup> Simultaneously, those who were unmarried also tended to prefer involvement in decision-making in this sample, which is in accordance with previous studies

**Table 3** Participants' preference for participating in shared decision-making (N=516)

Statement		n (%)
I prefer to leave decisions about my medical care up to my doctor	Disagree	127 (24.6)
	Neutral/agree	389 (75.4)
I do not prefer that my doctor offers me options and asks my opinion	Disagree	256 (49.6)
	Neutral/agree	260 (50.4)
I prefer to rely on my doctor's knowledge and not try to find out about my condition on my own	Disagree	164 (31.8)
	Neutral/agree	352 (68.2)

**Table 4** Associations between preference to leave decisions about medical care up to the doctor with sociodemographic and clinical characteristics, health literacy and health status

Variables		Disagree n (%)	Neutral/agree n (%)	$\chi^2$	P value
Sex	Man	45 (20.0)	180 (80.0)	4.574	<b>0.032</b>
	Woman	82 (28.2)	209 (71.8)		
Age (years)	18–30	24 (27.0)	65 (73.0)	0.429	0.934
	31–45	43 (24.6)	132 (75.4)		
	46–60	43 (24.3)	134 (75.7)		
	61–75	17 (22.7)	58 (77.3)		
Country of birth	UAE	95 (24.1)	299 (75.9)	0.225	0.635
	Other Arab countries	32 (26.2)	90 (73.8)		
Marital status	Married	76 (21.6)	276 (78.4)	5.449	<b>0.020</b>
	Unmarried	51 (31.1)	113 (68.9)		
Educational level	Primary/middle school	42 (27.8)	109 (72.2)	1.676	0.433
	High school	34 (25.4)	100 (74.6)		
	University	51 (22.1)	180 (77.9)		
Employment status	Employed	53 (19.6)	217 (80.4)	7.578	<b>0.006</b>
	Unemployed	74 (30.1)	172 (69.9)		
Number of chronic diseases	1	46 (21.6)	167 (78.4)	1.778	0.182
	≥2	81 (26.7)	222 (73.3)		
Health literacy	Adequate	88 (27.1)	237 (72.9)	2.874	0.090
	Inadequate	39 (20.4)	152 (79.6)		
Having unanswered questions	Yes	46 (18.6)	201 (81.4)	9.159	<b>0.002</b>
	No	81 (30.1)	188 (69.9)		
Interest in learning more about condition(s)	Yes	119 (25.4)	349 (74.6)	1.801	0.180
	No	8 (16.7)	40 (83.3)		
Mobility	No problem	82 (24.1)	258 (75.9)	0.132	0.717
	Problem	45 (25.6)	131 (74.4)		
Self-care	No problem	119 (25.5)	348 (74.5)	2.003	0.157
	Problem	8 (16.3)	41 (83.7)		
Usual activities	No problem	98 (24.6)	300 (75.4)	0.000	0.992
	Problem	29 (24.6)	89 (75.4)		
Pain/discomfort	No problem	55 (21.6)	200 (78.4)	2.517	0.113
	Problem	72 (27.6)	189 (72.4)		
Anxiety/depression	No problem	61 (20.4)	238 (79.6)	6.795	<b>0.009</b>
	Problem	66 (30.4)	151 (69.6)		

Boldface italic represent P-values <0.05.

UAE, United Arab Emirates.

showing that unmarried patients preferred an active role in decision-making more often than married ones.<sup>19</sup>

Moreover, unemployed participants preferred involvement in decision-making more frequently. As reported in previous studies, it may be hypothesised that these patients are in a harder economic condition and do not possess medical insurance coverage,<sup>51</sup> which in the UAE is mostly dependent on employment status. Thus, they may feel the need to be more

involved in the decision-making processes in order to guarantee that the options made are the most affordable for them. Previous studies on physicians' attitudes reported that they seemed to be more prone to engage in SDM behaviours when their patients were employed, compared with unemployed and retired patients.<sup>52</sup> This calls attention to the importance of health professionals being attentive and supportive of the specific needs and preferences of patients.

**Table 5** Correlates of preference for shared decision-making among Arabic-speaking individuals with chronic diseases in the UAE

Variables		OR	95% CI	P value
Sex	Man	(Ref)		0.686
	Woman	1.101	0.690 to 1.758	
Marital status	Married	(Ref)		<b>0.030</b>
	Unmarried	1.634	1.049 to 2.544	
Employment status	Employed	(Ref)		0.128
	Unemployed	1.434	0.901 to 2.283	
Number of chronic diseases	1	(Ref)		0.372
	≥2	1.218	0.790 to 1.877	
Health literacy	Adequate	(Ref)		0.200
	Inadequate	0.737	0.462 to 1.175	
Having unanswered questions	No	(Ref)		<b>0.030</b>
	Yes	0.612	0.393 to 0.954	
Self-care	No problem	(Ref)		<b>0.048</b>
	Problem	0.423	0.181 to 0.993	
Pain/discomfort	No problem	(Ref)		0.361
	Problem	1.236	0.784 to 1.949	
Anxiety/depression	No problem	(Ref)		0.061
	Problem	1.526	0.981 to 2.372	

Boldface italic represent P-values <0.05.  
UAE, United Arab Emirates.

Preference for SDM was also more frequent among those who rarely or never had unanswered questions. Research indicates that individuals who had unanswered questions and were uncertain about relevant issues perceived themselves as being unable to define the next action steps.<sup>31</sup> Therefore, those who rarely or never have unanswered questions would feel more capable of being involved in decisions regarding their health. Furthermore, our results indicated that patients with anxiety or depression symptoms preferred involvement in decision-making more often, which is in line with previous studies.<sup>53 54</sup> In cases of psychopathological symptomatology, involvement in decision-making gains a special relevance for improving patient participation in treatment, medication management and the establishment of a trusting relationship.<sup>53</sup> On the other hand, those who reported physical problems related with difficulties in self-care (washing or dressing themselves) were less likely to prefer involvement in decision-making. This association between a poorer health status and lower preference for involvement in SDM has been previously reported<sup>51</sup> and is explained by a decreased interest and importance attributed to having control over health-related decisions by those who are already experiencing poor health.

Unexpectedly, educational level and health literacy did not appear to be associated with preference for SDM in our sample. Based on the previous literature, it would be predictable that the most educated individuals and those

with an adequate health literacy would be more likely to prefer involvement in decision-making.<sup>22 28</sup> The fact that most patients reported feeling adequately informed about issues important to their treatment may have attenuated the potential effects of lower educational levels and inadequate health literacy.

### Strengths and limitations

Our data provide a first portrait of patients' preferences regarding SDM in the UAE, allowing for a better understanding of this dimension in the context of healthcare provision in chronic diseases. Some limitations should be acknowledged. The causal relationship between the preference for SDM and the sociodemographic and clinical characteristics, health literacy and health status could not be established. Longitudinal studies are needed to clarify the directions of these associations. Furthermore, our sample included individuals with a wide range of chronic diseases. In a few hospitals, the number of patients approached and those who refused to participate could not be ascertained. Therefore, we could not calculate the response rate.

### Implications for future research

Future studies could target a more homogeneous group of patients who receive similar medical care. This would allow for a specific understanding of the preference for involvement in treatment decision-making. Additionally,



conducting interviews with Arabic-speaking patients could generate an in-depth understanding of their preferred involvement in decision-making. Moreover, patients' perspectives about the extent of SDM in routine medical care should also be assessed, taking into account the heterogeneity of Arabic-speaking cultures and communities in terms of unique experiences and outlooks on life based on places of birth and nationalities and accounting for local aspects of patient-provider communication in this non-Western country. Future research could also explore the differences in SDM between married and unmarried women and how the discussion with the husband (significant other) may influence such process.

These are fundamental to promote patient active participation in healthcare decisions.<sup>55</sup> Future research could focus on developing culturally appropriate decision aids among Arabic-speaking population and evaluating the impact of such tools on improving the extent of SDM. Additionally, to foster SDM in the country, in-depth exploration of physicians' perspectives is needed. This exploration should consider how the multiple cultural backgrounds and the variety of clinical training of the physicians affect the dynamic of the collaborative discussion in the clinical encounters.

## CONCLUSIONS

Contrary to results from Western countries, this study showed that a majority of Arabic-speaking patients with chronic disease preferred a paternalistic decision-making model. At the same time, some subgroups (eg, women, unemployed patients) had a higher preference for participation in decision-making. SDM among Arabic-speaking patients would require physicians' support and changes in healthcare systems that foster patients' involvement and promote their accountability.

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## Shared Decision Making – Exploring the Perspectives of Arabic-Speaking Patients with Chronic Diseases

### Section A

1. What is your sex?  
☐ Male      ☐ Female
2. How old are you?  
☐ 18-30 years      ☐ 31-45 years      ☐ 46-60 years      ☐ 61-75 years
3. What is your country of birth? \_\_\_\_\_
4. What is your marital status?  
☐ Single      ☐ Married      ☐ Divorced      ☐ Widowed      ☐ Separated
5. What is the highest level of education that you have attained?  
☐ Primary school      ☐ Middle school      ☐ High school      ☐ Undergraduate degree      ☐ Postgraduate degree
6. What is your current employment status?  
☐ Full-time      ☐ Part-time      ☐ Unemployed      ☐ Retired      ☐ Housewife
7. Which of the following chronic diseases do you have? Under the name of each disease that you have, please indicate the number of years for which you have had it.  

<input type="checkbox"/> High blood pressure	<input type="checkbox"/> High cholesterol	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Heart failure	<input type="checkbox"/> Arrhythmia
_____ years	_____ years	_____ years	_____ years	_____ years
<input type="checkbox"/> Atherosclerosis	<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Other (specify) _____	
_____ years	_____ years	_____ years	_____ years	

### Section B This section assesses your ability to obtain and understand basic health information.

8. How often do you have someone help you read hospital materials?  
☐ Always      ☐ Often      ☐ Sometimes      ☐ Rarely      ☐ Never
9. How often do you have problems learning about your medical condition because of difficulty reading hospital materials?  
☐ Always      ☐ Often      ☐ Sometimes      ☐ Rarely      ☐ Never
10. How confident are you filling out forms by yourself?  
☐ Always      ☐ Often      ☐ Sometimes      ☐ Rarely      ☐ Never
11. Do you have any unanswered questions regarding any aspect of your condition, treatment, or care in general?  
☐ Yes      ☐ No
12. Are you interested in finding out more about your condition, treatment, or care in general?  
☐ Yes      ☐ No
13. Please select the **two** most important sources that you use to obtain information about your condition, treatment, or health in general.  
☐ Friends and family      ☐ The internet      ☐ My doctor      ☐ Nurses      ☐ Pharmacists  
☐ Magazines      ☐ Other, specify \_\_\_\_\_

**Section C** Under each heading, please select the ONE box that best describes your health TODAY.

**14. Mobility**

- ☐ I have no problems in walking about
- ☐ I have slight problems in walking about
- ☐ I have moderate problems in walking about
- ☐ I have severe problems in walking about
- ☐ I am unable to walk about

**15. Self-care**

- ☐ I have no problems washing or dressing myself
- ☐ I have slight problems washing or dressing myself
- ☐ I have moderate problems washing or dressing myself
- ☐ I have severe problems washing or dressing myself
- ☐ I am unable to wash or dress myself

**16. Usual activities** (e.g., work, study, housework, family or leisure activities)

- ☐ I have no problems doing my usual activities
- ☐ I have slight problems doing my usual activities
- ☐ I have moderate problems doing my usual activities
- ☐ I have severe problems doing my usual activities
- ☐ I am unable to do my usual activities

**17. Pain/discomfort**

- ☐ I have no pain or discomfort
- ☐ I have slight pain or discomfort
- ☐ I have moderate pain or discomfort
- ☐ I have severe pain or discomfort
- ☐ I have extreme pain or discomfort

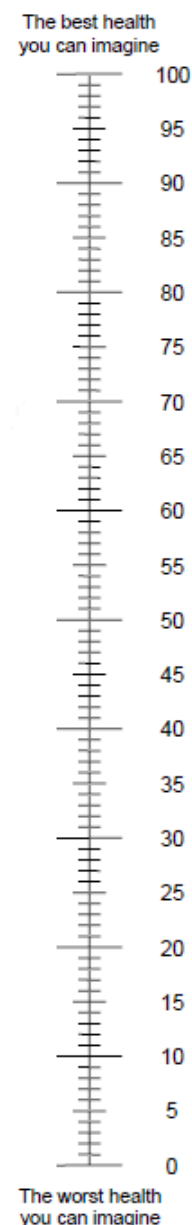
**18. Anxiety/depression**

- ☐ I am not anxious or depressed
- ☐ I am slightly anxious or depressed
- ☐ I am moderately anxious or depressed
- ☐ I am severely anxious or depressed
- ☐ I am extremely anxious or depressed

**19. We would like to know how good or bad your health is TODAY.**

- This scale is numbered from 0 to 100.
- 100 means the best health you can imagine.
- 0 means the worst health you can imagine.
- Mark an X on the scale to indicate how your health is TODAY.
- Now, please write the number you marked on the scale in the box below.

YOUR HEALTH TODAY =



**Section D** This section assesses your preference for being involved in making treatment decisions.

20. I prefer to rely on my doctor's knowledge and not try to find out about my condition on my own.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

21. I prefer that my doctor offers me options and asks my opinion.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

22. I prefer to leave decisions about my medical care up to my doctor.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree**Section E** The following statements are about your satisfaction with your treatment decision. For each statement, please indicate how much you agree or disagree.

23. I am adequately informed about the issues important to my treatment decisions.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

24. The treatment decision was the best possible decision for me.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

25. I am satisfied that the decision was consistent with my personal values.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

26. I expect to successfully continue to carry out the decision.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

27. I am satisfied that this decision was mine to make.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree

28. I am satisfied with the decision.

☐ Strongly disagree   ☐ Disagree   ☐ Neutral   ☐ Agree   ☐ Strongly agree



**Section F** The following statements are related to the decision-making in your consultation. For each statement, please indicate how much you agree or disagree.

29. My doctor made clear that a decision needs to be made.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
30. My doctor wanted to know exactly how I want to be involved in making the decision.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
31. My doctor told me that there are different options for treating my medical condition.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
32. My doctor precisely explained the advantages and disadvantages of the treatment options.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
33. My doctor helped me understand all the information.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
34. My doctor asked me which treatment option I prefer.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
35. My doctor and I thoroughly weighed the different treatment options.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
36. My doctor and I selected a treatment option together.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree
37. My doctor and I reached an agreement on how to proceed.					
<input type="checkbox"/> Completely disagree	<input type="checkbox"/> Strongly disagree	<input type="checkbox"/> Somewhat disagree	<input type="checkbox"/> Somewhat agree	<input type="checkbox"/> Strongly agree	<input type="checkbox"/> Completely agree

**THANK YOU!**