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

Hamzah Alzubaidi, Catarina Samorinha, Ward Saidawi, Amal Hussein, Basema Saddik, Isabelle Scholl

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 (e.g., 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 is receiving increasing attention in many healthcare systems worldwide. 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. A central component of both people-centred care and patient-centred care, two highly overlapping concepts, is the promotion of shared decision-making (SDM) in the clinical context. 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. This approach can support better-informed decisions that are congruent with patients’ preferences and values. The evidence regarding the effectiveness of SDM to improve patient outcomes is scarce, particularly for behavioural and health outcomes. However, patients who have been involved in their treatment decisions report less decisional conflict and more satisfaction with treatment decisions. 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.

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.
wanted health professionals to provide evidence-based recommendations that considered their individual preferences, \(^{19,20}\) while others preferred to leave final treatment decisions up to the doctor.\(^{18,29-22}\) Nevertheless, physicians remained the main source of medical and health information, \(^{23}\) and many patients preferred to rely on them for medical knowledge rather than seeking out information themselves.\(^{22}\) Concurrently, physicians have expressed their general support for incorporating SDM into practice.\(^{24-26}\)

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.\(^{27}\) 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.\(^{27,28}\) In comparison, lower literacy levels may reduce the possibility for SDM, impeding fluent communication\(^{28,29}\) and leading to unmet information needs.\(^{30,31}\) 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, \(^{32}\) while those who were involved in decision-making and those wishing to be more involved had an overall better health than other groups.\(^{31}\) Additionally, women, patients with a higher educational level and healthier individuals were more likely to prefer an active role in decision-making, \(^{22}\) while older people were more likely to prefer physician-led decisions.\(^{19,33}\)

Research on preference for SDM by Arabic-speaking patients has received increasing attention recently.\(^{23,26}\) Existing studies with this population revealed that both patients and physicians had a positive attitude towards active patient participation in clinical decision-making.\(^{26,34}\) 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.\(^{31}\) 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.\(^{9,11}\) 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.\(^{26}\) 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.\(^ {16,22,35-37}\) 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*,\(^ {22}\) 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.\(^ {20}\) 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. 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’ (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. 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 in the three items were considered to have inadequate health literacy.

Sample size
Sample size was calculated using Cochran’s sample size formula \( n = \frac{z^2 \times p \times (1-p)}{e^2} \). 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.
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 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    | 173 (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**

| ≥2  | 303 (58.7) |
| 1   | 213 (41.3) |

**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) |

- 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 hypothyroidism, anaemia, asthma, chronic kidney failure, psoriasis, irritable bowel syndrome. § TV, magazines or individuals with an academic background. UAE, United Arab Emirates.
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.

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. 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. 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.

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 and preferring to be more actively involved in all aspects of decision-making. 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. Simultaneously, those who were unmarried also tended to prefer involvement in decision-making in this sample, which is in accordance with previous studies.

**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, which demands changes in the power and knowledge hierarchies underlying the doctor–patient relationship. 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. 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. Furthermore, these results might also

| Table 2 | Participants’ satisfaction with treatment decisions (N=516) |
|-----------------------------|------------------------------------------|
| Statement | Disagree | Neutral | Agree |
| I am adequately informed about the issues important to my treatment decisions | | | |
| The treatment decision was the best possible decision for me | | | |
| I am satisfied that the decision was consistent with my personal values | | | |
| I expect to successfully continue to carry out the decision | | | |
| I am satisfied that this decision was mine to make | | | |
| I am satisfied with the decision | | | |

| Table 3 | Participants’ preference for participating in shared decision-making (N=516) |
|-----------------------------|------------------------------------------|
| Statement | Disagree | Neutral/agree |
| I prefer to leave decisions about my medical care up to my doctor | | |
| I do not prefer that my doctor offers me options and asks my opinion | | |
| I prefer to rely on my doctor’s knowledge and not try to find out about my condition on my own | | |
showing that unmarried patients preferred an active role in decision-making more often than married ones.19

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,51 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.52 This calls attention to the importance of health professionals being attentive and supportive of the specific needs and preferences of patients.

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 | Neutral/agree | χ²   | P value |
|--------------------|----------|---------------|------|---------|
| Sex                | Man      | Woman         |      |         |
| Man                | 45 (20.0)| 180 (80.0)    | 4.574| 0.032   |
| Woman              | 82 (28.2)| 209 (71.8)    |      |         |
| Age (years)        | 18–30    | 24 (27.0)     | 0.429| 0.934   |
|                   | 31–45    | 43 (24.6)     |      |         |
|                   | 46–60    | 43 (24.3)     |      |         |
|                   | 61–75    | 17 (22.7)     |      |         |
| Country of birth   | UAE      | Other Arab countries |      |         |
| UAE                | 95 (24.1)| 299 (75.9)    | 0.225| 0.635   |
| Other Arab countries | 32 (6.2)| 90 (73.8)     |      |         |
| Marital status     | Married  | Unmarried     |      |         |
| Married            | 76 (21.6)| 276 (78.4)    | 5.449| 0.020   |
| Unmarried          | 51 (31.1)| 113 (68.9)    |      |         |
| Educational level  | Primary/middle school | High school | University | |
| 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 | Unemployed    |      |         |
| Employed           | 53 (19.6)| 217 (80.4)    | 7.578| 0.006   |
| Unemployed         | 74 (30.1)| 172 (69.9)    |      |         |
| Number of chronic diseases | 1 | 2 | ≥2 | |
| 1                  | 46 (21.6)| 167 (78.4)    | 1.778| 0.182   |
| ≥2                 | 81 (26.7)| 222 (73.3)    |      |         |
| Health literacy    | Adequate | Inadequate    |      |         |
| Adequate           | 88 (27.1)| 237 (72.9)    | 2.874| 0.090   |
| Inadequate         | 39 (20.4)| 152 (79.6)    |      |         |
| Having unanswered questions | Yes | No | |
| Yes                | 46 (18.6)| 201 (81.4)    | 9.159| 0.002   |
| No                 | 81 (30.1)| 188 (69.9)    |      |         |
| Interest in learning more about condition(s) | Yes | No | |
| Yes                | 119 (25.4)| 349 (74.6)  | 1.801| 0.180   |
| No                 | 8 (16.7) | 40 (83.3)     |      |         |
| Mobility           | No problem | Problem | |
| No problem         | 82 (24.1)| 258 (75.9)    | 0.132| 0.717   |
| Problem            | 45 (25.6)| 131 (74.4)    |      |         |
| Self-care          | No problem | Problem | |
| No problem         | 119 (25.5)| 348 (74.5)  | 2.003| 0.157   |
| Problem            | 8 (16.3) | 41 (83.7)     |      |         |
| Usual activities   | No problem | Problem | |
| No problem         | 98 (24.6)| 300 (75.4)    | 0.000| 0.992   |
| Problem            | 29 (24.6)| 89 (75.4)     |      |         |
| Pain/discomfort    | No problem | Problem | |
| No problem         | 55 (21.6)| 200 (78.4)    | 2.517| 0.113   |
| Problem            | 72 (27.6)| 189 (72.4)    |      |         |
| Anxiety/depression | No problem | Problem | |
| No problem         | 61 (20.4)| 238 (79.6)    | 6.795| 0.009   |
| Problem            | 66 (30.4)| 151 (69.6)    |      |         |

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. 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. 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. 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 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. 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 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.55 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 (e.g., 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.

Contributors HA designed the study, reviewed and edited the manuscript, and he is responsible for the overall content as the guarantor. CS and WS contributed to data interpretation and to the first draft of the manuscript. AH analysed the data, interpreted it, and reviewed and edited the manuscript. BS and IS contributed to data interpretation and to the first draft of the manuscript. AH analysed the data, interpreted it, and reviewed and edited the manuscript.

Funding This study was supported by an operational grant from the University of Sharjah (grant number 150316).

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Consent obtained directly from patient(s)

Ethics approval This study involves human participants and was approved by University of Sharjah Research Ethics Committee. The ethical approval number is REC-17-09-28-01-S. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iDs
Hamzah Alabaidi http://orcid.org/0000-0001-5122-271X
Catarina Samorinha http://orcid.org/0000-0002-6662-0347
Basema Saddik http://orcid.org/0000-0002-4682-5927

REFERENCES

1 Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington D.C: National Academy Press, 2001.
2 Organization WH. World Health organization (who). People-Centred health care a policy framework, 2007: 13–14.
3 Park M, Giap T-T-T, Lee M, et al. Patient- and family-centered care interventions for improving the quality of health care: a review of systematic reviews, Int J Nurs Stud 2018;87:69–83.
4 Kaba R, Sooriakumaran P. The evolution of the doctor-patient relationship. Int J Surg 2007;5:57–65.
5 World Health organization (who). The who global strategy on people-centred integrated health services services delivery and safety. Department Service Delivery and Safety 2015;1–25 www.who.int.
6 Håkansson Eklund J, Holmström IK, Kumlin T, et al. “Same same or different?” A review of reviews of person-centered and patient-centered care. Patient Educ Couns 2019;102:3–11.
7 Barry MJ, Edgman-Levitan S. Shared decision making — the pinnacle of patient-centered care. N Engl J Med Overseas Ed 2012;366:780–1.
8 Sepucha KR, Scholl I. Measuring shared decision making: a review of constructs, measures, and opportunities for cardiovascular care. Circ Cardiovasc Qual Outcomes 2014;7:620–6.
9 Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). Soc Sci Med 1997;44:681–92.
10 Charles C, Gafni A, Whelan T. Decision making in the physician-patient encounter; revisiting the shared treatment decisionmaking model. The Sociology of Health and Illness: A Reader 2013;49:229–41.
11 Street RL, Haidet P. How well do doctors know their patients? factors affecting physician understanding of patients’ health beliefs. J Gen Intern Med 2011;26:21–7.
12 Shay LA, Lafata JE. Where is the evidence? A systematic review of shared decision making and patient outcomes. Med Decis Making 2015;35:114–31.
13 Fisher A, Milis K, Teesson M, et al. Shared decision-making among people with problematic alcohol/other drug use and co-occurring mental health conditions: a systematic review. Drug Alcohol Rev 2021;40:307-324.
14 Rathert C, Wyrrich MD, Boren SA. Patient-Centered care and outcomes: a systematic review of the literature. Med Care Res Rev 2013;70:351–79.
15 Joostens EAQ, DeFuentes-Merillas L, de Weert GH, et al. Systematic review of the effects of shared decision-making on patient satisfaction, treatment adherence and health status. Psychother Psychosom 2008;77:219–26.
16 Stacey D, Légaré F, Lewis K. Decision aids for people facing health treatment or screening decisions (Review) Summary of findings for the main comparison. Cochrane Database of Systematic Reviews 2017:1–242.
17 McMillan SS, Kendall E, Sav A, et al. Patient-Centered approaches to health care: a systematic review of randomized controlled trials. Med Care Res Rev 2013;70:567–96.
18 Chewing B, Bylund CL, Shah B, et al. Patient preferences for shared decisions: a systematic review. Patient Educ Couns 2012;86:9–18.
19 Elklin EB, Kim SMH, Casper ES, et al. Desire for information and involvement in treatment decisions: elderly cancer patients’ preferences and their physicians’ perceptions. J Clin Oncol 2007;25:5275–80.
20 Tamirisa NP, Goodwin JS, Kandalam A, et al. Patient and physician views of shared decision making in cancer. Health Expect 2017:20:1248–53.
21 Lindsay SEBS, Alokozi ABS, Eppler SLMPH. Patient preferences for shared decision making: not all decisions should be shared. *Journal of the American Academy of Orthopaedic Surgeons* 2020;28:419–26.

22 Levinson W, Kao A, Kuby A, et al. Not all patients want to participate in decision making. *J Gen Intern Med* 2005;20:531–5.

23 Alzubaidi H, Hussein A, Mc Namara K, et al. Psychometric properties of the Arabic version of the 9-item shared decision-making questionnaire: the entire process from translation to validation. *BMJ Open* 2019;9:e026672–7.

24 Zeuner R, Frosch DL, Kazemchak MD, et al. Physicians’ perceptions of shared decision-making behaviours: a qualitative study demonstrating the continued chasm between aspirations and clinical practice. *Health Expect* 2015;18:2465–76.

25 Pollard S, Bansback N, Bryan S. Physician attitudes toward shared decision making: a systematic review. *Patient Educ Couns* 2015;98:1046–57.

26 Alameddine M, AlGurg R, Otaki F, et al. Physicians’ perspective on shared decision-making in Dubai: a cross-sectional study. *Hum Resour Health* 2020;18:115–20.

27 Nutbeam D, McGill B, Premkumar P. Improving health literacy in community populations: a review of progress. *Health Promot Int* 2018;33:901–11.

28 Chang H-L, Li F-S, Lin C-F. Factors influencing implementation of shared medical decision making in patients with cancer. *Patient Prefer Adherence* 2019;13:1995–2005.

29 Rademakers J, Heijmans M. Beyond reading and understanding: health literacy as the capacity to act. *Int J Environ Res Public Health* 2018;15:1676–12.

30 Pimentel P, Abreu L, Azevedo A, et al. Patient-Centered communication in type 2 diabetes: the facilitating and constraining factors in clinical encounters. *Health Serv Res* 2019;54:623–35.

31 Roysland Ingrid Øfarnes, Dysvik E, Furnes B, et al. Exploring the information needs of patients with unexplained chest pain. *Patient Prefer Adherence* 2020;13:917–23.

32 Locatelli SM, Etingen B, Heinemann A, et al. Perceptions of shared decision making among patients with spinal cord injuries/disorders. *Top Spinal Cord Inj Rehabil* 2016;22:192–202.

33 Hahlweg P, Kriston L, Scholl I, et al. Cancer patients’ preferred and perceived level of involvement in treatment decision-making: an epidemiological study. *Acta Oncol* 2020;59:967–74.

34 AI-Haqwi AI, AI-Drees TM, AI-Rumayyan A, et al. Shared clinical decision making. A Saudi Arabian perspective. *Saud Med J* 2015;36:1472–80.

35 Doher H, Christalle E, Kriston L. Use of the 9-item shared decision making questionnaire (SDM-Q-9 and SDM-Q-Doc) in intervention studies. A systematic review. *PLoS ONE* 2017;12:1–16.

36 Kriston L, Scholl I, Hölzle L, et al. The 9-item shared decision making questionnaire (SDM-Q-9): development and psychometric properties in a primary care sample. *Patient Educ Couns* 2010;80:94–9.

37 Murad MS, Chatterley T, Guirguis LM. A meta-narrative review of recorded patient-physician interactions: exploring biomedical or patient-centered communication? *Res Social Adm Pharm* 2014;10:1–20.

38 Papadimitropoulos EA, Elbarazi I, Blair I, et al. An investigation of the feasibility and cultural appropriateness of stated preference methods to generate health state values in the United Arab Emirates. *Value Health Reg Issues* 2015;7:34–41.

39 Herdman M, Gudex C, Lloyd A, et al. Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L). *Qual Life Res* 2011;20:1727–36.

40 Peterson PN, Shetterly SM, Clarke CL, et al. Health literacy and outcomes among patients with heart failure. *JAMA* 2011;305:1695–701.

41 Entwistle VA, Watt IS, Gilhooley K, et al. Assessing patients’ participation and quality of decision-making: insights from a study of routine practice in diverse settings. *Patient Educ Couns* 2004;55:105–13.

42 Holmes-Rovner M, Kroll J, Schmitt N, et al. Patient satisfaction with health care decisions: the satisfaction with decision scale. *Med Decis Making* 1996;16:58–64.

43 Martin GP, Fink R. Patients as team members: opportunities, challenges and paradoxes of including patients in multi-professional healthcare teams. *Social Health Illn* 2011;33:1050–65.

44 Moonesar I, Elsholkamy M, Syani H. The state of UAE healthcare service delivery: public Perceptions- preliminary insights. *The Mohammed Bin Rashid School of Government* 2018.

45 Scholl I, LaRussa A, Hahlweg P. Organizational- and system-level characteristics that influence implementation of shared decision-making and strategies to address them - a scoping review. *Implementation Science* 2018;13:1–22.

46 Deber RB. Physicians in health care management: the patient-physician partnership: decision making, problem solving and the desire to participate. *CMAJ* 1994;151:423–7.

47 Deber RB, Kraetschmer N, Urowitz S, et al. Do people want to be autonomous patients? preferred roles in treatment decision-making in several patient populations. *Health Expect* 2007;10:248–58.

48 Obeidat RF, Homish GG, Lally RM. Shared decision making among individuals with cancer in non-Western cultures: a literature review. *Oncol Nurs Forum* 2013;40:45–6 http://search.ebscohost.com/login.aspx?direct=true&amp;amp;%5Cnbd=cin201955CnAN=2012246187%5Cnlang=en&amp;amp;%5Cnsite=ehost-live.

49 Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA* 2002;288:756–64.

50 Matoff-Steppe S, Applebaum B, Pooler J, et al. Women as health care decision-makers: implications for health care coverage in the United States. *J Health Care Poor Underserved* 2014;25:1507–13.

51 Xu RH, Wong EL. Involvement in shared decision-making for patients in public specialist outpatient clinics in Hong Kong. *Patient Prefer Adherence* 2017;11:505–12.

52 Menear M, Garvelink MM, Adeepekdoju R, et al. Factors associated with shared decision making among primary care physicians: findings from a multicentre cross-sectional study. *Health Expect* 2018;21:215–21.

53 Drake RE, Cimpean D, Torrey WC. Shared decision making in health care: prospects for personalized medicine. *Dialogues Clin Neurosci* 2009;11:455–63.

54 Patel SR, Bakken S. Preferences for participation in decision making among ethnically diverse patients with anxiety and depression. *Community Ment Health J* 2010;46:466–73.

55 Dolan H, Li M, Trevena L. Interventions to improve participation in health-care decisions in non-Western countries: a systematic review and narrative synthesis. *Health Expect* 2019;22:894–906.