

Shared Decision-Making In Primary Care In Bahrain: A Patient's Perspective

Dr. Eman Als Salman, Dr. Amal Taraif, Dr. Faten Albanna, Dr. Rana Kameshki, Dr. Mohamed Ali Jaffar Ahmed Mandeel
Family Practice Residency Programme, Kingdom of Bahrain

*Corresponding author: Dr. Eman Als Salman
DOI: [10.21276/sjm.2019.4.3.22](https://doi.org/10.21276/sjm.2019.4.3.22)

| Received: 13.03.2019 | Accepted: 21.03.2019 | Published: 31.03.2019

Abstract

Shared decision-making (SDM) is a process where clinicians and patients communicate and share evidence, giving patients an informed, active role in healthcare decisions.¹ This paper addresses SDM in a local setting in the kingdom of Bahrain. Participants filled a questionnaire with two decisional-role outcome measures. Dependent variables were patient role preference pre- and post-consultation. McNemar-Bowker's test was used to assess deviations in patient preferences pre- and post-consultation. A total (n=566) filled the questionnaire; 2.3% (95% CI; 1.2 - 3.9) preferred an active role while the majority preferred a collaborative role (43%, 95% CI; 39.0- 47.2) before their encounter with the doctor. Post-consultation, 7% of the participants had a less active role, and 31% a less collaborative role in comparison with their preference, whereas the passive role increased from 49% to 62.0% in relation to expressed preferences. It is apparent that the results lack symmetry (McNemar-Bowker $S=38.5$; $DF=3$; $P= 0.001$). Patients aged 36-49 years are less "collaborative" (33.1%) and more "passive" (57.5%) than younger and older age groups ($p < 0.028$). Higher educational meant more preference for the collaborative or active role ($p < 0.01$). Primary healthcare attendees prefer a passive role in SDM. Nevertheless, healthcare providers should not assume patient passivity in SDM, but must assess and treat each patient individually.

Keywords: Shared decision making, primary care, preference, passive role, collaborative role and kingdom of Bahrain.

Copyright @ 2019: This is an open-access article distributed under the terms of the Creative Commons Attribution license which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use (NonCommercial, or CC-BY-NC) provided the original author and source are credited.

INTRODUCTION

Shared decision-making (SDM) is a process in which clinicians and patients communicate together to share the best available evidence, allowing the patients to make an informed preference and play an active role in making healthcare decisions [1]. Involving patients in decision-making is an important part of patient-centered care.

There is growing evidence suggesting that involving patients in decision-making helps in improving their knowledge, healthcare experience and reducing health service utilization and cost.² The evidence also suggests that patients may modify their health behavior and status after being involved in decision-making [2]. The relevant studies shows that most patients prefer to be offered information on their medical conditions, available treatment options, and future plan of care [3-5]. However, the extent of patient involvement in the process of decision-making is variable and influenced by issues related to the patients' health status, illnesses, and types of decisions under consideration [6, 7].

Although SDM can be of great value when it comes to effective consultations, there are downsides that cannot be overlooked. One of the drawbacks of SDM arises when doctors deal with uncertainties; therefore, involving patients in this process could be harmful and may lead to unnecessary utilization of the health care system [8]. Also, some critics would argue that patients ability to communicate with their health professional and their health literacy level could affect their choice in SDM [9]. While others would argue that if you give patients the idea that they should make the decision, some will become too demanding and they may make costly or irrational choices [8].

The complexity of this process is further compounded by the fact that patients' views and attitudes towards involvement in medical decision-making are influenced significantly by certain underlying cultural aspects. This necessitates a sensitive and individual approach for each patient [10]. Therefore, implementing this process remains challenging, even in countries where shared decision-making is officially endorsed by the government such as the United Kingdom and the US [2].

Research has found a discrepancy between patients' desire to be involved and their actual involvement in healthcare decision-making [2]. In Asia, a cross-sectional study was done to determine patients' preferred role in decision-making in the primary care clinic in Malaysia [11]. They concluded that most patients (52%) attending the primary care clinic preferred and played an autonomous role in decision-making [11]. Moreover, a cross-sectional SDM study conducted in Saudi Arabia concluded that Saudi patients (57%) generally had a positive attitude toward active participation in the clinical decision process [10]. Their preferences were significantly influenced by socio-demographic and disease factors [10].

Despite the considerable interest in applying SDM clinically, only a few studies have explored decision-making in a primary care setting from the patient's perspective. In Bahrain, after performing a thorough search through the available literature, no evidence-based studies were found concerning this topic. Therefore, pioneering the study of this issue will make a worthwhile contribution to understanding overall health care outcomes.

METHODS

This was a cross-sectional study conducted at primary health centers in the Kingdom of Bahrain during the month of October 2017. Fourteen out of the total 28 local health centers were randomly selected, and general clinic patients were approached and invited to participate in the study.

A minimum sample size of 384 patients was required to participate in this study. This sample size was arrived at using a table for sample size estimation in prevalence studies derived from the Kish formula [12]. Since the estimated prevalence of patients who prefer SDM (51%) was based on the prevalence found in a previous study performed in Europe in 2002 [13], and due to our large targeted population, we required a minimum sample of 384 to reach a 5% margin of error and a 95% confidence interval. Moreover, taking into consideration that some patients might refuse to participate in the study, additional participants were approached to compensate for refusal and incomplete filling of questionnaire. Hence, we ended up with a total of 682.

Adult patients (≥ 18 years) and parents accompanying their children were included. Those excluded were patients who could not comprehend the purpose of the study, those attending specialized clinics and those who were unable to understand or read Arabic or English with ease.

A validated structured questionnaire was self-administered in two steps; pre- and post-consultation with a doctor. All researchers agreed in advance on how to explain the questionnaire terms if patients asked for

it. The questionnaire included four main parts: sociodemographic characteristics, a psychosocial measure and two decisional-role outcome measures. The sociodemographic variables (part 1) included age, gender, nationality, marital status, educational level, type of occupation, monthly income, presence of chronic illness, and consultation-related factors (reason for seeing the doctor and duration of consultation). Self-efficacy to communicate with physicians (part 2) was the psychosocial measure; it consists of a three-item measure developed by Lorig et al measure patients' self-efficacy to communicate with their physicians about such matters as their illness and personal problems and to work out their differences [14]. The score is the mean of three items whose responses range from 1 (not at all confident) to 10 (totally confident). The main outcome measures in this study were two parallel versions of the Control Preferences Scale (CPS) by Degner *et al.*, [15]. The patient-preferred decisional role was measured using the CPS. This determines the degree of control the individual wants to assume when decisions are being made about medical treatment. The CPS was used in two parts of the questionnaire (part 3 and part 4). Part 3 included the original unaltered version of the CPS; however, it was renamed the *Patient Preference Scale* to distinguish it from the modified version in part 4.^{11,16} This scale assessed patients' preferred decisional role on a five-point scale with each point corresponding to a different preferred roles (active, active-shared, collaborative, passive-shared, and passive). Whereas part 4 included a modification of the CPS to assess the patient's actual role during the consultation [11, 16], referred to as the *Patient Perception Scale* [16]. The parallel statements for the two versions of the CPS are shown in the appendix.

The questionnaire was translated to Arabic from its English version then back-translated by independent, qualified individuals. Face and content validation of the questionnaire was conducted. Face validation was performed by six non-health personnel and content validation by four family consultants. Both versions (Arabic and English) were tested in a pilot study of 12 individuals who had no difficulty in understanding or answering all parts of the questionnaire.

During data collection, the questionnaire was given to patients before and after consultation with the doctor. Possible participants were identified at the waiting areas. Patients who fulfilled the inclusion criteria were given brief information about the purpose of the study and an overview of the contents of the questionnaire. Selected participants who agreed to take part in the study gave verbal consent and were asked to fill in both the pre and post consultation questionnaires. Each participant was given an identifying label to ensure confidentiality and the time of consultation was

recorded from entry into the doctor's room until the conclusion of the consultation.

Data were recorded and analyzed with the Statistical Package for Social Sciences (SPSS) 23.0 software. The dependent variables were the patient's role preference and actual role in decision-making. The independent variables were age, gender, nationality, marital status, educational level, type of occupation, monthly income, experience of chronic illness, reason for seeing the doctor and duration of consultation. Categorical variables were summarized as percentages and continuous variables as mean and standard deviation. To test the association between variables, bivariate analysis of categorical variables was performed using the chi-squared test. For ease of data management, the five response options were further combined into three categories: "active" and "active shared" were combined to form "active"; "collaborative" was retained as a category; and "passive" and "passive shared" were combined to form "passive". This procedure was applied to both the "preferred role" and the "actual role" categories. McNamar-Bowker's test of symmetry was used to

assess deviations from agreement between patient preferences before the consultation and their perceptions (i.e. actual role) after the consultation.

The research protocol was submitted and approved by the research committee. Informed consent was taken from both patients and the in-charge doctors in the health centers involved. Patients were kept anonymous, identifiers were used instead, and data was handled with discretion.

RESULTS

Out of a total of 682 patients who were approached, 58 responders were excluded as they did not fit the inclusion criteria as shown in Figure-1. Of the 624 respondents eligible to participate in this study, 42 refused to take part in the study, hence the response rate was 82.99%. A total of 566 completed both the pre- and post-consultation questionnaire whereas 16 did not complete the post-consultation part and had to be discarded from our analysis.

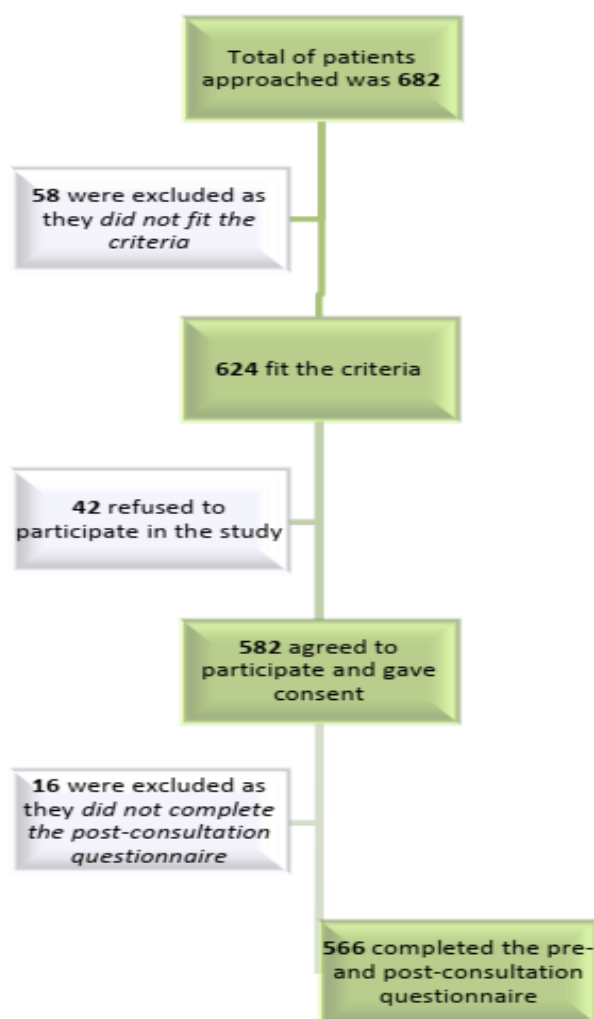


Fig-1:

Characteristics of the Participants

Table 1 and 2 show the socio-demographic characteristics of the patients, the reason for seeing the doctor and duration of the consultation. For ease of analysis, we have categorized age, marital status, educational level, and type of occupation into three categories as shown in the table 1. The mean age was 39.1 years; SD, 13.3 years. Forty seven percent of participants were < 35 years of age, of which 352 (62.2%) were females. The majority of patients (91.3%) were Bahraini citizens, and 75.3%, were married. Thirty-five percent had a university degree whereas 47.9% had either a secondary degree or other degrees such as technical, vocational or diploma. Fifty-four per cent of our population was retired, unemployed or

housewives. Of the 566 respondents, only 203 (36%) volunteered their monthly income with a mean income of Bahraini Dinar (BD) 599 (SD = BD 355.4). Many of them were housewives, unemployed or did not feel comfortable sharing sensitive information. Due to the paucity of data, income of participants was not considered in the final analysis. Thirty-three percent of the participants indicated having chronic diseases as shown in Table-1, such as diabetes mellitus, hypertension, dyslipidemia, bronchial asthma and others. Most of the respondents (49%) saw the doctor for symptoms/complaints. Mean duration of consultation was 6.6 minutes (SD = 3.2 minutes) (Table-2).

Table-1: Sociodemographic characteristics of the patients. Values are numbers (%), n= 566

		n %
Age in years (Mean ± SD)		39.10 ± 13.30
Age	≤ 35	268 (47.3%)
	36 - 49	160 (28.3%)
	≥ 50	138 (24.4%)
Gender	Male	214 (37.8%)
	Female	352 (62.2%)
Nationality	Bahraini	517 (91.3%)
	Non-Bahraini	49 (8.7%)
Marital Status	Married	426 (75.3%)
	Single	113 (20.0%)
	Divorced or Widowed	27 (4.8%)
Educational Level	No formal, Primary or Intermediate	95 (16.8%)
	Secondary, Technical, Vocational or Diploma	271 (47.9%)
	Tertiary or University	200 (35.3%)
Type of Occupation	Professional and Administrative	177 (31.3%)
	Manual labor and Other	81 (14.3%)
	Retired, Unemployed or House wife	308 (54.4%)
Monthly Income Bahraini Dinar (Mean ± SD)*		599 ± 355.38
Chronic illness	Yes	186 (32.9%)
	No	380 (67.1%)
*Values are missing for Monthly Income (n= 203)		

Table-2: Consultation-associated Factors. Values are numbers (%), n= 566

		n %
Reason for seeing the doctor today	Symptoms/ Complaints	277 (48.9%)
	Diagnosis/ Screening/ Prevention	103 (18.2%)
	Treatment/ Procedure/ Medications	91 (10.1%)
	Test Results	45 (8.0%)
	Other	50 (8.8%)
Duration of Consultation in Minutes (Mean ± SD)		6.60 ± 3.20

Self-efficacy scale to communicate with physician

The participants in the study scored a moderately high level of self-efficacy in communicating with their physician (mean of 7.9 on a 10-point scale {SD = 2.06}) as shown in Table-3. This number is similar to the score Lorig *et al.*, found when

developing his scale (7.3; SD, 2.71), which indicates that patients are confident in communicating with their doctor [14]. The reliability test done on the items in this study showed a score of 0.651 Cronbach's alpha which is moderately reliable.

Table-3: Self-efficacy scale to communicate with physician. Values are numbers (%), n= 566

	Mean	SD
Confident to ask the doctor things about the illness	8.66	1.98
Confident to discuss openly with the doctor any personal problems that may be related to the illness	7.40	3.06
Confident to work out differences with the doctor when they arise	7.54	2.79
Self-efficacy score	7.87	2.06

Patient preference for participation in decision-making

The patients' role preference in decision-making before consultation and their actual role during the consultation are shown in Table-4. Most

respondents (43.1%) preferred a "collaborative" role; 28.8% preferred a "passive shared" role, while a minority of patients wanted an "active" or "active shared" role in the decision-making process.

Table-4: Overall distribution of preferred role versus actual role treatment decision-making. Values are numbers (%), n= 566

	Preferred role (Pre-consultation)	95% CI	Actual Role (Post-consultation)	95% CI
Active	13 (2.3%)	1.2-3.9	13 (2.3%)	1.2-3.9
Active Shared	32 (5.7%)	3.9-7.9	26 (4.6%)	3.0-6.7
Collaborative	244 (43.1%)	39-47.2	176 (31.1%)	27.3-34.9
Passive Shared	163 (28.8%)	25.1-32.5	172 (30.4%)	26.6-34.2
Passive	114 (20.1%)	16.8-23.4	179 (31.6%)	27.8-35.5

McNemer-Bowker test brooks S=38.5; df=3; p<0.01

The decision-making role that patients reported post-consultation with their doctors were 2.3% active, 4.6% active shared, 31.1% collaborative, 30.4% passive shared, and 31.6% passive (Table-4). Collapsing these into three categories indicates that 6.9% of patient reported that they have experienced an active role, 31.1% a collaborative role, and 62% a passive role (Table-5).

Of the 566 respondents, only 13 (2.3%) (95% confidence interval; 1.2 to 3.9) preferred an active role while the majority preferred a collaborative role (43%, 95% Confidence interval; 39.0% – 47.2%) before their

encounter with the doctor (Table-4). After seeing the doctor, it emerged that 39 (7%) of the participants had a less active role, and 176 (31%) a less collaborative role in comparison with their preferences in the pre-consultation questionnaire; whereas the passive role increased from 49% to 62.0% in comparison with their expressed preferences (Table-5). Thus, it is apparent that the results lack symmetry (McNemar-Bowker S=38.5; DF=3; P= 0.001) with more patients located above, rather than below the diagonal cells of agreement. In conclusion, it was more likely for participants to experience a more limited role in SDM than they originally preferred.

Table-5: Preferred role versus Actual role. Values are numbers (%), n= 566

		Actual role			
		Active	Collaborative	Passive	Total
Preferred role	Active	19 (3.4%)	11 (1.9%)	15 (2.7%)	45 (8.0%)
	Collaborative	9 (1.6%)	135 (23.9%)	100 (17.7%)	244 (43.1%)
	Passive	11 (1.9%)	30 (5.3%)	236 (41.7%)	277 (48.9%)
	Total	39 (6.9%)	176 (31.1%)	351 (62.0%)	566 (100.0%)

Table-6: Association between patients' sociodemographic characteristics and patients' preferred role in decision-making. Values are numbers (%), n= 566

		Preferred role			χ^2 P-value
		Active	Collaborative	Passive	
Age	≤ 35	23 (8.6%)	127 (47.4%)	118 (44.0%)	0.028
	36 - 49	15 (9.4%)	53 (33.1%)	92 (57.5%)	
	≥ 50	7 (5.1%)	64 (46.4%)	67 (48.6%)	
Gender	Male	20 (9.3%)	85 (39.7%)	109 (50.9%)	0.361
	Female	25 (7.1%)	159 (45.2%)	168 (47.7%)	
Nationality	Bahraini	41 (7.9%)	226 (43.7%)	250 (48.4%)	0.630
	Non-Bahraini	4 (8.2%)	18 (36.7%)	27 (55.1%)	
Marital Status	Married	30 (7.0%)	183 (43.0%)	213 (50.0%)	0.067
	Single	14 (12.4%)	53 (46.9%)	46 (40.7%)	

	Divorced or Widowed	1 (3.7%)	8 (29.6%)	18 (66.7%)	
Educational Level	No formal, Primary or Intermediate	3 (3.2%)	32 (33.7%)	60 (63.2%)	0.013
	Secondary, Technical, Vocational or Diploma	23 (8.5%)	115 (42.4%)	133 (49.1%)	
	Tertiary or University	19 (9.5%)	97 (48.5%)	84 (42.0%)	
Type of Occupation	Professional and Administrative	19 (10.7%)	78 (44.1%)	80 (45.2%)	0.099
	Manual labor and Other	10 (12.3%)	33 (40.7%)	38 (46.9%)	
	Retired, Unemployed or Housewife	16 (5.2%)	133 (43.2%)	159 (51.6%)	
Chronic illness	Yes	16 (8.6%)	76 (40.9%)	94 (50.5%)	0.734
	No	29 (7.6%)	168 (44.2%)	183 (48.2%)	

The association between patients' sociodemographic characteristics and patients' preferred role (before the consultation) in decision-making before seeing the physician is shown in Table-6. There is a significant association between age and preferred role. Patients aged 36-49 years are less "collaborative" (33.1%) and more "passive" (57.5%) than younger and older ages groups, 47.4% and 46.4% respectively ($p < 0.028$). There is also a significant association between educational level and preferred role. The higher the educational level, the higher the preference for either a collaborative or an active role ($p < 0.01$). There is no significant association between patients' preferred role and gender, nationality, marital status, type of occupation, or chronic illnesses.

The association between patients' sociodemographic characteristics and patients' actual role (after the consultation) in decision-making is shown in table 7. The majority of respondents at all levels of education reverted to a passive role during consultation. Eighty percent of respondents with an intermediate level of educational attainment or below, 61.3% with secondary level and 54.5% with a university or higher degree took a passive role in decision making during the actual consultation ($p < 0.001$). Age, gender, nationality, marital status, type of occupation, or chronic illnesses were not significantly associated.

Table-7: Association between patients' sociodemographic characteristics and patients' Actual role in decision-making. Values are numbers (%), n= 566

		Preferred role			χ^2 P-value
		Active	Collaborative	Passive	
Age	≤ 35	18 (6.7%)	91 (34.0%)	159 (59.3%)	0.0582
	36 - 49	13 (8.1%)	33 (26.9%)	104 (66.0%)	
	≥ 50	8 (5.8%)	42 (30.4%)	88 (63.8%)	
Gender	Male	20 (9.3%)	62 (29.0%)	132 (61.7%)	0.172
	Female	19 (5.4%)	114 (32.4%)	219 (62.2%)	
Nationality	Bahraini	33 (6.4%)	167 (32.3%)	317 (61.3%)	0.064
	Non-Bahraini	6 (12.2%)	9 (18.4%)	34 (69.4%)	
Marital Status	Married	27 (6.3%)	134 (31.5%)	265 (62.2%)	0.477
	Single	11 (9.7%)	36 (31.9%)	66 (58.4%)	
	Divorced or Widowed	1 (3.7%)	6 (22.2%)	20 (74.1%)	
Educational Level	No formal, Primary or Intermediate	4 (4.2%)	15 (15.8%)	76 (80.0%)	0.001
	Secondary, Technical, Vocational or Diploma	19 (7.0%)	86 (31.7%)	166 (61.3%)	
	Tertiary or University	16 (8.0%)	75 (37.5%)	109 (54.5%)	
Type of Occupation	Professional and Administrative	17 (9.6%)	62 (36.0%)	98 (55.4%)	0.077
	Manual labor and Other	6 (7.4%)	18 (22.2%)	57 (70.4%)	
	Retired, Unemployed or Housewife	16 (5.2%)	96 (31.2%)	196 (63.6%)	
Chronic illness	Yes	12 (6.5%)	52 (28.0%)	122 (65.6%)	0.466
	No	27 (7.1%)	124 (32.6%)	229 (60.3%)	

DISCUSSION

The three key findings of our study are (1) most of the patients preferred a passive role in decision-making (48.9%); (2) only educational level and age were associated with patients' role preference and; (3) there was a statistically significant discordance between patients' preferred role and patients' actual role during the consultation with their primary care physician ($p < 0.001$).

Forty-three percent of the patients preferred SDM (before consultation), but fewer than that (31.1%) felt that the decision was shared during the actual consultation. A higher percentage preferred a passive role 48.9%, and 62% were actually passive during the consultation. Our results differ slightly than what other studies in the literature concluded. In those studies, patients' preference towards SDM was above 50% [10, 11, 13]. Moreover, a Japanese study found that 71% of patients preferred SDM [17]. It is worth mentioning, however, that their results were drawn from using case study vignettes rather than actual clinical encounters, and that their population were diabetics with relatively high compliance to treatment [17]. In contrast, a population-based study conducted in the USA found that 52% of patients preferred to leave decision-making to their physicians and 66% of patients in a Swiss study also preferred a doctor-centered approach when dealing with acute respiratory tract infections [7, 18]. These variances can be explained by several things including but not limited to differences in study design (population-based rather than cross-sectional) [13], setting (single center vs multicentric) [10, 11, 17], the use of assessment tools to assess decisional role other than the CPS [10, 13, 17], and method of questionnaire administration (phone interviews rather than face-to-face) [13]. Additionally, patients' active involvement in the management of their illness in the previously mentioned studies can be attributed to the nature/course of the disease at hand (diabetes, cancer, etc.), whereas the majority of our patients were visiting their doctors for an acute or simple complaint and hence had no major decisions ahead. The results may also vary due to differences in the clinical setting.

It is important to note that the questionnaire had five options corresponding to each of the preferred roles (active, active-shared, collaborative, passive-shared, and passive). Many patients chose either option 3 or 4, thinking that they both entailed interactive communication between the doctor and the patient, thus leading to a mutually agreed decision (SDM) but with a slight difference in the degree of involvement. They assumed that in option 3, both doctor and patient decide together. In option 4, after reading the phrase "I prefer that my doctor makes the final decision about which treatment will be used but seriously consider my opinion", many patients perceived that to mean that the patient was involved in SDM. In this categorization, the collaborative role was viewed as the most popular

(43.1%). When collapsing the preferred roles into the three categories (active, collaborative and passive), the result was a higher number of patients being classified as passive (48.9%).

The important question here is why our patients were responding in a passive manner. This can be dissected based on multiple factors. Consultation related factors such as reason for consultation and time available to consult the doctor. In the primary care setting, physicians deal with both acute and chronic conditions. Sometimes, the consultation tends to be for acute complaints that require an active decision to be taken by the doctor such as administration of a life-saving medication or referral to the accident and emergency department. Consultation time is another constraint on SDM; the usual time allocated to each patient is around eight minutes. Doctor related factors such as experience, training, and communication style may contribute to involving the patients in decision-making or not [7, 17, 19]. Moreover, some doctors might underestimate patients' preferred level of involvement due to their age, education or disability, for example. SDM is significantly influenced by the age, knowledge, personal, religious and cultural values of both patients and physicians [20]. Some patients simply believe that doctors know best and interfering with their work is generally not acceptable. The patient-doctor relationship is another aspect that cannot be ignored. If the doctor knows the patient well, this usually leads to a better relationship, which is more likely to involve the patient in decision-making. Conversely, when the patient is difficult to deal with (angry, in a hurry, has an agenda prior to seeing the doctor that is hard to achieve or had a previous negative encounter), the doctor usually tries to conclude the consultation faster which usually assigns the patient into a more passive role.

There was a significant association between educational level and patients' preferred decisional role. Patients who had a higher educational level had higher preference for either a collaborative or an active role. This was consistent with findings of several previous studies [16, 21-24]. Patients who are more educated tend to have more exposure to information, read more, argue more and want to explore options available to them prior to making a decision. Conversely, those with a lower educational level often tend to believe that the doctor would be the best person to decide for them as he/she has the expertise, knowledge and skills.

Our patients aged between 36-49 years were less collaborative than younger and older age groups. This was in contrast to several other studies where younger patients and the highly educated are more likely to express a desire to be involved in decision making, while the older and those with fewer qualifications were more likely to want the doctor to make the decision [25-30]. A study by Levinson et al

revealed that “preferences for an active role increased with age up to a maximum at 45 years, but declined thereafter”, with older people preferring to defer to their physicians for decisions about treatment, independent of their health status or the presence of chronic illness [7]. This shift may be attributed to a change in beliefs and attitudes regarding health care in association with an age-cohort effect [31-33]. This pattern has been suggested by previous studies [31, 34-37]; however, limitations in study design may have contributed to confounding age-related health deterioration with preference for a physician-directed style [7]. The fact that older people in our study were less likely to be passive might be due to cultural reasons.

This study design not only allowed us to compare between patients’ preferences and their actual role in the decision-making process, but also showed us that these were in concordance in the majority of cases (69%). The discordance between patients’ initial preferences and their perceived decisional role (actual role during the consultation), despite being small (roughly 31%), was statistically significant ($p < 0.001$). This discord may, in part, be explained by their previous experiences with the healthcare system or the reason they were seeing the doctor on that day [16]. This raises an important point for healthcare delivery and providers since such a discrepancy between what the patient prefers and their actual experience can diminish patient satisfaction with care and therefore lead to generally lowered quality of life [38]. Hence, further research is needed to improve patient-doctor communication strategies in order to successfully overcome this discrepancy.

STRENGTHS

This study is the first of its kind in the Kingdom of Bahrain. The data were obtained from a large sample making it representative of the population as a whole. Based on the above, we are confident that these findings can become a part of further studies in the future. A further strength was reduced recall bias due to interviewing the patients immediately before and after the consultation. Moreover, the doctors were unaware of the study and therefore unable to modify their behavior during the consultation, which naturally led to less bias when patients answered the post-consultation part of the questionnaire (actual role). A pilot study had been conducted earlier to ensure that the patients expressed no difficulty in comprehending the

questionnaire and that the results were consistent with that of the study itself.

LIMITATIONS

The cross-sectional design of our study can be considered as a limitation. Moreover, patients seeking treatment at the health center on the days the researchers were present were selected via convenience sampling and this can be considered as another drawback.

Another limitation of the study is the difficulty of measuring the patient’s involvement in SDM in the context of a single setting. This is considered a limitation as this consultation might be the patient’s first encounter with the doctor, with the emphasis being more on building a rapport rather than on SDM. As the current health status and the severity of the health problem tend to influence involvement in SDM, a longitudinal assessment is advised [39].

Finally, this study measured patients’ level of education rather than health literacy. No matter how educated patients are they might still not have enough insight into their illness. In SDM, health literacy is essential for effective interpersonal communication as it leads to improved health outcomes [2].

CONCLUSION

This study concludes that healthcare attendees in Bahrain prefer a passive role in healthcare decision-making or at the primary care level at least. Nonetheless, many patients wished to become partners with the doctors and to be involved in decision-making relevant to their care. However, we cannot determine whether patients will change their attitude about decision-making from their previous views based on the severity of the illness they encounter. Therefore, healthcare providers are advised to avoid the assumption that patients have no desire to participate in decision-making regarding their conditions, but must assess patients’ role preferences individually and tailor care accordingly.

ACKNOWLEDGMENT

We are very grateful to Dr Wael Almahdi for translating the questionnaire, his valuable comments and proofreading which greatly improved our manuscript. We would also like to extend our thanks to Mr. Hasan Al-Basri, whose help with making sense of the statistics was invaluable and timely.

APPENDIX

Table x. Two Parallel Versions of the Control Preferences Scale

	<i>Patient Preference Scale</i>	<i>Patient Perception Scale</i>
Active	I prefer to make the final treatment selection about which treatment I receive.	I made the final decision about which treatment I would receive.
Active-shared	I prefer to make the final selection of my treatment after seriously considering my doctor’s opinion.	I made the final selection of my treatment after seriously considering my doctor’s opinion.

Collaborative	I prefer that my doctor and I share responsibility for deciding which treatment is best for me.	My doctor and I shared responsibility for deciding which treatment is best for me.
Passive-shared	I prefer that my doctor makes the final decision about which treatment will be used but seriously consider my opinion.	My doctor made the final decision about which treatment would be used but seriously considered my opinion.
Passive	I prefer to leave all decisions regarding my treatment to my doctor.	My doctor made all the decisions regarding my treatment.

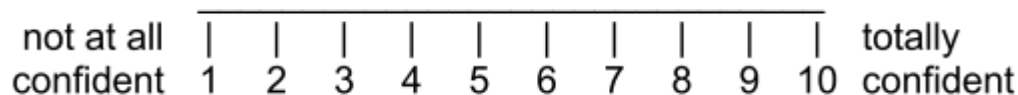
The questionnaire (English version)

Part 1: Demographics

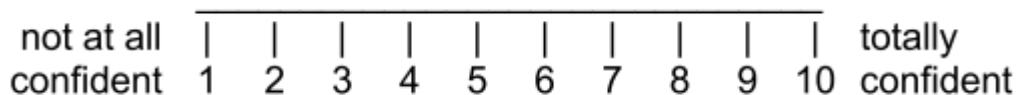
- 1. **Age:**
 - Other
- 2. **Gender:**
 - Male
 - Female
- 3. **Nationality:**
 - Bahraini
 - Non-Bahraini
- 4. **Marital Status:**
 - Married
 - Single
 - Divorced
 - Widowed
- 5. **Educational Level:**
 - No formal or primary
 - Intermediate
 - Secondary
 - Technical /Vocational /Diploma
 - Tertiary/ University
- 6. **Occupation:**
- 7. **Type of Occupation:**
 - Administrative
 - Professional
 - Manual labor
 - Retirement
 - Unemployed
 - Housewife
- 8. **Monthly income:**
- 9. **Any chronic illness?**
 - Yes
 - No
- 10. **Do you have diabetes?**
 - Yes
 - No
- 11. **Do you have high blood pressure?**
 - Yes
 - No
- 12. **Do you have high cholesterol?**
 - Yes
 - No
- 13. **Do you have asthma?**
 - Yes
 - No
- 14. **Reason for seeing the doctor today?**
 - Symptoms/Complaints
 - Diagnosis / Screening / Prevention
 - Treatment / Procedure / Medications
 - Test results
 - Other
- 15. **Duration of consultation**

Part 2: Chronic Disease Self-Efficacy Scales – Communicate with Physician Scale

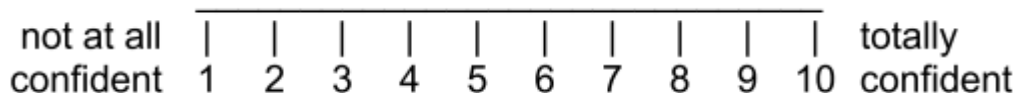
1. How confident are you that you can ask your doctor things about your illness that concerns you?



2. How confident are you that you can discuss openly with your doctor any personal problems that may be related to your illness?



3. How confident are you that you can get work out differences with your doctor when they arise?



Part 3: Patient Involvement in Decision Making

Survey (Pre-consultation)

Patient Preference Scale

- Option 1: "I prefer to make the final treatment selection about which treatment I receive."
- Option 2: "I prefer to make the final selection of my treatment after seriously considering my doctor's opinion."
- Option 3: "I prefer that my doctor and I share responsibility for deciding which treatment is best for me."
- Option 4: "I prefer that my doctor makes the final decision about which treatment will be used but seriously consider my opinion."
- Option 5: "I prefer to leave all decisions regarding my treatment to my doctor."

Part 4: Patient Involvement in Decision Making Survey (Post-consultation)

Patient Perception Scale

- Option 1: "I made the final decision about which treatment I would receive."
- Option 2: "I made the final selection of my treatment after seriously considering my doctor's opinion."
- Option 3: "My doctor and I shared responsibility for deciding which treatment is best for me."
- Option 4: "My doctor made the final decision about which treatment would be used but seriously considered my opinion."
- Option 5: "My doctor made all the decisions regarding my treatment."

REFERENCES

1. Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., ... & Edwards, A. (2012). Shared decision making: a model for clinical practice. *Journal of general internal medicine*, 27(10), 1361-1367.
2. Ng, C. J., Lee, P. Y., Lee, Y. K., Chew, B. H., Engkasan, J. P., Irm, Z. I., ... & Tong, S. F. (2013). An overview of patient involvement in healthcare decision-making: a situational analysis of the Malaysian context. *BMC health services research*, 13(1), 408.
3. Simmons, M., Hetrick, S., & Jorm, A. (2010). Shared decision-making: benefits, barriers and current opportunities for application. *Australasian Psychiatry*, 18(5), 394-397.
4. Stiggelbout, A. M., Van der Weijden, T., De Wit, M. P., Frosch, D., Légaré, F., Montori, V. M., ... & Elwyn, G. (2012). Shared decision making: really putting patients at the centre of healthcare. *Bmj*, 344, e256.
5. Sekimoto, M., Asai, A., Ohnishi, M., Nishigaki, E., Fukui, T., Shimbo, T., & Imanaka, Y. (2004). Patients' preferences for involvement in treatment decision making in Japan. *BMC Family Practice*, 5(1), 1.
6. Légaré, F., & Witteman, H. O. (2013). Shared decision making: examining key elements and barriers to adoption into routine clinical practice. *Health affairs*, 32(2), 276-284.
7. Levinson, W., Kao, A., Kuby, A., & Thisted, R. A. (2005). Not all patients want to participate in decision making: a national study of public preferences. *Journal of general internal medicine*, 20(6), 531-535.
8. Coulter, A. (1997). Partnerships with patients: the pros and cons of shared clinical decision-making. *Journal of health services research & policy*, 2(2), 112-121.
9. Loh, A., Simon, D., Kriston, L., & Härter, M. (2007). Shared decision making in medicine. *Dtsch Arztebl*, 104(21), 1483-8.
10. AlHaqwi, A. I., AlDrees, T. M., AlRumayyan, A., AlFarhan, A. I., Alotaibi, S. S., AlKhashan, H. I., & Badri, M. (2015). Shared clinical decision making: A Saudi Arabian perspective. *Saudi medical journal*, 36(12), 1472.
11. Ambigapathy, R., Chia, Y. C., & Ng, C. J. (2016). Patient involvement in decision-making: a cross-sectional study in a Malaysian primary care clinic. *BMJ open*, 6(1), e010063.
12. Kish, L. (1987). *Statistical Design for Research*. New York: Wiley.
13. Coulter, A., & Jenkinson, C. (2005). European patients' views on the responsiveness of health systems and healthcare providers. *European journal of public health*, 15(4), 355-360.
14. Lorig, K., Stewart, A., Ritter, P., Gonzalez, V., Lynch, J., & Laurent, D. (1996). *Outcome*

measures for health education and other health care interventions. Sage, 41-45..

15. Degner, L. F., Sloan, J. A., & Venkatesh, P. (1997). The control preferences scale. *Canadian Journal of Nursing Research Archive*, 29(3): 2143.
16. Janz, N. K., Wren, P. A., Copeland, L. A., Lowery, J. C., Goldfarb, S. L., & Wilkins, E. G. (2004). Patient-physician concordance: preferences, perceptions, and factors influencing the breast cancer surgical decision. *Journal of clinical oncology*, 22(15), 3091-3098.
17. Sekimoto, M., Asai, A., Ohnishi, M., Nishigaki, E., Fukui, T., Shimbo, T., & Imanaka, Y. (2004). Patients' preferences for involvement in treatment decision making in Japan. *BMC Family Practice*, 5(1), 1.
18. Briel, M., Young, J., Tschudi, P., Hugenschmidt, C., Bucher, H. C., & Langewitz, W. (2007). Shared-decision making in general practice: Do patients with respiratory tract infections actually want it?. *Swiss medical weekly*, 137(33-34), 483-485.
19. Murray, E., Pollack, L., White, M., & Lo, B. (2007). Clinical decision-making: Patients' preferences and experiences. *Patient education and counseling*, 65(2), 189-196.
20. Charles, C., Gafni, A., Whelan, T., & O'Brien, M. A. (2006). Cultural influences on the physician-patient encounter: the case of shared treatment decision-making. *Patient education and counseling*, 63(3), 262-267.
21. Rademakers, J., Delnoij, D., Nijman, J., & De Boer, D. (2012). Educational inequalities in patient-centred care: patients' preferences and experiences. *BMC health services research*, 12(1), 261.
22. Benbassat, J., Pilpel, D., & Tidhar, M. (1998). Patients' preferences for participation in clinical decision making: a review of published surveys. *Behavioral medicine*, 24(2), 81-88.
23. Arora, N. K., & McHorney, C. A. (2000). Patient preferences for medical decision making: who really wants to participate?. *Medical care*, 335-341.
24. Degner, L. F., Kristjanson, L. J., Bowman, D., Sloan, J. A., Carriere, K. C., O'Neil, J., ... & Mueller, B. (1997). Information needs and decisional preferences in women with breast cancer. *Jama*, 277(18), 1485-1492.
25. Robinson, A., & Thomson, R. (2001). Variability in patient preferences for participating in medical decision making: implication for the use of decision support tools. *BMJ Quality & Safety*, 10(suppl 1), i34-i38.
26. Strull, W. M., Lo, B., & Charles, G. (1984). Do patients want to participate in medical decision making?. *Jama*, 252(21), 2990-2994.
27. Vick, S., & Scott, A. (1998). Agency in health care. Examining patients' preferences for attributes of the doctor-patient relationship. *Journal of health economics*, 17(5), 587-605.
28. Ende, J., Kazis, L., Ash, A., & Moskowitz, M. A. (1989). Measuring patients' desire for autonomy. *Journal of general internal medicine*, 4(1), 23-30.
29. Degner, L. F., & Sloan, J. A. (1992). Decision making during serious illness: what role do patients really want to play?. *Journal of clinical epidemiology*, 45(9), 941-950.
30. Blanchard, C. G., Labrecque, M. S., Ruckdeschel, J. C., & Blanchard, E. B. (1988). Information and decision-making preferences of hospitalized adult cancer patients. *Social science & medicine*, 27(11), 1139-1145.
31. Rosén, P., Anell, A., & Hjortsberg, C. (2001). Patient views on choice and participation in primary health care. *Health policy*, 55(2), 121-128.
32. Inglehart, R. (1981). Post-materialism in an environment of insecurity. *American Political Science Review*, 75(4), 880-900.
33. Beisecker, A. E. (1988). Aging and the desire for information and input in medical decisions: Patient consumerism in medical encounters. *The Gerontologist*, 28(3), 330-335.
34. Cassileth, B. R., Zupkis, R. V., Sutton-Smith, K., & March, V. (1980). Information and participation preferences among cancer patients. *Annals of internal medicine*, 92(6), 832-836.
35. Stiggelbout, A. M., & Kiebert, G. M. (1997). A role for the sick role: patient preferences regarding information and participation in clinical decision-making. *CMAJ: Canadian Medical Association Journal*, 157(4), 383.
36. Mazur, D. J., & Hickam, D. H. (1997). Patients' preferences for risk disclosure and role in decision making for invasive medical procedures. *Journal of General Internal Medicine*, 12(2), 114-117.
37. Catalan, J., Brener, N., Andrews, H., Day, A., Cullum, S., Hooker, M., & Gazzard, B. (1994). Whose health is it? Views about decision-making and information-seeking from people with HIV infection and their professional carers. *AIDS care*, 6(3), 349-356.
38. Singh, J. A., Sloan, J. A., Atherton, P. J., Smith, T., Hack, T. F., Huschka, M. M., ... & Degner, L. F. (2010). Preferred roles in treatment decision making among patients with cancer: a pooled analysis of studies using the Control Preferences Scale. *The American journal of managed care*, 16(9), 688.
39. Shay, L. A., & Lafata, J. E. (2014). Understanding patient perceptions of shared decision making. *Patient education and counseling*, 96(3), 295-301.