

Shared clinical decision making

A Saudi Arabian perspective

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ABSTRACT

الأهداف: تهدف هذه الدراسة إلى تحديد وجهات ورغبات المرضى بخصوص مدى مشاركتهم في اتخاذ القرار الطبي الخاص بعلاج مشاكلهم الصحية ودراسة العوامل المؤثرة في تحديد تلك الرغبات.

الطريقة: أجريت دراسة مقطعية في أحد مراكز طب العائلة الكبرى في مدينة الملك عبدالعزيز الطبية، الرياض، المملكة العربية السعودية في الفترة من مارس إلى مايو 2012م. وتم استخدام نموذج التحليل التحوفي المتعدد لتحديد العوامل المؤثرة في تحديد رغبات المرضى.

النتائج: شارك في الدراسة 236 مريضاً. كان نمط اتخاذ القرار الطبي المفضل لدى شريحة المشاركين هو «النمط المشارك» (57%)، تبعه النمط «الأبوي» بواقع (28%) فيما كان النمط «الاستهلاكي» هو الأقل لدى المشاركين بواقع (14%). كان «النمط المشارك» هو النمط المفضل وبدلالة احصائية معتبرة لدى المرضى الذكور وذوو التعليم العالي بينما كان النمط الأبوي هو السائد لدى المرضى كبار السن وأولئك المصابين بأمراض صحية مزمنة أما النمط الاستهلاكي فكان السائد لدى الشريحة الشابة سنة. كما أوضح التحليل التحوفي المتعدد بالمقارنة مع مجموعة النمط المشارك أن الإناث غالباً ما يفضلون النمط الاستهلاكي (نسبة الاحتمال: 2.87، حدود الثقة: 1.31-6.27) وكذلك المرضى غير المصابين باعتلال زيادة الدهون (نسبة الاحتمال: 2.90، حدود الثقة: 1.03-8.09)، وأن من يفضلوا النمط الأبوي غالباً هم من الشريحة العمرية الأكبر سناً (نسبة الاحتمال: 1.03، حدود الثقة: 1.01-1.05) وأيضاً الإناث (نسبة الاحتمال: 2.47، حدود الثقة: 1.32-4.06).

الخاتمة: أوضحت هذه الدراسة أن أنماط مشاركة المرضى في قرار المشاركة الطبية تختلف وتتعدد بشكل كبير. إن اعتبار هذه الأنماط وتحديد رغبات المرضى في مدى المشاركة في القرار الطبي على درجة كبيرة من الأهمية للحصول على أفضل النتائج الطبية الممكنة.

Objectives: To determine preferences of patients regarding their involvement in the clinical decision making process and the related factors in Saudi Arabia.

Methods: This cross-sectional study was conducted in a major family practice center in King Abdulaziz Medical City, Riyadh, Saudi Arabia, between March and May 2012.

Multivariate multinomial regression models were fitted to identify factors associated with patients preferences.

Results: The study included 236 participants. The most preferred decision-making style was shared decision-making (57%), followed by paternalistic (28%), and informed consumerism (14%). The preference for shared clinical decision making was significantly higher among male patients and those with higher level of education, whereas paternalism was significantly higher among older patients and those with chronic health conditions, and consumerism was significantly higher in younger age groups. In multivariate multinomial regression analysis, compared with the shared group, the consumerism group were more likely to be female [adjusted odds ratio (AOR) =2.87, 95% confidence interval [CI] 1.31-6.27, $p=0.008$] and non-dyslipidemic (AOR=2.90, 95% CI: 1.03-8.09, $p=0.04$), and the paternalism group were more likely to be older (AOR=1.03, 95% CI: 1.01-1.05, $p=0.04$), and female (AOR=2.47, 95% CI: 1.32-4.06, $p=0.008$).

Conclusion: Preferences of patients for involvement in the clinical decision-making varied considerably. In our setting, underlying factors that influence these preferences identified in this study should be considered and tailored individually to achieve optimal treatment outcomes.

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Patients and physicians assume different and varying roles in the medical consultation process. This could determine the extent of involvement of the patient and the physicians in the clinical decision making process and patient care management. In one extreme, the physician assumes the responsibility of the clinical decision with no or very little joint deliberation with the patient. This is known as the “paternalistic” approach.^{1,2} In the other extreme, the informed medical decision approach means that the clinical decision is made by patients and potential others, including family members, after obtaining all needed medical information that could enable the patient to make an appropriate decision. This is known as the “consumerism” approach to clinical decision-making.^{3,4} Shared decision making is probably at the center of this spectrum, in which patients and physicians exchange information, discuss the details of the medical problems, explore available treatment options, and conclude together an agreed treatment plan.⁵ The provision of health care that is consistent with the preferences of patients may improve the patients’ satisfaction and health outcomes.^{6,7} The practice of shared clinical decision-making was encouraged as it respects patients’ autonomy, values, and commitment to the agreed health plan and continuity of care.⁸ The relevant literature shows that most patients prefer to be offered information on their medical conditions, available options of treatment, and future plan of care.^{1,3,9} However, the extent of the involvement of patients in the process of decision making is variable and influenced by issues related to the patients’ status of their illnesses, and types of decisions under consideration.^{10,11} Patients of younger age, women, and with higher levels of education have been found to prefer an active role and to share this process. In addition, preferences of patients may change with time and different stages of the sickness.^{11,12} The complexity of this process is further compounded by the fact that patient 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.¹³ This study aims to explore preferences of patients from Saudi Arabia regarding their involvement in medical decision making, and to explore factors that may affect these preferences.

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Methods. This cross-sectional study was conducted in a major family practice center in King Abdulaziz Medical City, Riyadh, Saudi Arabia between March and May 2012. This family practice center provides highly accessible and comprehensive medical care to all eligible patients and their families. Most patients with acute and chronic problems receive their medical treatment in this center, and if needed will be referred for diagnostic and therapeutic services to the affiliated secondary and tertiary care services. This is a well-equipped and staffed busy health care center that serves 1200 patients daily. Adult Saudi patients presented to this center, either as walk-in, or with prior appointments, were invited to participate in this study. After the end of their visit, patients that consented to participate in the study were requested to complete a structured questionnaire designed to address the objectives of the study. The questionnaire was written in Arabic.

The questionnaire. The questionnaire consisted of 3 main parts; demographic characteristics, presence and details of chronic diseases, and questions related to preferences for involvement in clinical decision making. The options for decision making were presented to patients as follows: “If you have obtained all needed information related to the available treatment options on your medical problems, who do you prefer to take the final decision on your treatment?” Patients were given many responses that were grouped into 3 options: 1) The final decision will be taken by me, or my family without involvement of the physician. 2) The final decision will be left to the physician only, and 3) The decision will be taken, after discussion and agreement, jointly by me and my physician. If the patient indicated a preference for the first option of making the decision by him/her alone, or with the help of family members and without the involvement of a physician, then this was labeled as the informed “consumerist” style of decision making. The second option indicates the “paternalistic” style. The third option was labeled “shared decision making” in which the patients prefer to involve the physician in the management process either alone, or along with other family members.

To ensure content validity of the questionnaire, it was constructed by utilizing available published data.^{2-6,9} The content of the questionnaire was further discussed and reviewed by a group of family medicine consultants. This was followed by a pilot study to further check the validity and clarity of the questionnaire. The study proposal was reviewed and approved by the Ethics Committee of King Abdullah International Research Center, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia.

Statistical analysis. Data was summarized as proportions or medians, and compared using the chi-squared test or Mann-Whitney test. Multinomial regression models were fitted to identify variables associated with preferences of patients regarding their involvement in the clinical decision process. In these models, the “shared decision” was modelled as the referent group. The factors modeled as explanatory variables in these models included sociodemographic and baseline clinical characteristics of the participants. The final multinomial multivariate model included variables found significant in univariate models. Strength of association was expressed as an odds ratio (OR) with a 95% confidence interval (CI) and tested for significance using the Wald test. All tests were 2-sided and a $p < 0.05$ was considered significant. Data was coded, entered, and analyzed using the Statistical Package for Social Sciences (IBM SPSS version 20, New York, USA).

Results. Characteristics of the participants. The total number of participants was 236 with a mean (\pm SD) age of 43 years (145 males and 91 females). Most of the participants (81%) were married and 62% had formal level of education ranging from elementary to high school education (Table 1). Sixty-five percent of the participants indicated having chronic diseases, with 41% diagnosed with dyslipidemia, 38% with diabetes mellitus, 31% with hypertension (31%), and 18% with bronchial asthma.

Preference for participation in decision-making. Approximately 57% of the participants preferred shared decision making with their physicians, 28% preferred the paternalistic approach, and 14% of patients preferred the informed consumerism approach, Table 1.

The following characteristics were shown to be significantly associated with increased preference for shared clinical decision making: being male, and with a higher level of education. The second preferred approach by patient was the paternalistic approach, which indicates a rather passive role in the decision making process.

In multivariate multinomial regression analysis, compared with the shared group, the consumerism group were more likely to be female (adjusted odds ratio [AOR]=2.87, 95% CI 1.31-6.27, $p=0.008$) and non-dyslipidemic (AOR=2.90, 95% CI: 1.03-8.09, $p=0.04$), and the paternalism group were more likely to be older (AOR=1.03, 95% CI: 1.01-1.05, $p=0.04$), and females (AOR=2.47, 95% CI: 1.32-4.06, $p=0.008$), Table 2.

Discussion. This study demonstrated that shared decision-making was the most preferred style followed by the paternalistic approach, and the least preferred was the consumerist approach. These findings are consistent with the preferred styles reported in a Japanese study⁹ found that most of the patients (71%) preferred the collaborative approach of decision-making, 17% preferred a passive role, and 12% preferred an active role in the decision-making process. Previous studies^{4,5} from western societies reported the order of preference among western patients as follows: shared decision making, consumerist, and paternalistic approach. This indicates that Saudi patients generally have a positive attitude towards active involvement in the process of shared decision-making. However, the consumerist style, with a more active role, was more common among western societies as compared with findings in the present study, and other eastern communities tend to rely on the physician’s decision-making process compared with patients from western societies.

In this study, the preference of shared style in the clinical decision-making process was found to be higher in male patients, and in those with higher levels of education. These factors were consistently identified in other studies.^{4,6,11} The multinomial multivariate regression model used in this study demonstrates that, compared with the shared group, the consumerism group were more likely to be females and non-dyslipidemic patients. In addition, a less active role in the decision-making process is preferred by females as well as older patients. This study demonstrated that females could prefer different roles, active and passive, in the clinical decision making process. The preference of active roles of females was demonstrated mainly in previous studies^{5,11} in western societies. The preference of a less active role among female participants in this study could be related to cultural and social factors. The discrepancy in these views should be explored by further studies. Previous studies¹⁴ confirmed that preference of the paternalistic styles by patients increases with age. In this study, patients with dyslipidemia had a 3-fold increase in the likelihood of preferring a collaborative, shared style more than the active, and consumeristic approach. Further analysis of patients with dyslipidemia demonstrated that of the 97 dyslipidemic patients, 53 (54.6%) preferred to share decisions with the doctor, 6 (6.2%) were consumeristic, and 38 (39.2%) were paternalistic. Most patients were older (66%), 60% were males, and virtually all of them (100%) were found to have one or more other chronic medical disease in addition to the dyslipidemia. These findings highlight the previously reported studies^{14,15} that certain categories

Table 1 - Socio-demographic and clinical characteristics of the 3 groups of patients (N=236).

Characteristic	Informed consumerism (n=34)	Shared decision making (n=135)	Paternalism (n=67)	P-value
Age, median (IQR)	35 (22.8-45.8)	38 (28-52)	50 (38-62)	0.001
Gender				
Male	16 (47.1)	96 (71.1)	33 (49.3)	0.002
Female	18 (52.9)	39 (28.9)	34 (50.7)	
Marital status				
Married	27 (97.4)	114 (84.4)	49 (73.1)	0.159
Unmarried	7 (20.6)	21 (15.6)	18 (26.9)	
Education level				
Non-formal	10 (29.4)	24 (17.8)	28 (41.8)	0.004
Elementary - High School	21 (61.8)	89 (65.9)	35 (52.2)	
Tertiary	3 (8.8)	22 (16.3)	4 (6.0)	
Any chronic disease				
Yes	20 (58.8)	80 (59.3)	54 (80.6)	0.008
No	14 (41.2)	55 (40.7)	13 (19.4)	
Diabetes				
Yes	11 (32.4)	45 (33.3)	33 (49.3)	0.07
No	23 (67.6)	90 (66.7)	34 (50.7)	
Hypertension				
Yes	12 (35.3)	34 (25.2)	27 (40.3)	0.076
No	22 (64.7)	101 (74.8)	40 (59.7)	
Lipidemia				
Yes	6 (17.6)	53 (39.3)	38 (56.7)	0.001
No	28 (82.4)	82 (60.7)	29 (43.3)	
Asthma				
Yes	9 (26.5)	21 (15.6)	12 (17.9)	0.33
No	25 (73.5)	114 (84.4)	55 (82.1)	

Data are expressed as number and percentage (%) unless otherwise specified, IQR - interquartile range, P-value: χ^2 test.

Table 2 - Univariate and multivariate multinomial regression analysis for factors associated with preferences of patients regarding their involvement in the clinical decision making process.

Factor	Consumerism versus shared group*		Paternalism versus shared group*	
	OR (95% CI)	P-value	OR (95% CI)	P-value [†]
Age	0.94 (0.97-1.02)	0.706	1.03 (1.01-1.05)	0.008
Gender				
Male	1	0.008	1	0.005
Female	2.87 (1.31-6.27)		2.47 (1.32-4.60)	
Dyslipidemia				
Yes	1	0.04	1	0.35
No	2.90 (1.04-8.09)		0.73 (0.37-1.41)	

*shared group is the baseline comparator. OR - odds ratio, CI - confidence interval, [†]Wald test

of patients, such as the elderly and those with chronic conditions tend to prefer a passive and paternalistic style in the decision-making process. This view is even more evident in patients with serious and life threatening medical conditions, such as cancer.^{12,15} Physicians' related factors, such as age, experience, values, and communication styles were shown to contribute to the

extent of patients' preference and involvement in the decision-making process.^{9,11,16} Shared decision-making is significantly influenced by the values and culture of both patients and physicians.¹³ Many barriers were reported that compromise patients' involvement in this process including; values and expectations of physicians and patients, communication, and linguistic barriers.¹⁷

Study limitations. The patients' views on participation in shared decision-making were obtained from one family practice center in this study. However, multicenter studies are required to confirm and generalize these findings. In addition, this study reported the preference of patients regarding their involvement in shared decision making in general rather than their actual experiences.

In conclusion, this study showed that Saudi patients generally have a positive attitude toward active participation in the clinical decision process. Their preferences were significantly influenced by sociodemographic and disease factors. The noted difference in the clinical decision-making styles with different culture should be recognized and appreciated in order to ensure patients' involvement that is consistent to their values for best outcomes. Further multicenter studies are recommended to evaluate the actual involvement of patients in the process of shared decision making in different clinical settings and with varying level of disease seriousness especially with life-threatening and terminal illnesses. The effect of other contributing factors such as physicians' characteristics and attitude should be evaluated as well. In addition, further qualitative studies are recommended to obtain a better understanding of patients' preferences and their actual involvement in the process of shared clinical decision.

References

1. Simons M, Hetrick S, Jorm A. Shared decision making: benefits, barriers and current opportunities for application. *Australas Psychiatry* 2010; 18: 394-397.
2. Schneider A, Korner T, Mehring M, Wensing M, Elwyn G, Szecsenyi J. Impact of age, health locus of control and psychological co-morbidity on patients' preferences for shared decision making in general practice. *Patient Educ Couns* 2006; 61: 292-298.
3. Stiggelbout AM, Van der Weijden T, De Wit MPT, Frosch D, Legare F, et al. Shared decision making: really putting patients at the centre of healthcare. *BMJ* 2012; 344: e256.
4. Murray E, Pollack L, White M, Lo B. Clinical decision-making: Patients' references and experiences. *Patient Educ Couns* 2007; 65: 189-196.
5. Murray E, Charles C, Gafni A. Shared decision-making in primary care. Tailoring the Charles et al. model to fit the context of general practice. *Patient Educ Couns* 2006; 62: 205-2011.
6. Dy SM, Purnell TS. Key concepts relevant to quality of complex and shared decision-making in healthcare: a literature review. *Soc Sci Med* 2012; 74: 582-857.
7. Gravel K, Legare F, Gramam ID. Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. *Implement Sci* 2006; 1: 16.
8. Say R, Murtagh M, Thomson R. Patient's preference for involvement in medical decision making: a narrative review. *Patient Educ Couns* 2006; 60: 102-114.
9. Sekimoto M, Asai A, Ohnishi M, Nishigaki E, Fukui T, Shimbo T, et al. Patients' preferences for involvement in treatment decision making in Japan. *BMC Fam Pract* 2004; 5: 1.
10. Legare F, Wittman HO. Shared decision making: examining key elements and barriers to adoption into routine clinical practice. *Health Aff (Millwood)* 2013; 32: 276-284.
11. Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making, a national study of public preferences. *J Gen Intern Med* 2005; 20: 531-535.
12. Hawley ST, Lantz PM, Janz NK, Salem B, Morrow M, Schwartz K, et al. Factors associated with patient involvement in surgical treatment decision making for breast cancer. *Patient Educ Couns* 2007; 65: 387-395.
13. Charles C, Gafni A, Whelan T, O'Brien MA. Cultural influences on the physician-patient encounter: the case of shared treatment decision-making. *Patient Educ Couns* 2006; 63: 262-267.
14. Nomura K, Ohno M, Fujinuma Y, Ishikawa H. Patient autonomy preferences among hypertensive outpatients in a primary care setting in Japan. *Intern Med* 2007; 46: 1403-1408.
15. Elkin EB, Kim SH, Casper ES, Kissane DW, Schrag D. Desire for information and involvement in treatment decisions: elderly cancer patients' preferences and their physicians' perceptions. *J Clin Oncol* 2007; 25: 5275-5280.
16. Murray E, Pollack L, White M, Lo B. Clinical decision-making: physicians' preferences and experiences. *Patient Educ Couns* 2007; 65: 189-196.
17. Suurmond J, Seeleman C. Shared decision-making in an intercultural context barriers in the interaction between physicians and immigrant patients. *Patient Educ Couns* 2006; 60: 253-259.