

1 **Original research paper**
2 **Physicians' perspectives toward shared**
3 **decision making in developing countries**

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8 **ABSTRACT**

9 **Aims:** To evaluate Iranian physicians' perspectives on shared decision making by validating and
10 translating the physician version of a shared decision making questionnaire (SDM-Q-DOC).

11 **Place and duration:** Iranian Evidence-Based Medicine Center of Excellence, Tabriz University of Medical
12 Sciences, Tabriz, Iran, from June 2012 to July 2013.

13 **Methods:** The physician version of a shared decision making questionnaire (SDM-Q-DOC) was
14 translated and validated through a pilot study among urologists in one of the hospitals of Tabriz University
15 of Medical Sciences. A validated questionnaire was handed out among Iranian physicians in three main
16 hospitals of Urmia. The results were analyzed using factorial analysis SPSS 16 software. To assess
17 reliability, Cronbach's alpha coefficient was calculated. Pearson correlation coefficient was used to
18 assess test-retest value.

19 **Results:** The Persian version of the questionnaire showed an acceptable level of reliability (Cronbach
20 alpha=0.901). In the implementation phase, Iranian physicians were generally in favor of the SDM
21 process (mean score=74.4%) but their perspective on different phases of SDM were different, with 93%
22 answering questions evaluating physicians' clinical explanations to their patients and only 68% agreeing
23 with questions evaluating physicians' attitudes regarding involving patients in the last treatment option.

24 **Conclusion:** The physician version of SDM-Q-DOC is a valid and reliable questionnaire assessing
25 physicians' attitudes toward the SDM process. In this study, Iranian physicians showed a positive view to
26 SDM.

27 **Keywords**
28 *Shared decision making, patient-centeredness, Person-centeredness, evidence-based medicine;*
29 *developing countries.*

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31 1. INTRODUCTION

32 In recent decades, there has been a strong move toward shared decision making (SDM) in medical
33 literature, medical encounters [1] and even in countries' health care systems [2]. **Despite numerous**
34 **studies in the field, SDM implementation still faces various barriers** [3]. Measuring SDM from different
35 viewpoints might clarify the health care system's status for SDM implementation.

36 SDM is defined as presenting information for patients to involve them in finalizing the suitable treatment
37 option [4, 5]. Several instruments are used to assess the SDM process, varying from questionnaire-based
38 to audiovisual-based instruments. The Instruments can be classified as those that assess SDM from a
39 third observer perspective [6–8], the physician's perspective [9], and the patient's perspective [10].
40 Despite many studies discussing various options for assessing shared decision making, most of them are
41 not able to address social and cultural differences in decision making encounters [11]. Some SDM
42 processes could be viewed negatively by patients in countries with different cultures and levels of health
43 knowledge [12]. A study by Charles et al. points out the importance of considering confounding factors in
44 different possible contexts of shared decision making [11].

45 Because studies evaluating SDM processes have been designed in developed countries, they often fail to
46 consider different contexts of this process in countries with lower socioeconomic levels. SDM
47 implementation could be completely different in different cultures resulting in different perspectives of their
48 physicians toward an SDM process.

49 **We figured that measuring Iranian physicians' attitudes toward SDM could clarify the level of perceived**
50 **SDM in Iran, a country posing barriers to SDM implementation similar to other developing countries; this**
51 **necessitates consideration of cultural influences, as pointed out by Charles et al., as well as other**
52 **potential barriers in SDM perception and utilization.** In this study, we adapted SDM-Q-DOC "an instrument
53 for assessing physicians' points of view on SDM" in order to address the knowledge gap regarding **SDM**
54 **implementation in countries with different social contexts, economy, and culture.**

55 2. METHODOLOGY

56 2.1. Developing the instrument

57 The nine-item physician version of the shared decision making questionnaire (SDM-Q-Doc) was chosen
58 to assess Iranian physicians' points of view on shared decision making (SDM). The original questionnaire
59 was in the German language but we decided to use an English version of the questionnaire for the
60 process of validation. The author's consent was obtained to use the English version instead of German.
61 SDM-Q-Doc was translated from English to Persian by two bilingual experts, one of whom was a
62 physician and the other a researcher who was aware of the research objectives. Back-translation was
63 performed by a native English speaker (fluent in Persian) who was unaware of research aims. The
64 translation methodology was checked by sending the back-translation to the original authors, to ensure

65 that the content of the translation conforms to the original version and the author's recommendations
66 were considered.

67 To assess reliability, we conducted a pilot study on 18 physicians from the department of urology in a
68 teaching hospital of Tabriz University of Medical Sciences. Questionnaires were answered by physicians
69 at two separate times with a one-week interval. This was to reduce recall-induced agreement.

70 The results of the pilot study were analyzed and the reliability of the questionnaire was assessed by
71 Cronbach's alpha using the factorial analysis in SPSS16 software. Pearson correlation coefficients were
72 calculated to evaluate test-retest value.

73 **2.2. Implementing the instrument**

74 After validation, the new questionnaire was administered among 81 physicians in teaching hospitals of
75 Urmia University of Medical Sciences (Shahid Motahari Hospital, Imam Khomeini Hospital, and Taleghani
76 Hospital) to assess physicians' perspectives on shared decision making. An oral consent was obtained
77 from physicians and study aims and their role in its design were explained to each doctor when handing
78 out the questionnaires. Hospital administrators' consents were acquired before the questionnaires were
79 distributed. Physicians participating in the study were from the departments of anesthesia, urology,
80 gynecology and emergency (all departments present in each hospital were asked to take part in the
81 study, but only these departments agreed to participate).

82 To evaluate physicians' general perception of SDM, the scoring system of the original questionnaire was
83 implemented; it was a nine-item questionnaire with six items for each question, with a scoring range from
84 0 (completely disagree) to 5 (completely agree). The total score for each questionnaire was calculated
85 and mean scores (ranging from a minimum of 0 to a maximum of 45) of whole questionnaires were
86 determined to estimate perceived level of SDM among Iranian physicians in general.

87 The results were analyzed using SPSS16 software. Frequencies of answers for each question were
88 calculated and analyzed separately.

89 **3. RESULTS**

90 In the first phase of the study (validation), 18 physicians from the urology department were involved. The
91 Cronbach's alpha coefficient was 0.9, indicating that the questionnaire had a high degree of internal
92 consistency. The Pearson correlation coefficient was 0.70, showing a large and positive linear
93 relationship between two variables. Pearson coefficient was 0.5–0.7 in questions 1, 2, 4, and 5, which
94 showed a large relationship. We attributed this to different understanding of Iranian physicians due to the
95 differences in medical scenarios in Iran compared to Western countries.

96 The second phase of the study (implementation) involved 81 physicians who were specialists or general
 97 practitioners from anesthesia, urology, gynecology, and emergency departments. The mean score was
 98 31.18 (7.45 SD), which was calculated as 74.40% level of perceived SDM (Table 1).

99 Approximately 97% of physicians declared they make clear to their patients the necessity of making a
 100 medical decision. Almost 90% agreed that they would like to know how their patient wants to be involved
 101 in the process of shared decision making. Likewise, 90% said that they explain different treatment options
 102 to their patients and 89% believed that they explain the advantages and disadvantages of different
 103 options to their patients. Most of the doctors (94%) agreed that they help their patients to understand all
 104 the information related to their health problem. On the other hand, 30% of physicians declared that they
 105 disagree about asking the patients about their treatment preferences and 32% were unlikely to have
 106 patients weigh different treatment options. Interestingly, 42% indicated that they select the final decision
 107 alone, not with their patients, and 25% do not reach an agreement with their patients on how to proceed
 108 in the process of treatment (Table 2).

109 **Table 1. Scores noted based on questionnaire's scoring system.**

Number of questionnaires	Mean score	Mean score (%)	Standard Deviation	Maximum	Minimum
81	31.18	74.40	7.45	45.00	14.00

110 *This table demonstrates level of perceived general SDM by Iranian physicians by reporting scores derived from original questionnaire's proposed scoring system.*

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112 DISCUSSION: This study evaluated physicians' points of view on shared decision making (SDM) in a
 113 developing country by adapting the English version of SDM-Q-Doc scale to the Persian language. To our
 114 best of knowledge, this questionnaire is the first valid scale assessing physicians' perspectives on SDM in
 115 developing countries. In the adaptation phase, the instrument showed an acceptable level of internal
 116 consistency and a good level of reliability of the questionnaire. In the implementation, phase physicians
 117 showed positive attitudes towards SDM generally (with 74.40% level of perceived SDM) but their
 118 perspectives in different stages of SDM, as defined by Heghland and colleagues (2012) [13] (information
 119 dissemination, formulation of options, and integration of information and control), were different.

120 Studies evaluating physicians' points of view on SDM reported positive attitudes of physicians toward
 121 shared decision making in general. Some of these studies provide stages [13] and special frameworks [4]
 122 for SDM process. A study by Charles et al. discussed SDM in four models: paternalistic (in which the
 123 physician is the only decision maker); some sharing (in which the physician shares information with
 124 patients but ignores their views when making the final treatment option; informed (the physician shares

125 information and the patient decides about the treatment option); and shared (in which the physician
 126 shares the information with the patient and they make the final decision together). In the study, Charles et
 127 al. found that 93% of physicians agreed with a shared approach, 28.2% agreed with some sharing, 26.8%
 128 with the informed approach, and 5.3% with the paternalistic approach [4, 14].

129 In another study, Heghland et al. assessed physicians' perspectives on different stages of shared
 130 decision making [13]. This study showed that 80% of physicians agreed with sharing information but only
 131 65% and 70% of them agreed in formulation of options and control process, respectively, when assessing
 132 physicians' attitudes toward involving patients in choosing the final treatment option. These studies were
 133 performed in developed countries, where positive points of view on SDM are expected due to a high level
 134 of literacy in their societies and SDM implementation by physicians is much easier than in developing
 135 countries. Other studies report the influence of culture in the SDM process [11,12,15].

136 **Table 2 .Questions and scores noted by participants for each question.**

Questions	Maximum	Minimum	Mean	Standard Deviation	Agree (%)	Disagree (%)
1 I made clear to my patient that a decision needs to be made.	5.00	2.00	4.23	0.89	97.5	2.5
2 I wanted to know from my patient how he/she wants to be involved	5.00	0.00	3.60	1.16	91.1	9.9
3 I told my patient that there are different options for treating his/her medical condition.	4.00	0.00	4.4	1.6	91.1	9.9
4 I precisely explained the advantages and disadvantages of treatment options to my patient.	5.00	0.00	3.62	1.16	88.9	11.1
5 I helped my patient understand all the information.	5.00	2.00	3.77	0.90	95.1	4.9
6 I asked my patient which treatment option he/she prefers.	5.00	0.00	3.17	1.36	70	30

7	My patient and I thoroughly weighed the different treatment options.	5.00	0.00	3.33	1.39	67.9	32.1
8	My patient and I selected a treatment option together.	5.00	0.00	2.69	1.36	58	42
9	My patient and I reached an agreement on how to proceed.	5.00	0.00	3.25	1.28	75.3	24.7

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138 Although there is a difference in culture and level of literacy in Iran's society, fortunately Iranian
 139 physicians' points of view on SDM were positive and their perspective in different stages of SDM were
 140 similar to Western countries—with 94% of physicians agreeing with an information exchange and 68%
 141 agreeing that physicians should involve patients in selecting a treatment option. We attributed this
 142 similarity to an educational system for Iranian physicians similar to that in the West, bringing better
 143 information to Iranian physicians on SDM.

144 A study by Murray et al. highlighted the role of physicians specialties in shared decision making [16]. We
 145 did not consider physicians' specialties in our sampling methodology, meaning our sample was not a
 146 homogenous number of physicians from different specialties. It should be noted that our study was
 147 questionnaire-based, with several limitations because of self-reporting. We think that larger studies with
 148 suitable instruments should be implemented to assess physicians' perspectives on the SDM process in
 149 developing countries with different cultures.

150 **4. CONCLUSION**

151 It can be concluded that the Persian version of SDM-Q-DOC is a valid and reliable questionnaire that can
 152 be implemented in health care systems to assess SDM from the physician's view. Iranian physicians had
 153 a positive view of SDM, but they were more likely to disseminate information to their patients than involve
 154 them in choosing the treatment option.

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 158 administrators and staff who helped us during the study process.

159 **COMPETING INTERESTS**

160 Authors declare that they have no conflicts of interests

161 **AUTHORS' CONTRIBUTIONS**

162 S. H and A.H designed the study. H.M and M.A.H.E collected the data, F.P conducted the data analysis,
163 and the article is written by M.A.H.E and critically edited by S. H and A.H.

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