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Original Research Article

Patients' Involvement in Decision-Making During Healthcare Visit in Karachi City, Pakistan: A Cross-Sectional Study

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Abstract: *Shared decision-making (SDM) is a key component of patient-centred care that involves sharing information and reaching an agreement between healthcare practitioners and patients. Although globally acknowledged as a quality indicator in clinical treatment, SDM is still underused in many low- and middle-income countries (LMICs), including Pakistan.* ***Objective:*** *The purpose of this study was to evaluate patients' involvement in SDM during outpatient consultations at a tertiary care hospital in Karachi, Pakistan.* ***Methods:*** *A cross-sectional study was conducted from 13-Nov-2024 to13-Jan-2025 involving a total of two hundred outpatients with long-term conditions, including diabetes, hypertension, heart disease, and gastrointestinal disorders. Derived from the SDM-Q9 instrument, data were collected through a semi-structured interview. When translated into Urdu, this questionnaire examined various aspects of SDM, including the degree of decision involvement, the time spent on consultation, and the level of sufficient information. Using SPSS version 27, data analysis comprised both descriptive and inferential methods.* ***Results:*** *The average age of participants was 51.9 years (±13.5), and the gender distribution was balanced. Despite 97.5% of participants indicating they were afforded time for reflection and 76% reporting empathetic communication, only 19.5% experienced sufficient shared decision-making. No significant associations were found between SDM scores and age, gender, education, marital status, or ethnicity ($p > 0.05$). Visual aids were underutilised, with only 28% of participants strongly supporting their use.* ***Conclusion:*** *Although contact between patients and doctors is improving, patients are still not involved in decision-making, indicating that they rely on doctor-led care. To improve shared decision-making in Pakistan, both cultural and structural barriers need to be addressed. This can be achieved by training providers, making decision aids available, and modifying the way institutions operate. Future studies should investigate treatments aimed at improving SDM in clinical settings.*

Keywords: Shared decision-making, outpatient consultations, tertiary care hospital, long-term conditions, SDM-Q9

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Introduction

Globally, there has been a significant shift in the provision of healthcare, leading to the advancement of a patient-centered approach. This approach positions patients as the primary agents of care, enabling them to attain enduring treatment objectives. (1) Shared decision-making (SDM) requires doctor-patient information sharing and patient preferences (2). The goal of SDM is for the patient and doctor to work together to provide the patient with the necessary tools to be an active partner in their health. Healthcare decisions are crucial, particularly in chronic conditions or preference-sensitive scenarios where many interventions exist. Patient engagement also positively influences behavioral modifications (e.g., lifestyle changes) and compliance with preventive treatments, thereby reducing the likelihood of issues or complications associated with the condition (3). Research has identified several obstacles, such as time limitations, the attitudes of healthcare personnel, the perceived validity of the PDA, and the lack of relevance due to patient characteristics, clinic capacity, treatment processes, and the healthcare environment (4).

According to the findings of a study on SDM that was carried out in Malaysia, most patients who participated in the study desired to have a more independent role, and a significant number of them desired to have their families participate in the decision-making process(5). A gap persists between patients' expectations and those of physicians. Physician training in communication and shared decision-making, as well as the creation of culturally appropriate decision aids, is required to improve CKD knowledge and shared decision-making (6). The study by Nuwagaba et al. indicates that insufficient patient involvement in decision-making within health centres correlates with increased treatment costs and a heightened risk of healthcare complications (7). The principles of patient-centered care and the ethical conviction that decisions should be made cooperatively with patients, rather than on their behalf, define shared decision-making (SDM). Systematic decision making (SDM) is most effective when there is a clear need for a choice, a balance between care options, and when it is physically possible to engage in SDM discussions (8). Changing conditions can influence the SDM process; each individual can decide how much accountability they wish to assume. It is considered ethically required of patients to participate in healthcare decisions. In care decision-making, patient care (PC) combines patient information about requests, requirements, and preferences.

Firstly, the development of customized implementation methods to remove obstacles and support SDM depends on an understanding of the viewpoints of healthcare professionals towards SDM (9). Tenth. Elwyn et al. reported that limited health literacy and numeracy are hurdles to SDM, and certain patients' cultural backgrounds prevent them from making independent decisions. Assessments and treatments should be selected after considering cultural aspects, such as cultural preferences and standards, to support individuals better.

The paper prepared by Farhat Moazam claims "Families, Patients, and Physicians in Medical Decision offers an awareness that, as in many non-Western civilisations, decisions about a patient's health care are typically decided by the family or the doctor (10) less research on patients' role preference in decision making in the Pakistan Tertiary care environment has been written on. This study will therefore be conducted to determine patients' role preferences in decision-making and the elements associated with them (11).

Methodology

This study was conducted at a tertiary care hospital in Karachi from 13-Nov-2024 to 13-Jan-2025. The target population included patients visiting the outpatient clinics of the hospital who had diabetes, hypertension, or heart disease, chronic renal disease, and gastrointestinal issues. Our approach was convenience sampling. The sample size was calculated using Yamane's population survey formula, where n = N / [1 + N(e^2)], with N representing the population size and e representing the desired degree of accuracy. Approximately 400 patients visited the relevant clinics daily; the monthly population count, derived from an expected one-month data collection period, was also 400. The computed sample count was 200 persons, with a 5% degree of accuracy. Following their informed agreement, patients visiting the outpatient offices were contacted and individually recruited. The study excluded severe pain, emergency visits, and consent refusals from its analysis. We studied patients who met the inclusion criteria and gave written informed consent after CPSP approval. We guaranteed anonymity, privacy, and confidentiality to participants and used their data solely for research purposes. Originally developed in English and translated into the locally spoken Urdu language to fit the Pakistani setting, a semi-structured, interviewer-administered questionnaire was used for data collection. After participants finished their meetings with doctors, underwent pertinent investigations, received prescriptions or treatments, and were preparing to leave the hospital, patient departure interviews were conducted. Trained research team members with knowledge of study techniques and research ethics handled data collection. The questionnaire comprised two components. Six questions in Part A caught the participants' sociodemographic traits. Part B consisted of two questions gauging the suitability of consultation time, seven rating the quantity of information given, and four investigating elements of decision-making involvement. The 13 items examined several dimensions of shared decision-making (SDM). On a five-point Likert scale, responses fell into the following categories: strongly agree, agree, neutral, disagree, and strongly disagree. The authors modified the questions from the SDM-Q9 questionnaire to suit the local clinical and cultural setting. Supplementary File 14 has the whole questionnaire. Following data collection, we ran all analyses using SPSS version 27. Considered statistically significant was a p-value of under 0.05. Continuous variables have descriptive statistics computed with means and standard deviations. For categorical variables, frequencies and percentages were noted. The chi-square test was used to evaluate relationships between categorical variables.

Results

A total of 200 people took part in the study. The volunteers' mean age was 51.9 years (±13.5). Most of the answers (59.5%) fell between 41 and 64 years of age, followed by 20.5% who were above 64 years of age and 20.0% who were between 17 and 40 years of age, when categorized by age. Regarding gender distribution, 48.5% of the participants (n = 97) were men, and 51.5% of the participants (n = 103) were women, demonstrating somewhat equal gender representation. Most participants (42.0%) had received primary education, while 19.0% had received secondary education. Only 13.5% had completed intermediate education, 14.5% had completed graduate education, and 7.5% had completed advanced education. Only 3.5% of the survey respondents reported their level of education. The great majority of participants, 94.5%, identified as Muslims; Christians make up 2.0%; others, 0.5%; and religion was not reported in 3.0% of cases. Based on marital status statistics, most participants, 79.5%, were married; 12.0% were widows or widowers. Single individuals (7.5%), divorced individuals (0.5%), and separated individuals (0.5%) had rather smaller ratios. Muhajirs (36.0%) followed Sindhis (27.5%), Punjabis (20.0%), and Pathans (14.0%), in terms of ethnicity among the participants. Balochi individuals accounted for 2.0%, while ethnicity was not stated for 1.5% of the participants.

According to this sociodemographic profile, the sample was varied in terms of age and ethnicity; most participants were middle-aged, married individuals with primary-level education and a Muslim background. The distribution also shows a quite equal gender ratio.

Table 1: Sociodemographic Characteristics of Study Participants (n = 200)

Demographics (N=200)	Frequency (n)	(%)
Age *(median, interquartile range)*	54	43.3 – 61.8
17 – 40	40	20.0
41 – 64	119	59.5
>65	41	20.5
Gender		
Male	97	48.5
Female	103	51.5
Education		
Primary	91	45.5
Secondary	38	19.0
Intermediate	27	13.5
Graduate	29	14.5
Post Graduate	15	7.5
Religion		
Muslims	195	97.5
Christian	4	2.0
Others	1	0.5
Ethnicity		
Muhajir	73	36.5
Sindhi	55	27.5
Punjabi	40	20.0
Pathan	28	14.0
Balochi	4	2.0
Marital status		
Single	15	7.5
Married	159	79.5
Divorced	1	0.3

Widow/Widower	24	12.0
Separated	1	0.5
Specialty		
Cardiology	41	20.5
Diabetes	138	61.0
Nephrology	21	10.5

The Shared Decision-Making (SDM) questionnaire revealed rather high degrees of patient involvement in activities related to care and satisfaction. Most respondents, 67.5%, strongly agreed, and 30.5% stated their doctor allowed them enough time to review all their symptoms and indicators. Furthermore, 49.0% strongly agreed, and 44.5% agreed that their doctor asked them what they believed was the reason behind their illness. Few individuals disagreed or expressed neutrality. Regarding the explanation of the disease, 53.0% of respondents strongly agreed, while 43.5% of them claimed that their doctor had diagnosed the reason for their condition. With 60% of respondents strongly agreeing and 39% agreeing, responses for test and treatment explanations revealed a high degree of communication about medical decisions. Almost all participants (96.5%) either strongly agreed or agreed that their doctor described the relevance and side effects of the therapy; a comparable proportion (97.0%) thought their knowledge was validated and that they were instructed to ask questions. Regarding group decisions, 45.5% of respondents stated that they carefully considered treatment options and study findings with their doctor, and 52.5% strongly agreed with this statement. Furthermore, 96.3% of respondents agreed on how to proceed, and 98.5% of them reported making treatment decisions in the presence of their doctor. Emphasising especially the quality of the doctor-patient connection, 76.0% of respondents highly agreed, and 22.5% said their doctor showed empathy. Moreover, 97.5% of the respondents claimed they had time to give important decisions some thought.

With 28.0% highly agreeing and 60.0% agreeing, the use of visual aids, including drawings, images, or outlines, remained evident, although they were not as popular. At last, the large majority—73.5% strongly agreed and 25.5% agreed—felt their doctor clearly and logically presented everything. Among the research population, the results typically revealed a highly positive perspective on shared decision-making, sympathetic communication, and clarity in doctor-patient interactions, notwithstanding a few complaints or apathetic responses.

Table 2: Responses to Shared Decision-Making Questionnaire Items Among Study Participants (n = 200)

Statements on Shared Decision Making (200)	**S.D n (%)**	**D n (%)**	**N n (%)**	**A n (%)**	**S.A n (%)**	**Mean ± SD**
Q1. My doctor gave me enough time to tell all my symptoms and signs	13 (6.5)	15 (7.5)	2 (1.0)	72 (36.0)	98 (49.0)	4.14 ± 1.17
Q2. My doctor asked me what I thought was the cause of my illness	13 (6.5)	81 (40.5)	8 (4.0)	77 (38.5)	21 (10.5)	3.06 ± 1.21
Q3. My doctor explained to me the cause of my illness	29 (14.5)	71 (35.5)	5 (2.5)	60 (30.0)	35 (17.5)	3.01 ± 1.45
Q4.My doctor explained to me the required tests (investigations) and possible treatment options	79 (39.5)	12 (6.0)	26 (13.0)	47 (23.5)	36 (18.0)	2.75 ± 1.59
Q5. My doctor explained to me the importance of treatment and its side effects	35 (17.5)	63 (31.5)	2 (1.0)	76 (38.0)	24 (12.0)	2.96 ± 1.37
Q6. My doctor inquired if I had understood all the information and asked me if I had any questions for them	30 (15.0)	65 (32.5)	5 (2.5)	64 (32.0)	36 (18.0)	3.06 ± 1.40
Q7. My doctor and I thoroughly weighed the investigations and treatment options together	22 (11.0)	81 (4.05)	21 (10.5)	51 (25.5)	25 (12.5)	2.88 ± 1.26
Q8. My doctor and I made a decision together about my treatment	27 (13.5)	92 (46.0)	6 (3.0)	56 (28.0)	19(9.5)	2.74 ± 1.3
Q9. My doctor and I reached an agreement on how to proceed	43 (21.5)	63 (31.5)	9 (4.5)	70 (35.0)	15 (7.5)	2.76 ± 1.33
Q10. My doctors carried out conversations with me in a very empathetic manner	7 (3.5)	44 (22.0)	10 (5.0)	38 (19.0)	101 (50.5)	3.91 ± 1.32
Q11. My doctors gave me time to think about important decisions	5 (2.5)	2 (1.0)	3 (1.5)	111 (55.0)	80 (40.0)	4.29 ± 0.77
Q12. Doctors used visual aids (pictures, drawings, and outlines)	71 (35.5)	50 (25.0)	8 (4.0)	52 (26.0)	19 (9.5)	2.49 ± 1.43
Q13. My doctors explained everything in a clear and understandable way	33 (16.5)	48 (24.0)	0 (0.0)	40 (20.0)	79 (39.5)	3.42 ± 1.58

Twenty-one of the participants achieved an average score of 3.19 (±0.37) for shared decision-making (SDM). We categorised about eighty-five percent of the individuals as having poor SDM, while only twenty-nine percent obtained adequate SDM. The sociodemographic factors examined did not show any statistically significant correlations with the effectiveness of collaborative decision-making. Regarding age categories, individuals between 17 and 40 years showed a mean SDM score of 3.26 ± 0.32; 25.6% of them reported having sufficient SDM. Those aged 41–64 years had a mean score of 3.16 ± 0.39, with 51.3% reporting acceptable SDM; participants over 65 years had a mean score of 3.19 ± 0.34, with 23.1% reporting adequate SDM. Still, these variations were not statistically significant, p = 0.478. Female participants had a slightly higher mean SDM score (3.21 ± 0.38) and adequacy rate (59.0%) than men (3.16 ± 0.35; 41.0% adequate), with a p-value of 0.298 indicating no significant difference. The level of schooling did not have a substantial effect on SDM scores (p = 0.749).

Postgraduates, on the other hand, had the highest mean score (3.28 ± 0.33) and a similar adequacy percentage (7.7%), based on the size of their group. Religious affiliation showed no notable variations (p = 0.852); Muslims comprised the majority and displayed a similar distribution of SDM adequacy. Marital status showed variation; widows and widowers had the lowest mean SDM score (3.05 ± 0.55) and a reduced adequacy rate (15.4%). On the other hand, although the study was based on one participant with appropriate SDM (p = 0.171), divorced people had the highest mean score, 3.77. With Muhajirs showing the highest mean score of 3.24 ± 0.37 and an appropriate rate of 33.3%, there was no appreciable link between ethnic background and SDM scores (p = 0.978). Reflecting generally poor practices across many patient populations, the results indicate that none of the assessed demographic characteristics were statistically associated with the suitability of shared decision-making.

Table 3. Mean score and Factors Associated with Participation in Shared Decision Making Among Patients at Dow Medical Health

Demographics (N=200)	**Shared Decision Making**			
	Mean ± SD	**Poor n (%)**	**Adequate n (%)**	**p-value**
Overall	3.19 ± 0.37	161 (80.5)	37 (19.5)	
Age groups				
17-40	3.26 ± 0.32	30 (18.60)	10 (25.6)	0.478
41-64	3.16 ± 0.39	99 (61.5)	20 (51.3)	
>65	3.19 ± 0.34	32 (19.9)	9 (23.1)	
Gender				
Male	3.16 ± 0.35	81 (50.3)	16 (41.0)	0.298
Female	3.21 ± 0.38	80 (49.7)	23 (59.0)	
Education				
Primary	3.18 ± 0.37	73 (45.3)	18 (46.2)	0.749
Secondary	3.19 ± 0.40	32 (19.9)	6 (15.4)	
Intermediate	3.21 ± 0.32	23 (14.3)	4 (10.3)	
Graduate	3.24 ± 0.39	21 (13.0)	8 (20.5)	
Post Graduate	3.28 ± 0.33	12 (7.5)	3 (7.7)	
Religion				
Muslims	3.18 ± 0.37	157 (97.50	38 (97.4)	0.852
Christian	3.33 ± 0.20	3 (1.9)	1 (2.6)	
Others	3.31 ± 0.00	1 (0.6)	0 (0.0)	
Marital Status				
Single	3.17 ± 0.30	14 (8.7)	1 (2.6)	0.171
Married	3.21 ± 0.35	128 (79.5)	31 (79.5)	
Divorced	3.77 ± 0.00	0 (0.00)	1 (2.6)	
Widow/Widower	3.05 ± 0.55	18 (11.2)	6 (15.4)	
Separated	3.08 ± 0.00	1 (0.6)	0 (0.0)	
Ethnicity				
Muhajir	3.24 ± 0.37	60 (37.3)	13 (33.3)	0.978
Sindhi	3.17 ± 0.38	43 (26.7)	12 (30.8)	
Punjabi	3.12 ± 0.35	32 (19.9)	8 (20.5)	
Pathan	3.12 ± 0.35	23 (14.3)	5 (12.8)	
Balochi	3.19 ± 0.50	3 (1.9)	1 (2.6)	

Discussion

The study in Karachi, Pakistan, found a significant disparity between patients' genuine involvement in shared decision-making and their perceptions of medical communication during outpatient visits. Usually content with their interactions—when they were listened to, given enough time, and had clear explanations, patients were only 19.5% able to make "adequate" decisions with their healthcare provider. Despite receiving knowledge and treatment with respect, eighty-five percent of the participants were classified as having poor SDM. This outcome suggests that, despite the abundance of characteristics of patient-centered care, actual involvement in cooperative healthcare decisions remains rare.

The findings align with previous research conducted in low- and middle-income countries (LMICs), which have identified comparable shortcomings in shared decision-making practices. A study conducted in Uganda indicated that shared decision-making (SDM) was rarely practiced in rural health centres.. This was largely attributed to hierarchical relationships, time constraints, and insufficient training of health workers in participatory methods. (7). A cross-sectional study in Tanzania by Vedasto et al. indicated that while patients appreciated being informed, many adopted a passive role in decision-making, frequently deferring to the authority of healthcare providers. (1). In this study, 76% of participants reported that their physicians communicated with empathy, while 97.5% were given sufficient time to deliberate on significant decisions. Despite these positive indicators, patients' engagement in collaborative decision-making processes was lower (12).

A comparative review of findings from several healthcare systems suggests that structural and cultural factors significantly impact collaborative decision-making techniques. Ambigapathy et al. noted that although patients desired greater decision-making authority, familial and cultural traditions frequently dictated their preferences, resulting in a tendency to favour medical delegation (5). Similar to Moazam's ethnographic study, this reflects the way people live and work in Pakistan, where respecting doctors' authority is a natural part of healthcare interactions (10). Our study found no significant correlation between the appropriateness of SDM and sociodemographic factors, including age, gender, marital status, education, or ethnicity. This suggests a systematic deficiency in participatory treatment, rather than differences resulting from patient-specific circumstances (13).

Although research conducted in high-income nations reveals a more regimented approach to SDM, several challenges persist. Even in countries with highly developed healthcare infrastructures, SDM was commonly limited by time constraints, clinician workload, and a lack of decision aids, according to a large-scale study done in Europe (8). Just 28% of participants employed visual aids, such as drawings and diagrams, which could help explain their poor scores on the SDM. Visual tools have been shown to help patients understand and allow SDM, especially in groups where people don't know much about health(8, 14).

Furthermore, a study of people with chronic conditions conducted in Ethiopia discovered that medication adherence and health outcomes were positively associated with SDM. A small percentage of patients reported being actively involved (15). Despite several of our participants having diabetes, high blood pressure, and kidney illness, shared decision-making was not functioning (16). An important area for development is the disparity between the necessity for patient involvement in the management of chronic illnesses and its actual implementation (17).

Training doctors in SDM communication methods has been shown to increase their concern for their patients. According to a Cochrane review by Légaré et al., treatments that altered clinicians' behavior, such as decision coaching and communication workshops, were effective in improving SDM (18). Our analysis emphasises the need for comparable capacity-building programs in Pakistani medical environments. Additionally, using decision aids tailored to different cultures could help patients better understand their options and address current problems, as shown by studies from South Asia and the Middle East (19).

Our study indicates favourable outcomes regarding comprehension of conversation and efficient time utilisation. Nonetheless, it suggests that patients lack active participation in decision-making processes. The findings align with other studies conducted in low- and middle-income countries, emphasising the need for multifaceted responses to address structural, cultural, and systemic barriers. Providers could be trained, choice tools could be added, consultations could last longer, and rules could be made that make SDM principles a normal part of care.

Conclusion

This study reveals that, in the tertiary care environment under review, real shared decision-making (SDM) practices remain unsatisfactory, despite hopeful indicators in information exchange, physician empathy, and patient satisfaction with communication. Although they appreciated the time and attention doctors paid, only a small fraction of patients were sufficiently engaged in choosing their medical treatment. The findings indicate a more general systematic problem whereby traditional, paternalistic paradigms of therapy persist even in patient-centred environments. The absence of any significant link between SDM and sociodemographic variables suggests that institutional and cultural rather than personal reasons limit patient participation.

Improving SDM requires concerted efforts involving institutional support to expand consultation time and advance collaborative care, as well as the development of culturally flexible decision aids and training for healthcare providers in effective communication techniques. Further research should examine physician opinions, test interventions to enhance SDM performance, and evaluate the long-term outcomes of increased patient engagement. Strengthening SDM techniques not only ethically conforms to patient autonomy but also can improve treatment adherence, satisfaction, and clinical outcomes, especially in patients with chronic diseases.

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC- 24)

Consent for publication

Approved

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

SRA (Senior Medical Advisor)
Manuscript drafting, Study Design,
FA (Program Director)
Review of Literature, Data entry, Data analysis, and drafting articles.
SHD (Mentor)
Conception of Study, Development of Research Methodology Design,

All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the integrity of the study.

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