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Research Articles

Does a List of Potential Questions Increase Patient Comfort with Decisions in Musculoskeletal Specialty Care?

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Objectives

Important decisions about tests and treatment might benefit from prompting people to be ready to ask questions, particularly in musculoskeletal specialty care, where many tests and treatments are discretionary.

Methods

We enrolled 146 adult patients in a prospective, 1:1 randomized controlled trial, with about half receiving a list of questions people with musculoskeletal symptoms might ask a specialist before the visit. After the visit, patients in both groups completed a survey that included demographics, measures of comfort with decisions, agency, perceived clinician empathy (using two different measures), and an 11-point ordinal measure of satisfaction with the visit.

Results

There were no significant differences between the two groups regarding whether or not they received a list of questions prior to the visit.

Conclusion

The observation that a question list did not improve patient agency or experience suggests—in combination with other lines of evidence–that preparing patients for greater agency may not be as effective as training clinicians in a more guiding rather than directing communication style. Whether a question prompt list improves patient agency and experience or limits decision conflict beyond what patients experience without it.

INTRODUCTION

People seek musculoskeletal specialty care when a symptom becomes a concern, which is not alleviated in non-specialty care. Unhelpful thoughts regarding symptoms and feelings of worry, despair, or insecurity are common in association with musculoskeletal symptoms.[1-4] People who are flexible in their thinking–ready to replace unhelpful thoughts with healthier narratives about their symptoms–experience less intense symptoms and are more capable.[5,6]

Patients can be coached to enter specialty care visits with an open and curious mind, prepared to move from how they currently regard their symptoms to a potentially healthier mindset.[7] Previous studies found that greater patient activation (feeling agency to take action to maintain and improve one's health)[8] is correlated with greater capability, lower pain intensity, and greater satisfaction with treatment.[9] A surgical question prompt list (a list of questions that patients can consider as they interact with a surgeon to consider surgery)[10] has been used to help increase patient agency and increase participation in deci-

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sion-making regarding discretionary surgery.[11] A question list prompts patients to reflect on and ask about things that matter to them. We are interested in whether or not patients who review a question prompt list before the consultation feel greater comfort with decisions, have a greater health agency, regard their specialist as more empathetic, and are more satisfied with their care.

A Cochrane review identified 16 studies of the effectiveness of a question prompt list for an oncology consultation and found evidence that they enhance patient participation, reduce feelings of anxiety, and improve recall of information.[10] One study of patients seeking specialty hand care compared a question prompt list with three simple questions and found comparable patient-perceived involvement in their care. However, it did not address whether either tool improved patient agency and experience or limited decision conflict beyond what patients experience without using either tool.[12]

We addressed this question: Do patients who receive a question prompt list before a musculoskeletal specialty care visit experience greater comfort with decisions, feel greater agency for their care, perceive their surgeon as more empathetic, and are they more satisfied with their care?

METHODS

STUDY DESIGN AND SETTING

Our Institutional Review Board approved this study at the Office of Research at the University of Texas in Austin. New, English-literate adults (18 years or older) seeking care for musculoskeletal symptoms were invited to enroll from January 2018 to March 2020. The question prompt list was developed by surgeons and patients alike. Questions were considered important after reviewing. After verbal consent and reading a research letter, subjects were randomized 1:1 using a random number generator to be given or not given a question list before their visit.

PARTICIPANTS

Patients were asked by medical assistants throughout all clinical offices and voluntarily decided to participate. Participants were fluent and literate in English, and there was no concern about understanding the list of questions. Participants had an average of 5-10 minutes to review the list before the physician came in. We enrolled 146 adults (60% women) with an average age of 53 (SD=17) **[Table 1]**. Seventy participants (48%) received a question prompt list. More than half of the patients had non-trauma conditions (77%), and more than half had upper-extremity conditions (59%). Injuries and diagnosis include but are not limited to rotator cuff and labral tears, Dupuytren's contracture, lumbar radiculopathy, total joint replacement, and pilon fractures.

MEASUREMENTS

The list suggested questions about diagnosis, cause, treatment options, and recovery. For instance, "What is causing my symptoms?", "Have I done anything to cause this problem?" "Are there treatments that can stop, slow, or reverse the problem?" finally, questions about the specific treatments offered, such as, "Does this treatment cure the disease?"

After the visit concluded, including a specific treatment plan, the physician left the room, and the research assistant administered the surveys. Patients in both groups completed a demographic survey (age, gender, ethnicity, etc.), the Decisional Conflict Scale (measures personal perceptions of uncertainty in choosing options; modifiable factors contributing to uncertainty and unsupported in decision making, and effective decision making), a measure of perceived clinician empathy (CARE measure), a measure of patient activation (PAM score: assesses an individual´s knowledge, skill and confidence for managing their health and health care), and an 11-point ordinal measure of satisfaction with the visit. The Decisional Conflict Scale was used as our primary outcome variable. It is a validated measure of patient uncertainty in making decisions about their care, the factors contributing to their uncertainty, and whether or not the patient felt involved in their care through shared decision-making.[11,13]

STATISTICAL ANALYSIS

Descriptive statistics were performed on all patients. Shapiro-Wilk tests were conducted to test the normality of continuous variables. The mean and standard deviation were reported for normally distributed variables; the median and interquartile range were reported for all nonparametric variables. To seek factors associated with receiving a QPL, we performed bivariate analyses using Mann-Whitney U tests for nonparametric response variables. Spearman rank-order correlations were calculated for all continuous explanatory variables. All variables with $P < 0.10$ were moved to multivariable analysis. Multivariable linear regression analysis was used to identify variables associated with CARE score. Alpha was set at 0.05.

A priori power analysis using G power determined that a sample size of 128 subjects would have 80 percent power to detect a difference of effect size 0.5 with alpha set at 0.05. Anticipating the potential for 10% incomplete surveys, we aimed to enroll more than 141 patients.

RESULTS

In bivariate analysis, there were no significant differences in (Median [IQR]) in decision comfort (4 [0-13], 5 [0-14]), agency (92.3 [80.8-100], 92.3 [83.7-100]), perceived clinician empathy, (31 [26-34], 31 [27.5-35]) and satisfaction with care (50 [48-50], 50 [46.5-50]) between two groups whether they received a question prompt list (QPL) prior to a visit or not **[Tables 2-6]**.

DISCUSSION

Question lists encouraged discussion and improved patient knowledge in prior studies of people considering surgery.[10,

Table 1. Demographics

	N=146	
	Mean ± SD (Range)	
Age	53 ± 17 (18-87)	
	Median (InterQuartile Range)	**Skewness**
CARE measure	50 (48-50)	-2.03
Decision Conflict Score	4 (0-13)	0.98
PAM score	92.31 (82.70-100)	-2.5
JSPPPE Score	31 (27-35)	-1.77
Gender	**Percentage (Number)**	
Male	40% (58)	
Female	60% (88)	
Race		
White	65% (95)	
Hispanic	18% (27)	
Other	16% (24)	
Employment		
Employed	60% (88)	
Retired/disabled/Student/homemaker	40% (58)	
Household Income		
<50K	32% (47)	
50-99K	25% (36)	
100k and Above	43% (63)	
Education		
High School Degree and Less	19% (28)	
College Degree	58% (85)	
Post College Graduate Degree	23% (33)	
Marital Status		
Married	62% (91)	
Single	18% (27)	
Separated/Divorced/Widowed	19% (28)	
Prompt List		
Received	48% (70)	
Not Received	52% (76)	
Diagnosis		
Trauma	23% (33)	
Non Trauma	77% (113)	
Involved Area		
Upper Extremity	59% (86)	
Lower Extremity	39% (57)	
Spine	2% (4)	

[14] We tested the influence of a question list on patient experience after an initial musculoskeletal specialty care visit. We did not find a difference in comfort with decisions or other aspects of patient experience when people received a question list prior to their visit.

Our study has limitations. First, it was performed at several musculoskeletal specialty care offices in a relatively wealthy, educated, White urban center in the United States [**Table 1**]. There is evidence that Black patients generally have shorter visits, ask fewer questions, and participate less than their counterparts.[14,15] Patients with lower incomes have been shown to ask fewer questions.[11] Therefore, it is possible that these populations could benefit more from a question prompt list than the people in our sample. Although the question list was not reviewed by the physician prior to each interaction, nor were they made aware of who received the list, the questions asked by patients may have alerted clinicians to patients who received the prompt list.

Table 2. Bivariate Analysis of Factors Associated with Receiving A Prompt List

Variable	Not Received	Received	*P-value*
	Mean ± SD	**Mean ± SD**	
Age	55 ± 17	51 ± 17	0.22
	Median (IQR)	**Median (IQR)**	
CARE Measure	50 (46.5-50)	50 (48-50)	0.69
Decision Conflict Score	5 (0-14)	4 (0-13)	0.86
PAM score	92.3(83.7-100)	92.3(80.8-100)	0.49
JSPPPE Score	31 (27.5-35)	31 (26-34)	0.48
Gender	**Percentage (Number)**	**Percentage (Number)**	
Male	19% (28)	21%(30)	0.45
Female	33% (48)	27% (40)	
Race			
White	34% (49)	32% (46)	0.62
Hispanic	11% (16)	7% (11)	
Other	7% (11)	9% (13)	
Employment			
Employed	32% (46)	29% (42)	0.94
Retired/disabled/Student/homemaker	20% (30)	19% (28)	
Household Income			
<50K	18% (26)	14% (21)	0.43
50-99K	14% (21)	10% (15)	
100k and Above	20% (29)	23% (34)	
Education			
High School Degree and Less	9% (14)	9% (14)	0.38
College Degree	33% (48)	25% (37)	
Post College Graduate Degree	9% (14)	13% (19)	
Marital Status			
Married	34% (50)	28% (41)	0.42
Single	7% (11)	11% (16)	
Separated/Divorced/Widowed	10% (15)	9% (13)	
Diagnosis			
Trauma	40% (59)	37% (54)	0.94
Non Trauma	12% (17)	11% (16)	
Involved Area			
Upper Extremity	29% (42)	30% (44)	0.61
Lower Extremity	22% (32)	17% (25)	
Spine	1% (2)	0.5% (1)	

SD: Standard deviation, IQR: interquartile range, CARE: consultation and relational empathy, PAM: patient activation measure, JSPPPE: Jefferson scale of patient perceptions of physician empathy

A study that intentionally made clinicians aware of whether or not patients received a question list might alter clinician behavior and result in different outcomes—a hypothesis that merits testing. The current study addressed how experience with specialty care might be altered when patients were more prepared and inquisitive.

The observation that there was no measured benefit to receiving a question list suggests that these tools may not be sufficient to improve patient-clinician communication and development of health strategies or that the tools we used to measure a difference were inadequate. A list that prompts patients to ask about things that matter to them may or may not improve their connection with the surgeon and their perception of the clinician's empathy. Furthermore, experience measures (empathy and satisfaction) have known shortcomings as research tools, such as powerful ceiling effects and non-normal distributions.[16] Other measures, such as anxiety regarding symptoms and trust in the clinician, might register a difference.[14,16] A systematic review of studies of question prompt lists for patients receiving cancer care has demonstrated associations with increased question asking, decreased anxiety over time, and

Table 3. Bivariate Analysis of Factors Associated with Care Measure

Variable	Spearman Rho	*P-value*
Age	0.002	0.98
Decision Conflict Score	-0.29	**<0.001**
PAM score	0.24	**0.002**
JSPPPE Score	0.46	**<0.001**
Gender	**Median (IQR)**	
Male	49.5 (41-50)	**0.04**
Female	50 (48-50)	
Race		
White	50 (46-50)	0.23
Hispanic	50 (49-50)	
Other	50 (44.5-50)	
Employment		
Employed	50 (48-50)	0.67
Retired/disabled/Student/homemaker	50 (42-50)	
Household Income		
<50K	50 (46-50)	0.48
50-99K	50 (48-50)	
100k and Above	50 (47-50)	
Education		
High School Degree and Less	50 (43-50)	0.84
College Degree	50 (48-50)	
Post College Graduate Degree	50 (48-50)	
Marital Status		
Married	50 (43-50)	0.61
Single	50 (48-50)	
Separated/Divorced/Widowed	50 (48-50)	
Diagnosis		
Trauma	50 (48-50)	0.39
Non Trauma	50 (46-50)	
Involved Area		
Upper Extremity	50 (48-50)	0.56
Lower Extremity	50 (46-50)	
Spine	50 (48-50)	

SD: Standard deviation, IQR: interquartile range, CARE: consultation and relational empathy, PAM: patient activation measure, JSPPPE: Jefferson scale of patient perceptions of physician empathy

improved recall as subsequent visits,[17] none of which were measured in this study. On the other hand, evidence suggests that a greater difference can be made by adjusting clinician tactics than by providing patients with tools. For instance, one trial in oncology randomized clinicians to train how to engage patients in care decisions or whether patients should receive a communication aid. They found that training clinicians had a large positive effect on independent observer ratings of the involvement of patients in decisions and a positive impact on patient's perception of their involvement. The patient communication aid did not improve feelings of involvement. Neither intervention affected satisfaction with the consultation or decisional conflict.[18] There are important differences between cancer care, where treatment is necessary, and the potential harms of treatment are greater, and upper extremity specialty care, where most treatments are discretionary, which makes even small potential harms potentially more influential.

We are interested in developing tools and interventions to help patients explore what matters most to them (their values), correct any misconceptions about what tests and treatments offer, and allow patients to choose treatment and testing options most consistent with their values and priorities. Clinician variation in biases and priorities with regard to tests and treatment can be tempered through

Table 4. Bivariate Analysis of Factors Associated with PAM Score

Variable	Spearman Rho	*P-value*
Age	0.008	0.92
Decision Conflict Score	-0.57	**<0.001**
JSPPPE Score	0.28	**<0.001**
Gender	**Median (IQR)**	
Male	91.34 (80.76-100)	0.38
Female	94.23 (82.69-100)	
Race		
White	90.38 (80.76-100)	0.22
Hispanic	94.23 (82.69-100)	
Other	95.19 (88.46-100)	
Employment		
Employed	92.30 (82.69-100)	0.72
Retired/disabled/Student/homemaker	93.26 (80.76-100)	
Household Income		
<50K	92.30 (80.76-100)	0.62
50-99K	92.30 (82.69-99.03)	
100k and Above	92.30 (82.69-100)	
Education		
High School Degree and Less	92.30 (83.65-100)	0.71
College Degree	92.30 (82.69-100)	
Post College Graduate Degree	92.30 (82.69-100)	
Marital Status		
Married	92.30 (80.76-100)	0.65
Single	90.38 (84.61-100)	
Separated/Divorced/Widowed	96.15 (86.53-100)	
Diagnosis		
Trauma	92.30 (82.69-100)	0.33
Non Trauma	94.23 (84.61-100)	
Involved Area		
Upper Extremity	92.30 (82.69-100)	0.68
Lower Extremity	94.23 (82.69-100)	
Spine	92.30 (75 -92.31)	

SD: Standard deviation, IQR: interquartile range, CARE: consultation and relational empathy, PAM: patient activation measure, JSPPPE: Jefferson scale of patient perceptions of physician empathy

shared decision-making with patient values. In future studies, we aim to target injuries based on acuity as we have acknowledged that patient preparation regarding questions they may ask and their anxiety around the clinical encounter will differ among patients. We found that—in a population of relatively socially advantaged people–a question list was not associated with lower decision conflict or greater perceived empathy, satisfaction, or agency. Future research can address the use of specific tools in less advantaged patients. Still, we think the current evidence may point to a need for tools and strategies that alter clinician behavior, perhaps by emphasizing guiding rather than directing patient approaches in a musculoskeletal specialty care visit.

DECLARATION OF CONFLICT OF INTEREST

The authors do not have any potential conflicts of interest pertinent to this manuscript.

DECLARATION OF FUNDING

The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

DECLARATION OF ETHICAL APPROVAL FOR STUDY

Approved by UT Austin IRB. IRB number: 2017-02-0122

Table 5. Bivariate Analysis of Factors Associated with Descional Conflict

Variable	Spearman Rho	*P-value*
Age	-0.02	0.8
JSPPPE Score	-0.32	**<0.001**
Gender	**Median (IQR)**	
Male	5 (0-14)	0.69
Female	4 (0-13)	
Race		
White	4 (0-14)	0.68
Hispanic	4 (0-9)	
Other	4 (0-13)	
Employment		
Employed	5 (0-15)	0.33
Retired/disabled/Student/homemaker	4 (0-11)	
Household Income		
<50K	5 (0-13)	0.82
50-99K	3.5 (0-12.5)	
100k and Above	5 (0-15)	
Education		
High School Degree and Less	5 (0-14.5)	0.86
College Degree	4 (0-13)	
Post College Graduate Degree	5 (0-14)	
Marital Status		
Married	5 (0-14)	0.88
Single	4 (0-11)	
Separated/Divorced/Widowed	4 (0-12.5)	
Diagnosis		
Trauma	4 (0-14)	0.29
Non Trauma	4 (0-7)	
Involved Area		
Upper Extremity	4 (0-13)	0.79
Lower Extremity	5 (0-14)	
Spine	16 (0 -16)	

SD: Standard deviation, IQR: interquartile range, CARE: consultation and relational empathy, PAM: patient activation measure, JSPPPE: Jefferson scale of patient perceptions of physician empathy

DECLARATION OF INFORMED CONSENT

There is no information (names, initials, hospital identification numbers, or photographs) in the submitted manuscript that can be used to identify patients.

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Table 6. Bivariate Analysis of Factors Associated with JSPPPE

Variable	Spearman Rho	*P-value*
Age	0.09	0.8
Gender	**Median (IQR)**	
Male	30 (25-35)	0.18
Female	32 (27.5-34)	
Race		
White	31 (27-34)	0.47
Hispanic	31.5 (25-34.5)	
Other	32 (27-35)	
Employment		
Employed	31 (27-34)	0.93
Retired/disabled/Student/homemaker	31 (26-35)	
Household Income		
<50K	32 (27-35)	0.76
50-99K	29.5 (26-33)	
100k and Above	31 (28-35)	
Education		
High School Degree and Less	31.5 (26.5- 33.5)	0.65
College Degree	31 (27- 35)	
Post College Graduate Degree	31 (28- 34)	
Marital Status		
Married	31 (26- 34)	0.66
Single	31 (26- 35)	
Separated/Divorced/Widowed	32 (27.5-35)	
Diagnosis		
Trauma	31 (26-34)	0.25
Non Trauma	31 (28-35)	
Involved Area		
Upper Extremity	31 (26-34)	0.65
Lower Extremity	31 (27-35)	
Spine	33 (30 -35)	

SD: Standard deviation, IQR: interquartile range, CARE: consultation and relational empathy, PAM: patient activation measure, JSPPPE: Jefferson scale of patient perceptions of physician empathy

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