

Consumer and Relationship Factors Associated with Shared Decision-Making in Mental Health Consultations

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Acknowledgements: The project reported here was supported by the Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development (CDA 10-034). The views expressed in this article are those of the authors and do not necessarily represent the views of the Department of Veterans Affairs or the United States Government.

Conflicts of Interest: The authors declare no conflicts of interest.

This is the author's manuscript of the article published in final edited form as:
Matthias, M. S., Fukui, S., Kukla, M., Eliacin, J., Bonfils, K. A., Firmin, R. L., ... & Salyers, M. P. (2014).
Consumer and relationship factors associated with shared decision making in mental health consultations.
Psychiatric Services, 65(12), 1488-1491. <http://dx.doi.org/10.1176/appi.ps.201300563>

Abstract

Objective: To understand how consumers' illness management and consumer-provider relationships are associated with shared decision-making.

Methods: 79 consumers were audio-recorded in medication management appointments. Shared decision-making and consumer-provider agreement on decisions were rated. Mental health diagnoses, medication adherence, patient activation, illness management, working alliance, and length of consumer-provider relationships were all assessed. Correlation analyses were used to determine relationships among measures.

Results: Overall shared decision-making was not associated with any variables.

Minimum levels of shared decision-making were associated with higher scores on the Bond subscale of the Working Alliance Inventory and higher medication adherence.

Agreement was associated with shorter consumer-provider relationships.

Conclusions: The association between consumer-provider relationships and shared decision-making might be more nuanced than originally thought.

Shared decision-making is a process by which consumers and providers share information and opinions, talk about each other's responsibilities, and ultimately agree on treatments (1). Shared decision-making has been advocated because of its potential to increase evidence-based practices, decrease variations in healthcare delivery, and promote consumers' involvement in care (2). It is consistent with a consumer-centered, recovery-oriented mental health system where consumers are encouraged to actively engage in illness management (3).

Recent frameworks have described the consumer-provider relationship and key features of a consumer's illness management (e.g., activation, adherence) as integral to shared decision-making. This is particularly applicable in chronic conditions longitudinally managed with one's provider (4, 5). In this "expanded" model, the moment when a decision is deliberated is only part of the shared decision-making process.

Despite the importance of shared decision-making in mental health, few studies have directly examined the process in mental health consultations. A recent study using an adaptation of Braddock's decision-making scale found mental health medication consultations met minimum criteria for shared decision-making about half the time (6). Further examination of these data indicated when consumer participation and decision complexity increased, more shared decision-making occurred (7). While these studies add to our understanding of shared decision-making, critical questions remain unexplored. Especially for chronic conditions, recent models of shared decision-making have placed increased emphasis on factors such as a consumer's illness management

and the consumer-provider relationship (4, 5). Yet we know little about how these factors relate to observed decision-making. We hypothesized that greater shared decision-making would be observed when the consumer-provider relationship was stronger and consumers had better illness management skills.

Methods

This study took place in a psychiatric clinic at a Veterans Affairs medical center from January to September 2012. The clinic has 23 providers, serving approximately 5,200 veterans with diagnoses including PTSD, depression, and anxiety disorder. Three providers were approached and agreed to participate in this study. All providers were female. One was a psychiatrist; the others were advanced practice nurses. Consumers were eligible for participation if they were seeing one of the three consenting providers during the study period and were not experiencing symptom exacerbations that concerned the provider.

A research assistant explained the study to eligible consumers when they checked in with the clinic. Interested consumers completed an informed consent process. Consumers were told the study was about communication, but not of our interest in shared decision-making, to help ensure that participation did not alter natural decision-making in visits.

For the appointment, the research assistant placed an audio recorder in the exam room and waited outside. After the visit, consumers completed a series of questionnaires. Consumers were paid \$10 for the clinic visit and \$20 to complete

questionnaires. Providers were not paid. All procedures were approved by the local Institutional Review Board and medical center review committee.

We collected demographic information from consumer report and mental health diagnoses from medical records. Medication adherence was measured with the 10-item Medication Adherence Rating Scale (MARS). The first four items (Morisky Scale) measure medication adherence behaviors; the last six measure attitudes and beliefs about medications. The scale has adequate internal consistency, test-retest reliability, and high positive correlations with the Medication Adherence Questionnaire ($r = .79$) and the Drug Attitude Inventory ($r = .82$) (8). Lower values indicate higher self-reported adherence.

Illness self-management was measured with the Illness Management and Recovery Scale (IMR Scale, Client Version), a 15-item questionnaire rated on a 5-point behaviorally-anchored scale. Questions include items related to progress toward goals, knowledge about mental illness, involvement with significant others, symptom distress and coping, and alcohol and drug use. The scale is internally consistent, with good test-retest reliability and convergent validity (9).

The Mental Health Version of the Patient Activation Measure (PAM-MH) was used to assess patient activation, i.e., the knowledge, skills, and confidence to manage illness (10). The 13-item PAM-MH has been used in several studies of people with mental illness, and shows strong reliability and validity (10). Scores range from 0 to 100, with higher scores indicating greater activation.

Length of consumer-provider relationship was measured through consumer self-

report. The Working Alliance Inventory (WAI) was used to assess consumer-provider agreement on treatment goals, collaboration to achieve these goals, and degree of emotional bond (i.e., liking and trust) between consumers and providers (11). In its original development and validation, the WAI showed high reliability and demonstrated convergent, discriminant, concurrent, and predictive validity. We administered the short form (12 items) of the client version of the WAI and examined total scores and scores on three subscales: task, bond, and goals.

The Shared Decision-Making (SDM) Scale is adapted from Braddock's Informed Decision-Making Scale, which has demonstrated high reliability in several studies of decision-making in primary care and surgery (1). The scale has been shown to reliably assess shared decision-making in mental health consultations (6). The scale is applied to transcripts of clinic visits by independent raters and identifies nine elements of shared decision-making (see Appendix). Items are summed for an overall score ranging from 0 to 18. Decisions are classified by complexity based on level of medical consensus and the extent to which the treatment decision's consequences could affect the consumer's life.

Braddock et al. (1) described a minimum level of decision-making (SDM-Min), based on decision complexity. For basic decisions, SDM-Min criteria are element #3, discussion of the decision's clinical nature, and either the consumer's desired role in decision-making (#1) or consumer preference (#9). Intermediate decisions require these elements plus discussion of alternatives (#4), pros/cons of decision (#5), and assessment of consumer understanding (#7). Complex decisions require all nine

elements. Decisions were coded for agreement as follows: full agreement, consumer or provider passively agrees, consumer or provider disagrees. The latter two categories were collapsed into “lack of full agreement.”

Transcripts were divided among four trained coders, who independently coded each transcript. To ensure consistency, one of every 3 transcripts was independently coded by all coders, who then met to compare coding and reach consensus. We used overall scores, presence of minimum shared decision-making (SDM-Min: 0 [not present] vs. 1 [present]), and overall agreement (0 [lack of full agreement] vs. 1 [full agreement]).

Correlation analyses (Pearson product-moment correlation for continuous measures and point-biserial correlation for dichotomous measures) were used to test the hypothesis that relationship factors (longer consumer-provider relationship, greater working alliance), and consumer self-management factors (greater medication adherence, illness management, and activation) would be related to greater shared decision-making, likelihood of minimum shared decision-making (SDM-Min) and consumer-provider agreement. We did not adjust for multiple comparisons, since this can obscure potential findings in exploratory contexts (12). We discuss results as statistically significant at $p < .05$. SAS (v9.3) was used for analyses.

Results

One hundred-two consumers were approached; 79 (78%) participated. Most common reasons for refusal were anxiety, lack of time, and lack of interest. Four were unable to stay after their appointment to complete the questionnaires and were

dropped from analysis. Results are presented only for visits that included a treatment decision (i.e., discussion with explicit course of action, $n=63$).

Consumers' ages ranged from 23 to 71 years ($M=53\pm 10$). Nine (14%) were women; all were veterans. Forty-seven (75%) were white; 13 (16%) African American, 2 Hispanic, 1 American Indian. Primary diagnoses were anxiety disorder (including PTSD, 56%), mood disorder (40%), schizophrenia spectrum (3%), and other (1%).

Demographics were not significantly related to overall shared decision-making score, SDM-Min, or agreement. Consumer-provider relationship duration ranged from 2 months to 10 years ($M=29.8\pm 25.8$ mo.). Shared decision-making scores ranged from 3 to 13 ($M=9.4\pm 2.4$). About half met SDM-Min criteria ($n=28$, 44%). Fifty-five (87%) had full agreement; eight decisions (13%) had passive/reluctant agreement by consumers. Eighteen decisions (29%) were basic, 43 (68%) intermediate, and 2 (3%) complex.

Measures had satisfactory internal reliability ($\alpha \geq .73$), with the exception of MARS total ($\alpha=.58$) and the Goals subscale of Working Alliance Inventory ($\alpha=.53$), which were dropped from analysis. Cronbach's alpha for the Morisky scale was .62.

Overall shared decision-making scores were not significantly associated with any measures (see Table). SDM-Min was associated with the Bond subscale of the Working Alliance Inventory ($r=.29$, $p<.05$). For those who met SDM-Min criteria, the mean Bond score was 25.9 ± 2.2 compared to those without minimum shared decision-making ($M=24.4\pm 2.9$). Medication adherence (Morisky scale) was significantly associated with SDM-Min ($r=-.32$, $p<.05$), indicating that participants with SDM-Min were more likely to report taking medications as prescribed ($M=.8\pm 1.0$) than those who did not meet SDM-

Min criteria ($M = 1.5 \pm 1.2$).

Overall agreement was associated with a shorter consumer-provider relationship ($r = -.31, p < .05$). Those with full agreement had been together for a mean of 26.8 ± 22.8 months, compared to those who did not fully agree (50.3 ± 36.2). Overall agreement was related to medication adherence in the expected direction ($r = -.28, p < .05$), but not to working alliance or other variables.

Discussion

This study examined associations between shared decision-making and factors related to illness management and the consumer-provider relationship. Contrary to our hypothesis, overall shared decision-making was not related to measured variables. However, minimum levels of shared decision making (SDM-Min) were associated with consumer-provider bond, measured by the Working Alliance Inventory. Bond refers to liking and trust between consumers and providers. Given that SDM-Min requires either discussion of the consumer's role in decision-making or exploration of preferences, these positive feelings likely encourage such discussions. Conversely, adopting a shared decision-making approach could lead to greater consumer-provider bond. Medication adherence was also significantly associated with SDM-Min, indicating a positive relationship between shared decision-making and taking medications as prescribed. This is consistent with other work showing shared decision-making to be associated with adherence (13). Relatedly, the positive relationship between adherence and agreement on a decision is unsurprising, since agreeing on treatment decisions should lead to greater treatment adherence.

Minimum levels of shared decision-making (versus total score) may be more relevant for mental health, and, more generally, chronic illness management. Because individuals with chronic conditions typically visit providers regularly, shared decision-making often occurs over numerous visits--it may be unnecessary to revisit each element each time (5). However, when treatment decisions are made, certain elements should still be discussed, which may be what SDM-Min is reflecting in this study.

Overall decision agreement was associated with shorter consumer-provider relationships. Initially, this appears counterintuitive—consumers and providers becoming more familiar over time with one another’s preferences and needs might have greater agreement. However, longer relationships might lead to participants feeling more comfortable expressing disagreement, rather than keeping silent.

It was surprising that patient activation was not related to shared decision-making. Activated consumers take greater “ownership” of their health care, which should translate to greater involvement in treatment decisions. However, a previous study also found no relationship between patient activation and observer-rated activation in mental health visits (14). Activation might not manifest in communication, specifically decision-making, especially if consumers and providers have had a long relationship.

This study is limited in that we only included three providers, and did not examine provider factors (e.g., years of experience, attitudes, gender) that might influence shared decision-making. Because all providers were female and most consumers were male, gender might have affected findings, particularly since research

indicates female patients are more involved in treatment and ask more questions (15). Second, insufficient statistical power might have obscured some relationships. However, many correlations were so low that greater power would have been unlikely to change results. Third, the cross-sectional study design does not facilitate causal claims. Fourth, excluding consumers experiencing symptom exacerbations might have limited our ability to examine a wider range of decision-making, including the potential for greater provider paternalism. Fifth, the small magnitude of some correlations may call into question the clinical significance of some associations among variables. More research is needed to better understand these relationships. Finally, this study was conducted at a single VA medical center. There might be variations among different mental health clinics and differences between veterans and non-veterans.

Conclusions

This study adds to our knowledge of shared decision-making and suggests important directions for future research. Specifically, the role of minimum levels of shared decision-making in chronic care, the influence of the consumer-provider relationship, and the role of patient activation in shared decision-making merit further investigation. Future research should further explore these factors while examining decision-making over multiple provider visits.

Table. Correlations among study variables

		1	2	3	4	5	6	7	8	9	10
1	SDM Tot	1.00									
2	SDM-Min	.30*	1.00								
3	Agreement	.01	.25	1.00							
4	Relationship Length	.00	.00	-.31*	1.00						
5	IMR Scale	-.05	-.04	.17	.06	1.00					
6	Morisky Scale	-.03	-.32*	-.28*	.09	-.10	1.00				
7	PAM-MH	.03	-.09	.22	-.03	.52 ***	-.25	1.00			
8	Wkg Alliance Total	.07	.13	.13	-.04	.42 ***	-.13	.23	1.00		
9	Task	.04	.11	.19	-.02	.47***	-.08	.23	.92***	1.00	
10	Bond	.06	.29*	.17	.09	.22	-.24	.18	.80***	.64***	1.00

*p<.05; **p<.01; ***p<.001

References

1. Braddock CH , Edwards KA, Hasenberg NM, et al: Informed decision making in outpatient practice: Time to get back to basics. *Journal of the American Medical Association* 282:2313-2320, 1999
2. Legare F, Ratte S, Kryworuchko J, et al: Interventions for improving the adoption of shared decision making by healthcare professionals. *Cochrane Database of Systematic Reviews*, 2010
3. Drake RE, Deegan PE, Rapp C: The promise of shared decision making in mental health. *Psychiatric Rehabilitation Journal* 34:7-13, 2010
4. Matthias MS, Salyers MP, Frankel RM: Re-thinking shared decision-making: context matters. *Patient Education and Counseling* 91:176-9, 2013
5. Montori VM, Gafni A, Charles C: A shared treatment decision-making approach between patients with chronic conditions and their clinicians: the case of diabetes. *Health Expectations* 9:25-36, 2006
6. Salyers MP, Matthias MS, Fukui S, et al: Measuring shared decision making in psychiatric care. *Psychiatric Services* 63:779-784, 2012
7. Fukui S, Salyers MP, Matthias MS, et al: Predictors of shared decision making and level of agreement between consumers and providers in Psychiatric care. *Community Mental Health Journal* in press 10.1007/s10597-012-9584-0

8. Thompson K, Kulkarni J, Sergejew AA: Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. *Schizophrenia Research* 42:241-247, 2000
9. Salyers MP, Godfrey JL, Muesser KT, et al: Measuring illness management outcomes: A psychometric study of clinician and consumer rating scales for illness self management and recovery. *Community Mental Health Journal* 43:459-480, 2007
10. Green C, Perrin N, Polen M, et al: Development of the patient activation measure for mental health. *Administration and Policy in Mental Health and Mental Health Services Research* 37:327-333, 2010
11. Horvath AO, Greenberg LS: Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology* 36:223-233, 1989
12. Rothman KJ: No adjustments are needed for multiple comparisons. *Epidemiology* 1:43-46, 1990
13. Joosten EA, DeFuentes-Merrilas L, de Weert GH, et al: Systematic review of the effects of shared decision-making on patient satisfaction, treatment adherence, and health status. *Psychotherapy and Psychosomatics* 77:219-226, 2008
14. Salyers MP, Matthias MS, Spann CL: The role of patient activation in psychiatric visits. *Psychiatric Services* 60:1535-1539, 2009
15. Ong LM, de Haes JC, Hoos AM, et al: Doctor-patient communication: A review of the literature. *Social Science & Medicine* 40:903-918, 1995