



**Measurement issues of shared decision making in mental health: Challenges and Opportunities**

Journal:	<i>Mental Health Review Journal</i>
Manuscript ID	MHRJ-01-2017-0004.R2
Manuscript Type:	Research Paper
Keywords:	measurement, mental health, outcomes, patient involvement, shared decision making

SCHOLARONE™  
Manuscripts

Journal: Mental Health Review Journal

**Title:** Measurement issues of shared decision making in mental health:  
Challenges and Opportunities

**Authors:** Lilisbeth Perestelo-Perez<sup>a,b,c</sup>, Amado Rivero-Santana<sup>b,c,d</sup>, Yolanda Alvarez-Perez<sup>d</sup>,  
Yaara Zisman-Ilani<sup>e</sup>, Emma Kaminskiy<sup>f</sup>, Pedro Serrano-Aguilar<sup>a,b,c</sup>

<sup>a</sup> Evaluation Unit of the Canary Islands Health Service (SESCS), Tenerife, Spain

<sup>b</sup> Health Services Research on Chronic Patients Network (REDISSEC), Tenerife, Spain

<sup>c</sup> Center for Biomedical Research of the Canary Islands (CIBICAN), Tenerife, Spain

<sup>d</sup> Canarian Foundation for Health Research (FUNCANIS), Tenerife, Spain

<sup>e</sup> Dartmouth Institute for Health Policy and Clinical Practice Dartmouth College, Lebanon, NH,  
USA

<sup>f</sup> Department of Psychology, Anglia Ruskin University, Cambridge, UK

**Corresponding author:** Lilisbeth Perestelo-Perez, PhD. Servicio de Evaluacion del Servicio  
Canario de la Salud. Camino Candelaria, s/n. 38109. El Rosario. S/C de Tenerife. Spain. Phone  
Number: +34 922 68 40 19 (Ext 241). E-mail: lilisbethp@gmail.com

**Keywords:** measurement, mental health, outcomes, patient involvement, shared decision  
making

**Conflict of interest:** The authors confirm that this article content has no conflict of interest.

**Funding:** The authors declare no support from any organization for the submitted work.

Journal: Mental Health Review Journal

## Abstract

### Purpose

Shared decision making (SDM) is a model of health care in which patients are involved in the decision making process about their treatment, considering their preferences and concerns in a deliberative process with the health care provider. Many existing instruments assess the antecedents, process, or the outcomes of SDM. The aim of this article is to identify the SDM-related measures applied in a mental health context.

### Design/methodology/approach

We performed a systematic review in several electronic databases from 1990 to October 2016. Studies that assessed quantitatively one or more constructs related to SDM (antecedents, process, outcomes) in the field of mental health were included.

### Findings

We included ~~873~~ studies that applied 48 measures on distinct SDM constructs. A large majority of them have been developed in the field of physical diseases and adapted or directly applied in the mental health context. The most evaluated construct is the SDM process in consultation, mainly by patients' self-report but also by external observer measures, followed by the patients' preferences for involvement in decision making. The most applied instrument was the *Autonomy Preference Index* (API), followed by the *Observing Patient Involvement in Decision Making* (OPTION) and the *Control Preferences Scale* (CPS). The psychometric validation in mental health samples of the instruments identified is ~~very~~ scarce.

### Research limitations/implications

The bibliographic search is comprehensive, but could not be completely exhaustive. Effort should be invested in the development of new SDM for mental health tools that will ~~There is a need of psychometrically validated instruments, specifically developed in the mental health setting, which~~ reflect the complexity and specific features of mental health care.

### Originality/value

We highlight several limitations and challenges for the measurement of SDM in mental health care.

Journal: Mental Health Review Journal

## Introduction

Health professionals are increasingly being encouraged to adopt a collaborative and deliberative approach, Shared Decision Making (SDM) to enhance patient-centered care (Elwyn et al., 2012). In this sense, policy documents and clinical practice guidelines advocate for health professionals to involve patients in decision-making processes and allow service users' preferences, along with the scientific evidence, to guide decisions where possible (van der Weijden et al., 2013; NICE, 2016). Patient decision aids, risk calculators and other tools can help to translate information from evidence and incorporate the goals and subjective experiences of patients in ways that are accessible in routine practice (Van Der Weijden et al., 2012).

The SDM approach aims to change the asymmetry between patients and their health professionals regarding decisional power and decision-relevant information, as well as to increase patient autonomy and empower service users in decisions about treatment (Charles, Gafni and Whelan, 1999). However, while evidence suggesting its benefits is growing (Stacey et al., 2014), its application in the area of mental health is still in its infancy (Beitinger, Kissling and Hamann, 2014). There is a consensus about the importance of patient-centered care when dealing with mental health problems. In this regard, the concept of recovery (Duncan, Best and Hagen, 2010) (Duncan, Best and Hagen, 2010) goes beyond the simple "cure" of symptoms, emphasizing the inclusion and continue participation within the community of people with mental health disorders. Recovery implies to gain or retain control and responsibility over one's own life and to be able to integrate in the community, overcoming the impact of symptoms although these have not completely remitted. Interventions like assertive community treatment, supported employment or family interventions promote this community integration of people with mental illnesses, and in this sense SDM between services users and professionals seems an ineludible and core component of the process of

Journal: Mental Health Review Journal

patients' involvement that could lead to recovery (Storm and Edwards, 2013), (Storm and Edwards, 2013).

Several barriers in adapting SDM to mental health exist have been discussed in this special issue, including concerns regarding the patient's decision-making capacity due to psychiatric mental health symptoms, and lack of interventions and methods for measuring and assessing SDM in mental health (See Kaminskiy, Senner, and Hamann; and Zisman-Ilani et al., in this issue).

Measuring and assessing SDM is important to understand the effect of interventions and to explore relationships between different constructs (Scholl et al., 2011). Different constructs can be measured to provide insight into the decision making-process: *prerequisite skills for SDM* (e.g., decision self-efficacy, health literacy of patients, communication skills), *decision-making elements* (e.g., involvement and satisfaction in clinical decision making, type of topics covered in the consultation, the amount and type of deliberation on the part of patients and health professionals), and *decision outcomes* (e.g., objective knowledge, concordance between values and choices, decisional conflict, adherence and utilization of the choice made) (Sepucha & Mulley 2009; Barr, Scholl, et al. 2016). Regarding the perspective assessed, SDM measures can be divided into three type: observer measures, professional-report and patient-report tools (Scholl et al., 2011). Observer measures of SDM have been developed to assess observable aspects of SDM in clinical settings, typically assessed via audio or video recordings of clinical encounters, which then are coded based on a previously established system (Elwyn and Blaine, 2016); the perception of healthcare professionals on SDM (Chong, Aslani and Chen, 2013), and the patient-reported outcomes related to SDM (Barr, Scholl, et al. 2016; Barr & Elwyn 2016) are tools that assess the perspective from health professionals or service users about the extent to which patients have been involved in the decision-making process about

Formatted: List Paragraph

Journal: Mental Health Review Journal

their care. Assessments may measure a single consultation or to the whole process of care. Further insight into SDM can be gained by the triangulation of methods (e.g. observer, health professional, service users) and by using a dyadic data analysis approach (Kenny et al., 2010).

Despite the importance of SDM for delivering patient-centered care in mental health, there is no consensus on how to measure its process and outcomes (Perestelo-Perez et al., 2011). With the growing interest among policymakers, researchers, clinicians, and patients in using SDM in mental health routine care, there is a need for reliable measurement tools that will response to the unique setting of mental health (Morant, Kaminskiy and Ramon, 2015). The purpose of the present article is the review of measures of SDM-related constructs for mental health settings, describing their psychometric properties evaluated in the psychiatric mental health samples identified (the comparison of the psychometric quality of the instruments falls beyond the scope of this review).

~~review existing literature for measurements of SDM for mental health settings and provide a summary of tools that can serve in the future for research and clinical purposes of SDM in mental health.~~

## Method

### *Types of measurement of SDM*

~~SDM measures can be divided into three type: observer measures, professional report and patient report tools (Scholl et al. 2011). Observer measures of SDM have been developed to assess observable aspects of SDM in clinical settings, typically assessed via audio or video recordings of clinical encounters, which then are coded based on a previously established system (Elwyn & Blaine 2016); the perception of healthcare professionals on SDM (Chong et al. 2013), and the patient reported outcomes related to SDM (Barr, Scholl, et al. 2016; Barr &~~

Journal: Mental Health Review Journal

~~Elwyn 2016) are tools that assess the perspective from health professionals or service users about the extent to which patients have been involved in the decision making process about their care. Assessments may measure a single consultation or to the whole process of care. Further insight into SDM can be gained by the triangulation of methods (e.g. observer, health professional, service users) and by using a dyadic data analysis approach (Kenny et al. 2010).~~

#### *Review of key measurement instruments of SDM in mental health*

~~There are many measures to assess the different aspects of SDM (for decision antecedents, decision making process, and decision outcomes). Therefore, in~~ order to identify existing instruments, a ~~systematic~~ review was performed in the electronic databases Medline, PsycINFO, Scopus, Web of Science, from January 1990 to October 2016 using a number of Medical Subject Headings (MeSH) and keywords in three domains: i) shared decision making, ii) mental health, and iii) measures (see Appendix A). A secondary search of the reference sections of included papers and identified review articles was also conducted.

The study selection process consisted of several successive steps. First, the results obtained from the databases were grouped into a single file. Duplicate records for a single study were eliminated before starting the selection process. The study selection form was tested on ten randomly drawn studies in order to ascertain selection criterion relevance and discrimination. Then the title and abstracts were independently selected by two members of the review team (AR and YA)<sup>1</sup>, and any discrepancies were resolved by discussion or a third reviewer (LP)<sup>2</sup>. During the third phase, the selected abstracts were examined by AR and YA using the same process. Finally, examination of the full articles by AR and LP enabled a decision of whether to include

<sup>1</sup> AR: Amado Rivero-Santana. YA: Yolanda Alvarez-Perez

<sup>2</sup> LP: Lilisbeth Perestelo-Perez

Journal: Mental Health Review Journal

each article in the systematic review to be made. All references were managed using Reference Manager.

The following inclusion criteria were applied: ~~Experimental-experimental~~ or observational studies were included if: 1) they recruited patients receiving mental health treatment or ~~they were~~ diagnosed with a ~~psychiatric-mental health~~ disorder by a mental health professional; 2) quantitatively assessed at least one of the three aspects of SDM: decision antecedents, decision-making process and decision outcomes, from the perspective of the patient, the healthcare professional or an external observer; 3) ~~were published in English or Spanish. The decision of whether an identified construct fitted in this theoretical framework was discussed by the authors, independently of whether the study's stated aim was the measurement of SDM or how the construct was labeled.~~

Studies were excluded if: the decision was not related mental health care, or instruments applied were intended to measure the therapeutic alliance, or affective/empathic aspects of the patient-professional interaction. Studies assessing empowerment also were excluded, since this concept comprises indistinctly several dispositions and skills related to the SDM process and outcome, and currently there is no consensus about its operationalization (Barr et al., 2015; Bravo et al., 2015). We also excluded studies that applied preference elicitation techniques (e.g., discrete choice experiments, conjoint analysis) to assess treatment preferences, or studies where the SDM construct was assessed qualitatively (by means of conversation analysis, thematic analysis or other qualitative techniques).

## Results

The electronic search yielded 1212 references after eliminating duplicates- ~~and- other 14 references were identified by manual search.~~ A total of ~~238-242~~ articles were selected by



Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

title/abstract, and after full-text review [73–87](#) references were finally included. [Other 140](#)  
[references were identified by manual search](#) (Figure 1). [The most common cause of exclusion](#)  
[was that the instruments used did not assessed the SDM constructs targeted in this review](#)  
[\(n=102\), followed by not including at least a differentiated subsample of mental health](#)  
[patients.](#) A majority of [the included](#) studies recruited [samples of](#) patients with different  
[psychiatric mental healthpsychiatric](#) diagnoses, followed by studies that included patients with  
depression only (n=19). Few studies exclusively focused on other disorders such like  
schizophrenia (n=6), attention deficit and hyperactivity disorder (n=5), bipolar disorder (n=2),  
autism (n=2), dementia (n=2) or substance abuse (n=1). Only 10 studies focused on children,  
adolescents or their parents. Other two studies evaluated the desire of patients regarding their  
families' participation in treatment decisions.

[A total of 48 instruments were identified \(see Table 1\). From these, only 11 were originally](#)  
[developed in a mental health setting \(\*Clinical Decision Making Style-CDMS, Decisional Balance\*](#)  
[for Patient Choice in Substance Abuse Treatment, \*Family Involvement in Treatment scale-FIT,\*](#)  
[Preferences and Satisfaction Questionnaire-PSQ, \*Service Satisfaction Questionnaire,\* and six](#)  
[measures ~~assessing of objective~~ knowledge outcomes\). The remaining measures were](#)  
[developed in physical health care settings, and subsequently adapted for use in a mental](#)  
[health context, when necessary \(e.g. through minor change to item wording\). Five of these](#)  
[were constructed with specific SDM items selected from previous surveys, which assess](#)  
[patients' perceptions of quality of health care, not only SDM \(\*Consumer Quality Index-CQI,\*](#)  
[Consumer Assessment of Healthcare Providers and Systems-CAHPS, \*Experience of Service\*](#)  
[Questionnaire-ESQ, \*National Survey of Children with Special Health Care Needs- NS-CSHCN,\*](#)  
[Patient Assessment of Chronic Illness Care-PACIC\).](#)

Journal: Mental Health Review Journal

SDM antecedents

We identified 14 instruments that assess antecedents of the SDM process (the patient's preferences for involvement in most cases, but also decisional self-efficacy, desire for family involvement or decision emotional control). The most commonly used instrument for SDM antecedents in mental health is the *Autonomy Preference Index (API)*, applied in 16 studies, followed by the *Control Preferences Scale (CPS)*, 8 studies). The remaining scales (n=12) were applied to fewer studies (between 1 and 4). Only one out of the 14 measures (LATCon II) were applied to assess professionals' attitudes (De las Cuevas et al., 2012), whereas other one was designed for both patients and professionals (the *Clinical Decision Making Style, CDMS*). This latter measure was developed and validated with mental health patients from six European countries (Puschner et al., 2013).

Apart from internal consistency, which showed good values in most cases, the reported results on the psychometric properties of instruments are scarce. Three studies offered confirmatory factor validity: two for the API (Simon et al. 2010; Bonfils et al. 2015), and one for the *Decisional Balance for Patient Choice in Substance Abuse Treatment* (Finnell and Lee, 2011), whereas De las Cuevas et al. (De las Cuevas et al., 2011, 2012) performed exploratory component analyses on two versions of the LATCon questionnaire (in patients and psychiatrists, respectively). Puschner et al. (2013) assessed stability over one year of the CDMS, as well as its concurrent validity with stage of recovery. Finally, regarding predictive validity, Mahone (2008) did not find a significant association between the CPS and self-reported medication adherence, whereas O'Brien et al. (2013) observed that parents' self-efficacy significantly predicted self-reported adherence of their children/adolescents with serious emotional disturbance.

Journal: Mental Health Review Journal

SDM process

Twenty-two instruments were identified that assess the SDM process. Three are based on external observers' evaluations (*Informed Decision Making Scale-IDMS, Measure of Patient-Centered Communication-MPCC, Observing Patient Involvement in Decision Making-OPTION*), four were applied to assess the professional's self-report (*Clinical Decision Making Involvement and Satisfaction-CDIS, Dyadic OPTION, Physician Participatory Decision-Making Style, SDM-Q-9-Doc*), and the remaining focused on patients' views.

The OPTION scale was the most used instrument in studies assessing SDM in mental health (8 studies). It showed acceptable or good inter-rater reliability in the five studies that reported data; besides this, only an exploratory factor analysis has been reported (Goossensen, Zijlstra and Koopmanschap, 2007). The remaining measures were applied in few studies each; most of these reported measures of internal consistency, as well as construct/convergent validity (by means of associations with other scales or individual items). Slade et al. (2014) published the development and validation of the CDIS in mental health patients, in the same six European countries as the CDMS previously mentioned. Rosenberg et al. (2016) reported two-weeks temporal stability (reliability) and convergent validity (construct validity) of the dyadic OPTION and the 3-item scale CollaborATE. The SDM-Q-9 (patient and professional versions) has been validated in mental health settings in Germany, Netherlands, and Spain (Kriston et al. 2010; Kriston et al. 2012; Scholl, Kriston, Dirmaier & Harter 2012; De las Cuevas et al. 2013; Rodenburg-Vandenbussche et al. 2015), and in more recently, in recently a version for the psychiatric mental health settings in Israel and the US has been published (Alvarez et al. 2016; Zisman-Ilani et al. 2017).

Predictive validity was assessed in eight studies. Mahone (2008) obtained non-significant results on the association between perceived involvement (by means of the CPS) and self-

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Journal: Mental Health Review Journal

reported medication adherence, whereas Loh, Leonhart et al. (2007) found a significant positive relationship (by the Patient Participation Scale from Man-Son-Hing (MSH-scale)). Tambuyzer & Van Audenhove (2015), Golnik, Maccabee-Ryaboy et al. (2012) and Swanson et al. (2007) observed that perceived SDM significantly predicted patients' (or parents') satisfaction with care. In Bowersox et al. (2013), the SDM scale used ("care information") significantly predicted post-hospitalization attendance at mental health appointments. Edbrooke-Childs et al. (2016) found that involvement in SDM was significantly associated with lesser subsequent parent-reported psychosocial difficulties of their children. Finally, Butler, Elkins, et al. (2015) observed a significant concurrent association between parents' perceptions of SDM and their perceptions of their children's (lesser) impairment in school attendance and participation in extracurricular activities, receipt of all needed mental health care and lower illness severity.

#### SDM outcomes

The outcomes of the decisional process were assessed in 10 studies. Six studies assessed increased knowledge of the disease and treatments options, using measures specifically developed for the aim of each study. The Decisional Conflict Scale (DCS) was used in 5 studies. The other instruments identified were the Combined Outcome Measure for Risk Communication and Treatment Decision-Making Effectiveness (COMRADE), the Satisfaction with Information about Medicines Scale (SIMS), the Satisfaction with Decision Scale (SWDS), the SURE questionnaire, and the Decision Regret Scale (DRS).

The report of psychometric properties is very limited. Only two out of five studies report internal consistency of the DCS, and one explored its construct validity comparing the scores of patients wishing to continue neuroleptic medication to those who were unsure (Bunn et al.,

Journal: Mental Health Review Journal

1997). Rosenberg et al. (2016) offered test-retest and convergent validity data for the SURE questionnaire.

#### Other assessments of SDM constructs

Twelve other studies were identified that had not developed a psychometric scale, but instead used and analyzed individual items only (see Table 2). Perception of involvement from the patient's perspective was the most frequently assessed construct in this category.

#### Discussion

Results of the systematic review show that the number of studies assessing some aspect of SDM in a mental health setting has increased in recent years; 52 out of 87 studies (60%) were published in the last 5 years and from these, a wide variety of measures have been employed. The most used instruments are the *Autonomy Preference Index (API)* and the *Control Preferences Scale (CPS)* to assess patients' preference for involvement, and the *OPTION scale for assessing SDM in consultation, a scale based on external observers' ratings. The most common construct evaluated is the patient's perception of involvement/SDM, whereas variables such as decision process outcomes (e.g., knowledge of treatment options; congruence between values and choices) or professionals' attitudes to SDM are underrepresented in existing measures. Most instruments identified were originally developed in the field of physical health care and then minimally adapted to the mental health setting (e.g., changes in wording). Exceptions are the *CDMS* (Puschner et al., 2013), the *Decisional Balance for Patient Choice in Substance Abuse Treatment* (Finnell and Lee, 2011), the *CDIS* (Slade et al., 2014), and the *Preferences and Satisfaction Questionnaire* (Perreault et al., 2005). The inclusion of psychiatric patients mental health service users and providers in the initial development of the instruments is important to ensure that all the relevant facets of mental health care are covered.*

Journal: Mental Health Review Journal

The report of the psychometric properties of the scales in the mental health samples is limited. Internal consistency is good in most cases, but very few studies assessed the scales' factor structure and test-retest reliability. Data on convergent validity with other scales or individual items are offered in several studies, but there is no gold standard of SDM and therefore it is difficult to establish construct validity. Related to this, research is needed on the comparison of patients', professionals' and objective assessments, which have shown poor correlation in previous studies (Kasper et al. 2011; Kasper et al. 2012; Scholl, Kriston, Dirmaier & Harter 2012; Kasper et al. 2012; Kasper et al. 2011). Some authors have tried to develop dyadic measures, instruments with the same underlying structure for patients and professionals that enable a direct comparison of both perspectives (Melbourne et al. 2011; Kasper et al. 2012; Kasper et al. 2011; Kriston et al. 2012). It is also necessary more research on the predictive performance of measures of SDM on behavioral (adherence, self-management), and health outcomes (symptoms, health-related quality of life). With these limitations in mind, among the identified instruments we considered that the API, the CPS, and the CDMS are to date the most appropriate measures of patients' (and professionals in the case of the CDMS) preferences for involvement in mental health care, whereas the CDIS, the SDM-Q-9, the OPTION, and the dyadic self-report OPTION are good alternatives for assessing patients' or observer's perceptions of SDM process. In addition, brief instruments such like the CollaborATE or the SURE could be usefull in practical settings where short measures are required.

As commented in the introduction, the recovery model proposes thea communitary integration within the community of people with mental health disorders, overcoming the impact of symptoms and achieving an increased responsibility and involvement in the decisions about their own life. In this regard, one of the most important challenges for future SDM research is to capture the complexity of decision making processes in mental health care

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7 settings. Decisions occur over multiple time points, involve chronic and ongoing challenges and  
8 often a significant work impairment and social stigma are present. In this context,  
9 interventions should include decisions not only about pharmacological or psychological  
10 treatment, but also about psychosocial issues like work, lifestyle, housing, legal issues, or social  
11 and leisure activities. None of the included studies focused on these aspects. Furthermore, the  
12 impact that mental health problems have on distinct life areas also highlight the importance of  
13 patients' social support, and in this sense the involvement of caregivers, family, or parents of  
14 young patients in the process of care and decision making seems crucial to increases the  
15 quality of services and maximize clinical improvement and quality of life. Some research is  
16 emerging which explores the inclusion of carer/guardians for young people (Golnik, Scal, et al.  
17 2012; Maccabee-Ryaboy, et al. 2012; Butler, Elkins, et al. 2015; Ahmed et al. 2016; Golnik,  
18 Lipstein et al. 2016), but only two of the included studies assessed adult patients' (Cohen et al.  
19 2013)(Perreault et al. 2005) preferences for family involvement (Perreault et al., 2005; Cohen  
20 et al., 2013), and only the latter assessed relatives' opinion and experience. Research must  
21 therefore include carer and relative's views and experiences, and the way that these views are  
22 aligned with those of patients and mental health professionals (Roberts and Kim, 2015). The  
23 triangulation of these three perspectives will enable the detection of potential discrepancies in  
24 perceptions, preferences and intentions regarding treatment that could interfere negatively  
25 the process of care.

26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45 None of the studies included assessed decision-making in multiple successive timepoints,  
46 regarding the same or different decisions. The chronic nature of many of mental health  
47 problems is often associated with long term prescription of of psychiatric medications, which  
48 may lead to impairing and serious physical adverse effects. Therefore, it is necessary a  
49 continuous monitoring of treatment outcomes, and many times successive decisions must be  
50 taken regarding switching, augmenting or discontinuing medication. The active participation of  
51  
52  
53  
54  
55

Formatted: Not Highlight

Formatted: Not Highlight

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7 the patients in these decisions and an effective communication with the healthcare  
8 professional will increase the likelihood of achieving an optimal adjustment of pharmacological  
9 treatment. Measures of SDM should incorporate this temporal dimension taking into account  
10 the stability of users' preferences for involvement, their perceptions of the continuity of care,  
11 and the influence on these aspects of previous treatments and the evolution of clinical  
12 symptoms.

13  
14  
15  
16  
17  
18  
19  
20 Finally, from an organizational perspective, although there is no universally agreed measure of  
21 SDM, there are some proposed solutions at different levels (micro, meso or macro level) to  
22 overcome key challenges to measure SDM (Barr, Scholl, et al. 2016). In particular, it would be  
23 useful for organizations: to involve patients and healthcare professionals in designing,  
24 developing and testing measures; to build strategies to include patient-reported outcomes in  
25 organizational registries (e.g., electronic medical records); to set up automated analysis  
26 methods to provide rapid feedback and methods of monitoring SDM in clinical encounters (to  
27 service users, mental health professionals, multidisciplinary teams care, organizations and  
28 health care systems); to set aside staff time to measure and monitor key outcomes; and finally,  
29 to promote tools as a component of a continuous monitoring set of routines, and build the  
30 tools into balanced scorecard when the value of measuring may not be recognized (Barr et al.,  
31 2015; Metz et al., 2015).

32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44 This article offers an extensive review of instruments used to assess SDM-related constructs.  
45 However, given the variability of terms used to refer to these constructs (e.g., perceived  
46 involvement, decisional role, desire for participation, decisional control, etc) it is possible that  
47 the search was not completely exhaustive. While a detailed comparison of the psychometric  
48 properties of the instruments identified was beyond the scope of the review, we have,  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60



Journal: Mental Health Review Journal

nonetheless, tried to describe the extent of the psychometric validation performed on these measures.

### Conclusions

In conclusion, SDM may be particularly relevant in mental health care, where increasing treatment-related empowerment and reducing use of coercion have been identified by patients as outcomes of intrinsic value (Stovell et al., 2016). However, there is little or no consensus about the core set of measures and constructs for SDM in mental health, and the evidence available on the performance of published instruments is variable (Scholl et al. 2011; Metz et al. 2015; Bouniols et al. 2016). In this sense, theory development on a set of core constructs to be measured is paramount. Furthermore, the International Patient Decision Aids Standards Collaboration, a world-wide group of researchers, practitioners, and stakeholders who are interested in the design and use of patient decision aids, has acknowledged the importance of measuring the involvement of patients in the decision making process and decision quality to assess the effect of interventions to facilitate SDM in mental health care, yet far more rigorous and systematic methods are needed to make this a reality.

Journal: Mental Health Review Journal

The total 48 instruments were identified (see Table 1). From these, only ten were originally developed in a mental health setting (*Clinical Decision Making Style, Decisional Balance for Patient Choice in Substance Abuse Treatment, Family Involvement in Treatment scale, Preferences and Satisfaction Questionnaire, SDM-Q-9-Psy, Service Satisfaction Questionnaire*, and four measures of objective knowledge). The remaining measures were developed in physical health care settings, and subsequently adapted for use in a mental health context, when necessary (e.g. through minor change to item wording). Among the latter, in five cases the scales were constructed with specific SDM items selected from previous surveys, which assess patients' perceptions of quality of health care, not only SDM (*Consumer Quality Index, Consumer Assessment of Healthcare Providers and Systems, Experience of Service Questionnaire, National Survey of Children with Special Health Care Needs, Patient Assessment of Chronic Illness Care*).

#### *SDM antecedents*

We identified 14 instruments that assess antecedents of the SDM process (the patient's preferences to be involved in the decision in most cases, but also decisional self-efficacy, desire for family involvement or decision emotional control). The most commonly used instrument for SDM in mental health is the *Autonomy Preference Index (API)*, applied in 14 studies, followed by the *Control Preferences Scale (CPS)*, 7 studies). The remaining scales (n=12) were applied to fewer studies of SDM in mental health (between 1 and 4 studies). Only two out of the 14 measures were developed to assess professionals' attitudes, whereas other one was designed for both patients and professionals (the *Clinical Decision Making Style, CDMS*).

---

#### *SDM process*

Twenty-four instruments were identified that assess the SDM process. From this, three (*Informed Decision Making Scale, Measure of Patient-Centered Communication, Observing*

Journal: Mental Health Review Journal

~~*Patient Involvement in Decision Making*~~<sup>4</sup>) are based on external observers' evaluations, and four assess the professional's perspective (~~*Clinical Decision-Making Involvement and Satisfaction, Dyadic OPTION, Physician Participatory Decision-Making Style, SDM-Q-Doc*~~), whereas the remaining were focused on patients' views. The ~~OPTION~~ scale was the most applied instrument in studies assessing SDM in mental health (8 studies).

#### ~~SDM outcomes~~

The outcomes of the decisional process were assessed in 13 studies of SDM in mental health. The ~~Decisional Conflict Scale (DCS)~~ was the most applied measure (5 studies). The other instruments identified were the ~~Combined Outcome Measure for Risk Communication and Treatment Decision-Making Effectiveness (COMRADE)~~, the ~~Satisfaction with Information about Medicines Scale (SIMS)~~, the ~~Satisfaction with Decision Scale (SWDS)~~, the ~~SURE~~ questionnaire, and the ~~Decision Regret Scale (DRS)~~. Only four studies assessed objective knowledge of the disease and treatments options, using measures specifically developed for the aim of each study.

Twelve other studies were identified that did not used the complete or standardized version of a developed scale, but instead used individual items only (see table 2). Perception of involvement from the patient's perspective was the most frequently assessed construct.

#### ~~Discussion~~

As the results of the systematic review show that the number of studies assessing some aspects of SDM in a mental health setting has increased in recent years; 61 out of 83 studies (74%) were published in the last 5 years and from these, a wide variety of measures have been employed. Given the heterogeneity of measures there are still several limitations and challenges for future research:

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

~~From a methodological perspective, most instruments identified were originally developed in the field of physical health care and then adapted to the mental health setting. As such, there is a need to develop specific SDM measures for mental health that will enable us the specificities and complexities of decision-making in mental health, as oppose to relying on adapting existing tools. In addition, the psychometric validation of the existing measures is often limited, restricted in most cases to internal consistency analysis, and to a lesser extent, factorial validity.~~

~~In this respect, a large proportion of studies obtained acceptable values of internal consistency (Cronbach's  $\alpha \geq 0.70$ ), although for the most applied measure, the API, some studies found unsatisfactory values (Hamann et al. 2011; Puschner et al. 2013; Lukens et al. 2013). There is no gold standard of SDM, and therefore it is difficult to assess construct validity. Furthermore, the high number of different instruments developed to assess the same or similar constructs (e.g., patients' perceived involvement in decisions) makes difficult to compare the results of the different studies.~~

~~On the other hand, other variables such as decision process outcomes (e.g. treatment options knowledge; congruence between values and choices), or professionals' perspectives on SDM as a process are underrepresented in existing measures. It is also necessary to compare patients', professionals' and objective assessments, which have shown poor correlation in studies in physical health care settings (Scholl, Kriston, Dirmaier & Harter 2012; Kasper et al. 2012; Kasper et al. 2011). In summary, data on convergent/discriminant validity are needed to better delimitate the proposed constructs. Finally, existing evidence about the predictive performance of measures of SDM on behavioral (adherence, self-management) and health outcomes (symptoms, health-related quality of life) is scarce, but some significant positive associations have been found (Loh, Simon, et al. 2007; Clever et al. 2006; Woolley et al. 2010).~~

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

~~One of the most important challenges for SDM research in mental health is to capture the complexity of decision making processes in mental health care settings. For example decisions occur over multiple time points, involve chronic and ongoing challenges where comorbidity of physical and mental health problems are common, and where service users often also face significant social and work impairment associated to social stigma discrimination. In this context, interventions should include decisions not only about pharmacological or psychological treatment, but also about psychosocial issues like work, lifestyle, housing, legal issues, social and leisure activities or family relationships. Research on SDM in mental health care should recognize that different kind of decisions may be needed in any one clinical encounter, and that patients often may not recognize that a decision is required (Barr & Elwyn, 2016).~~

~~The significant impact that mental health problems have on distinct life areas also highlight the importance of patients' social support, and in this sense the involvement of caregivers, family, or parents of young patients in the process of care and decision making seems crucial to increases the quality of services and maximize clinical improvement and quality of life. Research must therefore include their views and experiences, and the way that these views are aligned with those of patients and mental health professionals (Roberts & Kim 2015). The triangulation of these three perspectives will enable the detection of potential discrepancies in perceptions, preferences and intentions regarding treatment that could interfere negatively the process of care.~~

~~From a longitudinally point of view, the chronic nature of many of mental health problems is often associated with long term prescription of of psychiatric medications, which may lead to impairing and serious physical adverse effects. Therefore, it is necessary a continuous~~

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

~~monitoring of treatment outcomes, and many times successive decisions will must be taken regarding switching, augmenting or discontinuing medication. In this sense, the quality and quantity of SDM may be routinely assessed. Both SDM and routine outcome monitoring are able to empower the patient during the treatment process and to provide good quality information in order to be a more effective agent in the decision-making process (Metz et al., 2015). The active participation of the patients in these decisions and an effective communication with the health care provider will increase the likelihood of achieving an optimal adjustment of pharmacological treatment. Measures of SDM should incorporate this temporal dimension taking into account the stability of users' preferences for involvement, their perceptions of the continuity of care, and the influence on these aspects of previous treatments and the evolution of clinical symptoms.~~

Finally, from an organizational perspective, although there is no universally agreed measure of SDM, there are some proposed solutions at different levels (micro, meso or macro level) to overcome key challenges to measure SDM (Barr et al. 2016). In particular, it would be useful for organizations: to involve patients and healthcare professionals in designing, developing and testing measures; to build strategies to include patient reported outcomes in organizational registries (e.g., electronic medical records); to set up automated analysis methods to provide rapid feedback and methods of monitoring SDM in clinical encounters (to service users, mental health professionals, multidisciplinary teams care, organizations and health care systems ); to set aside staff time to measure and monitor key outcomes; and finally, to promote tools as a component of a continuous monitoring set of routines, and build the tools into balanced scorecard when the value of measuring may not be recognized (Barr et al. 2015; Metz et al. 2015).

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7 **Conclusions**

8 ~~In conclusion, SDM may be particularly relevant in mental health care, where increasing~~  
9 ~~treatment-related empowerment and reducing use of coercion have been identified by~~  
10 ~~patients as outcomes of intrinsic value (Stovell et al. 2016). However, there is little or no~~  
11 ~~consensus about the core set of measures and constructs for SDM in MH, and the evidence~~  
12 ~~available on the performance of published instruments is variable (Salyers et al. 2012; Scholl et~~  
13 ~~al. 2011; Metz et al. 2015; Bouniols et al. 2016). In this sense, theory development on a set of~~  
14 ~~core constructs to be measured is paramount. Furthermore, the International Patient Decision~~  
15 ~~Aids Standards Collaboration, a world-wide group of researchers, practitioners, and~~  
16 ~~stakeholders who are interested in the design and use of patient decision aids, has~~  
17 ~~acknowledged the importance of measuring the involvement of patients in the decision-~~  
18 ~~making process and decision quality to assess the effect of interventions to facilitate SDM in~~  
19 ~~mental health care, yet far more rigorous and systematic methods are needed to make this a~~  
20 ~~reality.~~  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Journal: Mental Health Review Journal

## References

- Adams, J. R., Drake, R. E. and Wolford, G. L. (2007) 'Shared Decision-Making Preferences of People With Severe Mental Illness', *Psychiatric Services*, 58(9), pp. 1219–1221. doi: 10.1176/appi.ps.58.9.1219.
- Ahmed, R. *et al.* (2016) 'The evaluation of a question prompt list for attention-deficit/hyperactivity disorder in pediatric care: A pilot study', *Research in Social and Administrative Pharmacy*, 13(1), pp. 172–186. doi: 10.1016/j.sapharm.2016.01.009.
- Alegría, M. *et al.* (2014) 'Activation, Self-management, Engagement, and Retention in Behavioral Health Care', *JAMA Psychiatry*, 71(5), pp. 557–565. doi: 10.1001/jamapsychiatry.2013.4519.
- Ali, S. *et al.* (2015) 'Psychiatric Providers' Willingness to Participate in Shared Decision Making When Prescribing Psychotropics', *Journal of Pharmacy Technology*, 31(5), pp. 212–218. doi: 10.1177/8755122515578288.
- Aljumah, K. and Hassali, M. (2015) 'Impact of pharmacist intervention on adherence and measurable patient outcomes among depressed patients: a randomised controlled study', *BMC Psychiatry*, 15(1), p. 219. doi: 10.1186/s12888-015-0605-8.
- Alvarez, K. *et al.* (2016) 'Psychometrics of shared decision making and communication as patient centered measures for two language groups.', *Psychological Assessment*, 28(9), pp. 1074–1086. doi: 10.1037/pas0000344.
- Arora, N. K. and McHorney, C. A. (2000) 'Patient preferences for medical decision making: who really wants to participate?', *Medical care*, 38(3), pp. 335–341.
- Barr, P. J. *et al.* (2015) 'Assessment of patient empowerment - A systematic review of measures', *PLoS ONE*. doi: 10.1371/journal.pone.0126553.
- Barr, P. J. *et al.* (2016) 'Competing priorities in treatment decision-making: a US national survey of individuals with depression and clinicians who treat depression', *BMJ Open*, 6(1), p. e009585. doi: 10.1136/bmjopen-2015-009585.
- Barr, P. J. and Elwyn, G. (2016) 'Measurement challenges in shared decision making: putting the "patient" in patient-reported measures', *Health Expectations*, 19(5), pp. 993–1001. doi: 10.1111/hex.12380.
- Barr, P., Scholl, I. and de Silva, D. (2016) 'Patient-reported measures of shared decision making', in Elwyn, G., Edwards, A., and Thompson, R. (eds) *Shared Decision Making in Health Care*. Achieving. United Kingdom: Oxford University Press, pp. 168–174.
- Beitinger, R., Kissling, W. and Hamann, J. (2014) 'Trends and perspectives of shared decision-making in schizophrenia and related disorders.', *Current opinion in psychiatry*, 27(3), pp. 222–229. doi: 10.1097/YCO.0000000000000057.



Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Bonfils, K. A. *et al.* (2014) 'Why are you here again? Concordance between consumers and providers about the primary concern in recurring psychiatric visits', *Psychiatry Research*, 220(1-2), pp. 541–548. doi: 10.1016/j.psychres.2014.07.049.

Bonfils, K. A. *et al.* (2015) 'Factor structure of the autonomy preference index in people with severe mental illness', *Psychiatry Research*, 228(3), pp. 526–530. doi: 10.1016/j.psychres.2015.06.004.

Bouniols, N., Leclère, B. and Moret, L. (2016) 'Evaluating the quality of shared decision making during the patient-carer encounter: a systematic review of tools.', *BMC research notes*, 9, p. 382. doi: 10.1186/s13104-016-2164-6.

Bowersox, N. W. *et al.* (2013) 'Inpatient Psychiatric Care Experience and Its Relationship to Posthospitalization Treatment Participation', *Psychiatric Services*, 64(6), pp. 554–562. doi: 10.1176/appi.ps.002342012.

Bowskill, R. *et al.* (2007) 'Patients' perceptions of information received about medication prescribed for bipolar disorder: Implications for informed choice', *Journal of Affective Disorders*, 100(1-3), pp. 253–257. doi: 10.1016/j.jad.2006.10.018.

Braddock, C. H. *et al.* (2002) 'Factors that predict better informed consent.', *The Journal of clinical ethics*, 13(4), pp. 344–352.

Bravo, P. *et al.* (2015) 'Conceptualising patient empowerment: a mixed methods study', *BMC Health Services Research*, 15(1), p. 252. doi: 10.1186/s12913-015-0907-z.

Brinkman, W. B. *et al.* (2013) 'Shared decision-making to improve attention-deficit hyperactivity disorder care', *Patient Education and Counseling*, 93(1), pp. 95–101. doi: 10.1016/j.pec.2013.04.009.

Bunn, M. H. *et al.* (1997) 'Characteristics of clients with schizophrenia who express certainty or uncertainty about continuing treatment with depot neuroleptic medication.', *Archives of psychiatric nursing*, 11(5), pp. 238–248.

Burnett-Zeigler, I. *et al.* (2011) 'Perceptions of Quality of Health Care Among Veterans With Psychiatric Disorders', *Psychiatric Services*, 62(9). doi: 10.1176/appi.ps.62.9.1054.

Butler, A. M. *et al.* (2015) 'Shared Decision Making Among Parents of Children with Mental Health Conditions Compared to Children with Chronic Physical Conditions', *Maternal and Child Health Journal*, 19(2), pp. 410–418. doi: 10.1007/s10995-014-1523-y.

Butler, A. M., Weller, B. and Titus, C. (2015) 'Relationships of Shared Decision Making with Parental Perceptions of Child Mental Health Functioning and Care', *Administration and Policy in Mental Health and Mental Health Services Research*, 42(6), pp. 767–774. doi: 10.1007/s10488-014-0612-y.

Callaghan, J. *et al.* (2004) 'Evaluation of a New Mental Health Service for Looked after Children', *Clinical Child Psychology and Psychiatry*, 9(1), pp. 130–148. doi: 10.1177/1359104504039177.

Journal: Mental Health Review Journal

Campbell, S. R. *et al.* (2014) 'The Effect of CommonGround Software and Decision Support Center', *American Journal of Psychiatric Rehabilitation*, 17(2), pp. 166–180. doi: 10.1080/15487768.2014.916126.

Charles, C., Gafni, A. and Whelan, T. (1999) 'Decision-making in the physician-patient encounter: Revisiting the shared treatment decision-making model', *Social Science and Medicine*, 49(5), pp. 651–661. doi: 10.1016/S0277-9536(99)00145-8.

Chong, W. W., Aslani, P. and Chen, T. F. (2013) 'Multiple perspectives on shared decision-making and interprofessional collaboration in mental healthcare.', *Journal of interprofessional care*, 27(3), pp. 223–230. doi: 10.3109/13561820.2013.767225.

Clarke, E. *et al.* (2015) 'Empowerment and satisfaction in a multinational study of routine clinical practice', *Acta Psychiatrica Scandinavica*, 131(5), pp. 369–378. doi: 10.1111/acps.12365.

Clever, S. L. *et al.* (2006) 'Primary Care Patients' Involvement in Decision-Making Is Associated With Improvement in Depression', *Medical Care*, 44(5), pp. 398–405. doi: 10.1097/01.mlr.0000208117.15531.da.

Cohen, A. N. *et al.* (2013) 'Preferences for Family Involvement in Care Among Consumers With Serious Mental Illness', *Psychiatric Services*, 64(3), pp. 257–263. doi: 10.1176/appi.ps.201200176.

[De las Cuevas, C. \*et al.\* \(2011\) 'Psychiatric patients' attitudes towards concordance and shared decision making', \*Patient Education and Counseling\*, 85\(3\), pp. e245–e250. doi: 10.1016/j.pec.2011.02.015.](#)

[De las Cuevas, C. \*et al.\* \(2012\) 'Mental health professionals' attitudes to partnership in medicine taking: a validation study of the Leeds Attitude to Concordance Scale II', \*Pharmacoepidemiology and Drug Safety\*, 21\(2\), pp. 123–129. doi: 10.1002/pds.2240.](#)

[De las Cuevas, C. \*et al.\* \(2013\) 'Shared decision making in psychiatric practice and the primary care setting is unique, as measured using a 9-item Shared Decision Making Questionnaire \(SDM-Q-9\)', \*Neuropsychiatric Disease and Treatment\*, 9, pp. 1045–1052. doi: 10.2147/NDT.S49021.](#)

[De las Cuevas, C., Peñate, W. and de Rivera, L. \(2014\) 'Psychiatric patients' preferences and experiences in clinical decision-making: Examining concordance and correlates of patients' preferences', \*Patient Education and Counseling\*, 96\(2\), pp. 222–228. doi: 10.1016/j.pec.2014.05.009.](#)

Dijkstra, A., Jaspers, M. and van Zwieten, M. (2008) 'Psychiatric and psychological factors in patient decision making concerning antidepressant use.', *Journal of Consulting and Clinical Psychology*, 76(1), pp. 149–157. doi: 10.1037/0022-006X.76.1.149.

[Duncan, E., Best, C. and Hagen, S. \(2010\) 'Shared decision making interventions for people with mental health conditions', \*Cochrane Database of Systematic Reviews\*, \(1\), p. CD007297. doi: 10.1002/14651858.CD007297.pub2.](#)

Journal: Mental Health Review Journal

~~Duncan, E., Best, C. and Hagen, S. (2010) 'Shared decision making interventions for people with mental health conditions', *Cochrane Database of Systematic Reviews*, (1), p. CD007297. doi: 10.1002/14651858.CD007297.pub2~~

Edbrooke-Childs, J. *et al.* (2016) 'The relationship between child- and parent-reported shared decision making and child-, parent-, and clinician-reported treatment outcome in routinely collected child mental health services data', *Clinical Child Psychology and Psychiatry*, 21(2), pp. 324–338. doi: 10.1177/1359104515591226.

Einterz, S. F. *et al.* (2014) 'Development and Testing of a Decision Aid on Goals of Care for Advanced Dementia', *Journal of the American Medical Directors Association*, 15(4), pp. 251–255. doi: 10.1016/j.jamda.2013.11.020.

Elwyn, G. *et al.* (2012) 'Shared Decision Making: A Model for Clinical Practice', *Journal of General Internal Medicine*, 27(10), pp. 1361–1367. doi: 10.1007/s11606-012-2077-6.

Elwyn, G. and Blaine, A. (2016) 'Observer measures of shared decision making', in Elwyn, G., Edwards, A., and Thompson, R. (eds) *Shared Decision Making in Health Care*. Achieving . Reino Unido: Oxford University Press, pp. 176–181.

Finnell, D. S. and Lee, J. (2011) 'Psychometric Properties of the Decisional Balance for Patient Choice in Substance Abuse Treatment', *Issues in Mental Health Nursing*, 32(4), pp. 243–249. doi: 10.3109/01612840.2010.548542.

Fumero, A. *et al.* (2016) 'Preferencias por las decisiones compartidas en pacientes con depresión', *Acta Colombiana de Psicología*, pp. 249–269. doi: 10.14718/ACP.2016.19.1.11.

Golnik, A., Scal, P., *et al.* (2012) 'Autism-Specific Primary Care Medical Home Intervention', *Journal of Autism and Developmental Disorders*, 42(6), pp. 1087–1093. doi: 10.1007/s10803-011-1351-5.

Golnik, A., Maccabee-Ryaboy, N., *et al.* (2012) 'Shared Decision Making: Improving Care for Children with Autism', *Intellectual and Developmental Disabilities*, 50(4), pp. 322–331. doi: 10.1352/1934-9556-50.4.322.

Goossensen, A., Zijlstra, P. and Koopmanschap, M. (2007) 'Measuring shared decision making processes in psychiatry: Skills versus patient satisfaction', *Patient Education and Counseling*, 67(1-2), pp. 50–56. doi: 10.1016/j.pec.2007.01.017.

Goss, C. *et al.* (2008) 'Involving patients in decisions during psychiatric consultations', *The British Journal of Psychiatry*, 193(5), pp. 416–421. doi: 10.1192/bjp.bp.107.048728.

Hamann, J. *et al.* (2006) 'Shared decision making for in-patients with schizophrenia', *Acta Psychiatrica Scandinavica*, 114(4), pp. 265–273. doi: 10.1111/j.1600-0447.2006.00798.x.

Hamann, J. *et al.* (2007) 'Participation preferences of patients with acute and chronic conditions', *Health Expectations*, 10(4), pp. 358–363. doi: 10.1111/j.1369-7625.2007.00458.x.

Hamann, J. *et al.* (2010) 'Can Psychiatrists and Neurologists Predict Their Patients' Participation Preferences?', *The Journal of Nervous and Mental Disease*, 198(4), pp. 309–311. doi: 10.1097/NMD.0b013e3181d6128c.

Journal: Mental Health Review Journal

1  
2  
3  
4  
5  
6  
7 Hamann, J., Bronner, K., *et al.* (2011) 'Patient Participation in Medical and Social Decisions in  
8 Alzheimer's Disease', *Journal of the American Geriatrics Society*, 59(11), pp. 2045–2052. doi:  
9 10.1111/j.1532-5415.2011.03661.x.

10 Hamann, J., Mendel, R., *et al.* (2011) 'Why Do Some Patients With Schizophrenia Want to Be  
11 Engaged in Medical Decision Making and Others Do Not?', *The Journal of Clinical Psychiatry*,  
12 72(12), pp. 1636–1643. doi: 10.4088/JCP.10m06119yel.

13  
14 Hamann, J. *et al.* (2012) 'How do patients from eastern and western Germany compare with  
15 regard to their preferences for shared decision making?', *The European Journal of Public*  
16 *Health*, 22(4), pp. 469–473. doi: 10.1093/eurpub/ckr112.

17  
18 Hamann, J. *et al.* (2014) 'Effects of a question prompt sheet on active patient behaviour: A  
19 randomized controlled trial with depressed outpatients', *International Journal of Social*  
20 *Psychiatry*, 60(3), pp. 227–235. doi: 10.1177/0020764013482311.

21  
22 Hill, S. A. and Laugharne, R. (2006) 'Decision making and information seeking preferences  
23 among psychiatric patients', *Journal of Mental Health*, 15(1), pp. 75–84. doi:  
24 10.1080/09638230500512250.

25  
26 Honeycutt, C. *et al.* (2005) 'Physician use of a participatory decision-making style with children  
27 with ADHD and their parents', *Patient Education and Counseling*, 57(3), pp. 327–332. doi:  
28 10.1016/j.pec.2004.09.004.

29  
30 Jager, M. *et al.* (2014) 'Discrepancies between adolescents' attributed relevance and  
31 experiences regarding communication are associated with poorer client participation and  
32 learning processes in psychosocial care', *Patient Education and Counseling*, 97(3), pp. 332–338.  
33 doi: 10.1016/j.pec.2014.08.020.

34  
35 Kasper, J. *et al.* (2011) 'Patients' and Observers' Perceptions of Involvement Differ. Validation  
36 Study on Inter-Relating Measures for Shared Decision Making', *PLoS ONE*. Edited by M. Reindl,  
37 6(10), p. e26255. doi: 10.1371/journal.pone.0026255.

38  
39 Kasper, J. *et al.* (2012) 'Completing the third person's perspective on patients' involvement in  
40 medical decision-making: approaching the full picture', *Zeitschrift für Evidenz, Fortbildung und*  
41 *Qualität im Gesundheitswesen*, 106(4), pp. 275–283. doi: 10.1016/j.zefq.2012.04.005.

42  
43 Kenny, D. A. *et al.* (2010) 'Interpersonal perception in the context of doctor-patient  
44 relationships: A dyadic analysis of doctor-patient communication', *Social Science and Medicine*,  
45 70(5), pp. 763–768. doi: 10.1016/j.socscimed.2009.10.065.

46  
47 Klingaman, E. A. *et al.* (2015) 'Consumer satisfaction with psychiatric services: The role of  
48 shared decision making and the therapeutic relationship.', *Psychiatric Rehabilitation Journal*,  
49 38(3), pp. 242–248. doi: 10.1037/prj0000114.

50 ~~Van der Krieke, L. *et al.* (2013) 'A Web-Based Tool to Support Shared Decision Making for~~  
51 ~~People With a Psychotic Disorder: Randomized Controlled Trial and Process Evaluation',~~  
52 ~~*Journal of Medical Internet Research*, 15(10), p. e216. doi: 10.2196/jmir.2851.~~

Journal: Mental Health Review Journal

Kriston, L. *et al.* (2010) 'The 9-item Shared Decision Making Questionnaire (SDM-Q-9). Development and psychometric properties in a primary care sample', *Patient Education and Counseling*, 80(1), pp. 94–99. doi: 10.1016/j.pec.2009.09.034.

Kriston, L., Harter, M. and Scholl, I. (2012) 'A latent variable framework for modeling dyadic measures in research on shared decision-making', *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen*, 106(4), pp. 253–263. doi: 10.1016/j.zefq.2012.03.021.

Landis, S. E. *et al.* (2007) 'Generalist care managers for the treatment of depressed medicaid patients in North Carolina: A pilot study', *BMC Family Practice*, 8(1), p. 7. doi: 10.1186/1471-2296-8-7.

~~De las Cuevas, C. *et al.* (2011) 'Psychiatric patients' attitudes towards concordance and shared decision making', *Patient Education and Counseling*, 85(3), pp. e245–e250. doi: 10.1016/j.pec.2011.02.015.~~

~~De las Cuevas, C. *et al.* (2012) 'Mental health professionals' attitudes to partnership in medicine taking: a validation study of the Leeds Attitude to Concordance Scale II', *Pharmacoepidemiology and Drug Safety*, 21(2), pp. 123–129. doi: 10.1002/pds.2240.~~

~~De las Cuevas, C. *et al.* (2013) 'Shared decision making in psychiatric practice and the primary care setting is unique, as measured using a 9 item Shared Decision Making Questionnaire (SDM-Q-9)', *Neuropsychiatric Disease and Treatment*, 9, pp. 1045–1052. doi: 10.2147/NDT.S49021.~~

~~De las Cuevas, C., Peñate, W. and de Rivera, L. (2014) 'Psychiatric patients' preferences and experiences in clinical decision making: Examining concordance and correlates of patients' preferences', *Patient Education and Counseling*, 96(2), pp. 222–228. doi: 10.1016/j.pec.2014.05.009.~~

LeBlanc, A. *et al.* (2015) 'Shared Decision Making for Antidepressants in Primary Care', *JAMA Internal Medicine*, 175(11), p. 1761. doi: 10.1001/jamainternmed.2015.5214.

Lee King, P. A. *et al.* (2015) 'Role of patient treatment beliefs and provider characteristics in establishing patient-provider relationships', *Family Practice*, 32(2), pp. 224–231. doi: 10.1093/fampra/cmu085.

Liebherz, S. *et al.* (2015) 'Information and decision-making needs among people with affective disorders &ndash; results of an online survey', *Patient Preference and Adherence*, p. 627. doi: 10.2147/PPA.S78495.

Lipstein, E. A. *et al.* (2016) 'Shared Decision Making in the Care of Children with Developmental and Behavioral Disorders', *Maternal and Child Health Journal*, 20(3), pp. 665–673. doi: 10.1007/s10995-015-1866-z.

Loh, A. *et al.* (2006) 'The assessment of depressive patients' involvement in decision making in audio-taped primary care consultations', *Patient Education and Counseling*, 63(3), pp. 314–318. doi: 10.1016/j.pec.2006.04.006.

Journal: Mental Health Review Journal

Loh, A., Simon, D., et al. (2007) 'The effects of a shared decision-making intervention in primary care of depression: A cluster-randomized controlled trial', *Patient Education and Counseling*, 67(3 SPEC. ISS.), pp. 324–332. doi: 10.1016/j.pec.2007.03.023.

Loh, A., Leonhart, R., et al. (2007a) 'The impact of patient participation on adherence and clinical outcome in primary care of depression', *Patient Education and Counseling*, 65(1), pp. 69–78. doi: 10.1016/j.pec.2006.05.007.

Loh, A., Leonhart, R., et al. (2007b) 'The impact of patient participation on adherence and clinical outcome in primary care of depression', *Patient Education and Counseling*, 65(1), pp. 69–78. doi: 10.1016/j.pec.2006.05.007.

Lukens, J. M., Solomon, P. and Sorenson, S. B. (2013) 'Shared Decision Making for Clients With Mental Illness: A Randomized Factorial Survey', *Research on Social Work Practice*, 23(6), pp. 694–705. doi: 10.1177/1049731513489734.

Mahone, I. H. (2008) 'Shared Decision Making and Serious Mental Illness', *Archives of Psychiatric Nursing*, 22(6), pp. 334–343. doi: 10.1016/j.apnu.2007.11.002.

Matthias, M. S. et al. (2014) 'Consumer and Relationship Factors Associated With Shared Decision Making in Mental Health Consultations', *Psychiatric Services*, 65(12), pp. 1488–1491. doi: 10.1176/appi.ps.201300563.

McCabe, R. et al. (2013) 'Shared decision-making in ongoing outpatient psychiatric treatment', *Patient Education and Counseling*, 91(3), pp. 326–328. doi: 10.1016/j.pec.2012.12.020.

Melbourne, E. et al. (2011) 'Dyadic OPTION: Measuring perceptions of shared decision-making in practice', *Patient Education and Counseling*, 83(1), pp. 55–57. doi: 10.1016/j.pec.2010.04.019.

Metz, M. J. et al. (2015) 'Shared Decision Making in mental health care using Routine Outcome Monitoring as a source of information: a cluster randomised controlled trial', *BMC Psychiatry*, 15(1), p. 313. doi: 10.1186/s12888-015-0696-2.

Moncrieff, J. et al. (2016) 'Results of a pilot cluster randomised trial of the use of a Medication Review Tool for people taking antipsychotic medication', *BMC Psychiatry*, 16(1), p. 205. doi: 10.1186/s12888-016-0921-7.

Morant, N., Kaminskiy, E. and Ramon, S. (2015) 'Shared decision making for psychiatric medication management: beyond the micro-social', *Health Expectations*, 19(5), p. 1002. doi: 10.1111/hex.12392.

NICE (2016) *Shared decision making. NICE guidelines. National Institute for Health and Clinical Excellence*. Available at: <https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/shared-decision-making> (Accessed: 24 November 2016).

Noel, V. et al. (2016) 'Planning Treatment and Assessing Recovery in Participants With Dual Diagnosis: Preliminary Evaluation of a New Clinical Tool', *Journal of Dual Diagnosis*, 12(1), pp. 55–62. doi: 10.1080/15504263.2016.1146555.

Journal: Mental Health Review Journal

O'Brien, M. *et al.* (2013) 'Attitudes and Experience of Youth and Their Parents with Psychiatric Medication and Relationship to Self-Reported Adherence', *Community Mental Health Journal*, 49(5), pp. 567–575. doi: 10.1007/s10597-012-9526-x.

O'Neal, E. L. *et al.* (2008) 'Preferences of Older and Younger Adults With Serious Mental Illness for Involvement in Decision-Making in Medical and Psychiatric Settings', *The American Journal of Geriatric Psychiatry*, 16(10), pp. 826–833. doi: 10.1097/JGP.0b013e318181f992.

Park, S. G. *et al.* (2014) 'Factors Associated With Shared Decision-Making Preferences Among Veterans With Serious Mental Illness', *Psychiatric Services*, 65(12), pp. 1409–1413. doi: 10.1176/appi.ps.201400131.

Patel, S. R. and Bakken, S. (2010) 'Preferences for Participation in Decision Making Among Ethnically Diverse Patients with Anxiety and Depression', *Community Mental Health Journal*, 46(5), pp. 466–473. doi: 10.1007/s10597-010-9323-3.

Patel, S. R., Bakken, S. and Ruland, C. (2008) 'Recent advances in shared decision making for mental health.', *Current opinion in psychiatry*, 21(6), pp. 606–12. doi: 10.1097/YCO.0b013e32830eb6b4.

Paton, C. and Esop, R. (2005) 'Patients' perceptions of their involvement in decision making about antipsychotic drug choice as outlined in the NICE guidance on the use of atypical antipsychotics in schizophrenia', *Journal of Mental Health*, 14(3), pp. 305–310. doi: 10.1080/09638230500136498.

Perestelo-Perez, L. *et al.* (2011) 'Patient involvement and shared decision-making in mental health care', *Current Clinical Pharmacology*, 6(2), pp. 83–90. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=emed10&AN=2011338755>.

Perreault, M. *et al.* (2005) 'The role of relatives in discharge planning from psychiatric hospitals: The perspective of patients and their relatives', *Psychiatric Quarterly*, 76(4 SPEC. ISS.), pp. 297–315. doi: 10.1007/s11126-005-4964-z.

Puschner, B. *et al.* (2013) 'Development and psychometric properties of a five-language multiperspective instrument to assess clinical decision making style in the treatment of people with severe mental illness (CDMS)', *BMC Psychiatry*, 13(1), p. 48. doi: 10.1186/1471-244X-13-48.

Rise, M. B. and Steinsbekk, A. (2015) 'Does implementing a development plan for user participation in a mental hospital change patients' experience? A non-randomized controlled study', *Health Expectations*, 18(5), pp. 809–825. doi: 10.1111/hex.12105.

Roberts, L. W. and Kim, J. P. (2015) 'Attunement and alignment of people with schizophrenia and their preferred alternative decision-makers: An exploratory pilot study comparing treatment and research decisions.', *Journal of psychiatric research*, 71, pp. 70–7. doi: 10.1016/j.jpsychires.2015.09.014.

Rodenburg-Vandenbussche, S. *et al.* (2015a) 'Dutch Translation and Psychometric Testing of the 9-Item Shared Decision Making Questionnaire (SDM-Q-9) and Shared Decision Making

Journal: Mental Health Review Journal

Questionnaire-Physician Version (SDM-Q-Doc) in Primary and Secondary Care', *PLOS ONE*. Edited by L. Hakkaart, 10(7), p. e0132158. doi: 10.1371/journal.pone.0132158.

[Rodenburg-Vandenbussche, S. et al. \(2015b\) 'Dutch Translation and Psychometric Testing of the 9-Item Shared Decision Making Questionnaire \(SDM-Q-9\) and Shared Decision Making Questionnaire-Physician Version \(SDM-Q-Doc\) in Primary and Secondary Care', \*PLOS ONE\*. Edited by L. Hakkaart, 10\(7\), p. e0132158. doi: 10.1371/journal.pone.0132158.](#)

Rosenberg, D. et al. (2016) 'Shared decision making in Swedish community mental health services – an evaluation of three self-reporting instruments', *Journal of Mental Health*, pp. 1–8. doi: 10.1080/09638237.2016.1207223.

Salyers, M. P. et al. (2012) 'A coding system to measure elements of shared decision making during psychiatric visits.', *Psychiatric Services*, 63(8), pp. 779–784. doi: 10.1176/appi.ps.201100496.

Scholl, I. et al. (2011) 'Measurement of shared decision making - a review of instruments.', *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen*, 105(4), pp. 313–324. doi: 10.1016/j.zefq.2011.04.012.

Scholl, I., Kriston, L., Dirmaier, J. and Harter, M. (2012) 'Comparing the nine-item Shared Decision-Making Questionnaire to the OPTION Scale - an attempt to establish convergent validity', *Health Expectations*, 18(1), pp. 137–150. doi: 10.1111/hex.12022.

Scholl, I., Kriston, L., Dirmaier, J., Buchholz, A., et al. (2012) 'Development and psychometric properties of the Shared Decision Making Questionnaire – physician version (SDM-Q-Doc)', *Patient Education and Counseling*, 88(2), pp. 284–290. doi: 10.1016/j.pec.2012.03.005.

Sepucha, K. and Mulley, A. G. (2009) 'A Perspective on the Patient's Role in Treatment Decisions', *Medical Care Research and Review*, 66(1 suppl), p. 53S–74S. doi: 10.1177/1077558708325511.

Simon, D. et al. (2010) 'Confirmatory factor analysis and recommendations for improvement of the Autonomy-Preference-Index (API)', *Health Expectations*, 13, pp. 234–243. doi: 10.1111/j.1369-7625.2009.00584.x.

Simon, D. et al. (2012) 'Effectiveness of a web-based, individually tailored decision aid for depression or acute low back pain: A randomized controlled trial', *Patient Education and Counseling*, 87(3), pp. 360–368. doi: 10.1016/j.pec.2011.10.009.

Slade, M. et al. (2014) 'The development and evaluation of a five-language multi-perspective standardised measure: clinical decision-making involvement and satisfaction (CDIS)', *BMC Health Services Research*, 14(1), p. 323. doi: 10.1186/1472-6963-14-323.

Solberg, L. I. et al. (2014) 'How Much Shared Decision Making Occurs in Usual Primary Care of Depression?', *The Journal of the American Board of Family Medicine*, 27(2), pp. 199–208. doi: 10.3122/jabfm.2014.02.130164.

Stacey, D. et al. (2014) 'Decision aids for people facing health treatment or screening decisions.', *The Cochrane database of systematic reviews*, (1), p. CD001431. doi: 10.1002/14651858.CD001431.pub4.



Journal: Mental Health Review Journal

Storm, M. and Edwards, A. (2013) 'Models of User Involvement in the Mental Health Context: Intentions and Implementation Challenges', *Psychiatric Quarterly*, 84(3), pp. 313–327. doi: [10.1007/s11126-012-9247-x](https://doi.org/10.1007/s11126-012-9247-x).

Storm, M. and Edwards, A. (2013) 'Models of User Involvement in the Mental Health Context: Intentions and Implementation Challenges', *Psychiatric Quarterly*, 84(3), pp. 313–327. doi: [10.1007/s11126-012-9247-x](https://doi.org/10.1007/s11126-012-9247-x).

Stovell, D. et al. (2016) 'Shared treatment decision-making and empowerment-related outcomes in psychosis: systematic review and meta-analysis.', *The British journal of psychiatry : the journal of mental science*, 209(1), pp. 23–28. doi: [10.1192/bjp.bp.114.158931](https://doi.org/10.1192/bjp.bp.114.158931).

Swanson, K. A. et al. (2007) 'Effect of Mental Health Care and Shared Decision Making on Patient Satisfaction in a Community Sample of Patients with Depression', *Medical Care Research and Review*, 64(4), pp. 416–430. doi: [10.1177/1077558707299479](https://doi.org/10.1177/1077558707299479).

Tambuyzer, E. and Van Audenhove, C. (2013) 'Is perceived patient involvement in mental health care associated with satisfaction and empowerment?', *Health Expectations*, 18(4), pp. 516–526. doi: [10.1111/hex.12052](https://doi.org/10.1111/hex.12052).

Trujols, J. et al. (2012) 'Patient satisfaction with methadone maintenance treatment: The relevance of participation in treatment and social functioning', *Drug and Alcohol Dependence*, 123(1-3), pp. 41–47. doi: [10.1016/j.drugalcdep.2011.10.014](https://doi.org/10.1016/j.drugalcdep.2011.10.014).

~~Vohra, R. et al. (2014) 'Access to services, quality of care, and family impact for children with autism, other developmental disabilities, and other mental health conditions', *Autism*, 18(7), pp. 815–826. doi: [10.1177/1362261313512902](https://doi.org/10.1177/1362261313512902).~~ Van der Krieke, L. et al. (2013) 'A Web-Based Tool to Support Shared Decision Making for People With a Psychotic Disorder: Randomized Controlled Trial and Process Evaluation', *Journal of Medical Internet Research*, 15(10), p. e216. doi: [10.2196/jmir.2851](https://doi.org/10.2196/jmir.2851).

Van Der Weijden, T. et al. (2012) 'Clinical practice guidelines and patient decision aids. An inevitable relationship', *Journal of Clinical Epidemiology*, 65(6), pp. 584–589. doi: [10.1016/j.jclinepi.2011.10.007](https://doi.org/10.1016/j.jclinepi.2011.10.007).

Van der Weijden, T. et al. (2013) 'How can clinical practice guidelines be adapted to facilitate shared decision making? A qualitative key-informant study', *BMJ Quality & Safety*, 22(10), pp. 855–863. doi: [10.1136/bmjqs-2012-001502](https://doi.org/10.1136/bmjqs-2012-001502).

~~Vohra, R. et al. (2014) 'Access to services, quality of care, and family impact for children with autism, other developmental disabilities, and other mental health conditions', *Autism*, 18(7), pp. 815–826. doi: [10.1177/1362261313512902](https://doi.org/10.1177/1362261313512902).~~

Wills, C. E. and Holmes-Rovner, M. (2003) 'Preliminary validation of the Satisfaction With Decision scale with depressed primary care patients.', *Health expectations : an international journal of public participation in health care and health policy*, 6(2), pp. 149–159.

Formatted: Font: Spanish (International Sort)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Journal: Mental Health Review Journal

Woolley, S. B. *et al.* (2010) 'Hospital Patients' Perceptions During Treatment and Early Discontinuation of Serotonin Selective Reuptake Inhibitor Antidepressants', *Journal of Clinical Psychopharmacology*, 30(6), pp. 716–719. doi: 10.1097/JCP.0b013e3181fc343b.

Wright-Berryman, J. L. and Kim, H.-W. (2016) 'Physical Health Decision-Making Autonomy Preferences for Adults with Severe Mental Illness in Integrated Care', *Journal of Social Service Research*, 42(3), pp. 281–294. doi: 10.1080/01488376.2015.1093580.

Zikmund-Fisher, B. J. *et al.* (2010) 'Deficits and Variations in Patients' Experience with Making 9 Common Medical Decisions: The DECISIONS Survey', *Medical Decision Making*, 30(5 Suppl), p. 85S–95S. doi: 10.1177/0272989X10380466.

Zisman-Ilani, Y. *et al.* (2017) 'Shared Decision Making During Active Psychiatric Hospitalization: Assessment and Psychometric Properties', *Health Communication*, 32(1), pp. 126–130. doi: 10.1080/10410236.2015.1099504.

Journal: Mental Health Review Journal

Figure 1. Study selection process (PRISMA)

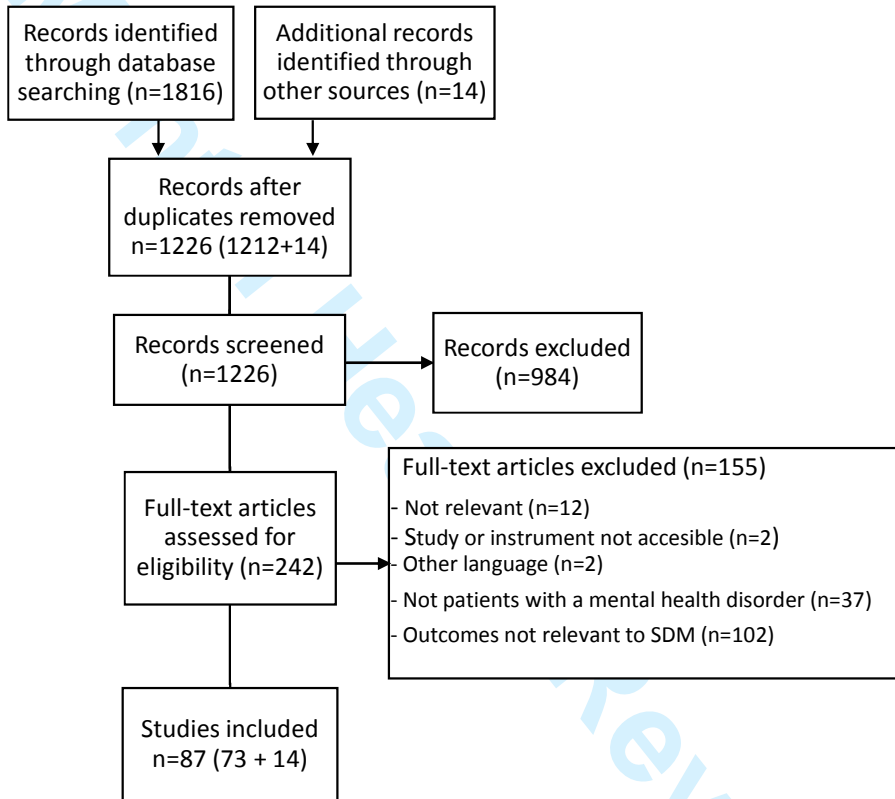


Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
<b>DECISION ANTECEDENTS</b>					
Autonomy Preference Index (API)	Preferred role (information preferences; decision-making autonomy preferences)	23	Likert scale (1-5)	Patient	Mixed sample (Hill and Laugharne, 2006; Adams, Drake and Wolford, 2007; Lukens, Solomon and Sorenson, 2013; van der Krieke et al., 2013; Bonfils et al., 2014, 2015; Wright-Berryman and Kim, 2016)  Depression (Hamann et al., 2007, 2014; O'Neal et al., 2008; Simon et al., 2010)  Schizophrenia (Hamann et al., 2006, 2007, 2010, 2012; Hamann, Mendel, et al., 2011)  Alzheimer (Hamann, Bronner, et al., 2011)
Clinical Decision Making Style (CDMS)	Preferences for participation (Participation in DM; Information)	21	Likert scale (0-4)	Patient Professional	Mixed sample (Puschner et al., 2013; Clarke et al., 2015)
Consumer Quality Index (CQI) <sup>1*</sup>	Preferences and experience in involvement (Affective communication; Information provision; Shared decision making)	20	Likert scale (1-4)	Patient	Adolescents receiving psychosocial or mental health care (Jager et al., 2014)

Formatted: Spanish (International Sort)

Formatted: Font: (Default) +Body (Calibri), Spanish (International Sort)

Formatted: Superscript

Journal: Mental Health Review Journal

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
Control Preferences scale (CPS) <sup>2</sup>	Preferred and perceived role	1	5 statements	Patient Parents	Mixed sample (Adams, Drake and Wolford, 2007; Mahone, 2008; Patel and Bakken, 2010; De las Cuevas, Peñate and de Rivera, 2014)  Depression (O'Neal et al., 2008; Fumero et al., 2016)  Bipolar (Liebherz et al., 2015)  Children/adolescents with ADHD (Ahmed et al., 2016)
Decision Emotional Control Scale (DECS)	Decision emotional control	5	Likert scale (1-3)	Patient	Schizophrenia (Bunn et al., 1997)
Decision Self Efficacy Scale (DSES)	Decisional Self-efficacy	11	Likert scale (1-3)	Patient	Mixed sample (Moncrieff et al., 2016)  Schizophrenia (Bunn et al., 1997)  Children/adolescents with "serious emotional disturbance" (O'Brien et al., 2013)  Depression (O'Neal et al., 2008)
Decisional Balance for Patient Choice in Substance Abuse Treatment	Preferences for participation	26	Likert scale (1-5)	Patient	Substance Abuse (Finnell and Lee, 2011)

Formatted: Font: (Default) +Body (Calibri), Superscript

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
Family Involvement in Treatment scale (FIT)	Desire for family involvement in treatment	21	Likert scale (0-4)	Patient	Mixed sample (Cohen et al., 2013)
Leeds Attitude to Concordance scale (LATCon)	Attitude towards concordance	12	Likert scale (0-3)	Patient	Mixed sample (De las Cuevas et al., 2011)
Leeds Attitude to Concordance scale II (LATCon II)	Attitude towards concordance	20	Likert scale (0-4)	Professional	Mixed sample (De las Cuevas et al., 2012; Ali et al., 2015)
Preferences and Satisfaction Questionnaire <sup>2</sup>	Preference and experiences about family involvement	35	4-point Likert scale	Patient	Mixed sample (Perreault et al., 2005)
Perceived Efficacy in Patient-Physician Interactions questionnaire (PEPPI)	Interaction self-efficacy	10	Likert scale (1-5)	Patient	Mixed sample (Alegria et al., 2014)
Preparation for Decision Making Scale	Preparation for decision-making	10	Likert scale (1-5)	Patient	Depression (Simon et al., 2012)

Formatted: Spanish (International Sort)

Formatted: Font: (Default) +Body (Calibri), Spanish (International Sort)

Formatted: Font: (Default) +Body (Calibri), Superscript

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49

Journal: Mental Health Review Journal

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
Problem Solving Decision Making Scale (PSDM)	Preference for participation	15 <sup>2</sup>	Likert scale (0-3)	Patient	Anxiety or depression (Patel and Bakken, 2010) Schizophrenia (Hamann, Mendel, et al., 2011)
<b>DECISION-MAKING PROCESS</b>					
CollaboRATE	SDM process	3	Likert scale (0-4)	Patient	Depression (Barr, Forcino, et al. 2016; Noel et al. 2016) Mixed sample (Rosenberg et al., 2016)
Clinical Decision Making Involvement and Satisfaction (CDIS)	SDM process (Involvement; Satisfaction with the decision)	15	Likert scale (1-5)	Patient Professional	Mixed sample (Puschner et al., 2013; Slade et al., 2014; Clarke et al., 2015)
Consumer Assessment of Healthcare Providers and Systems (CAHPS) <sup>1*</sup>	SDM process	4	Likert scale (1-7)	Parents	Children with autism (Golnik, Maccabee-Ryaboy, et al., 2012; Golnik, Scal, et al., 2012)
Dyadic OPTION	SDM process	12	Likert scale (1-4)	Patient Professional	Mixed sample (Rosenberg et al., 2016)
Experience of Service Questionnaire (ESQ) <sup>1*</sup>	SDM process	4	Likert scale (1-3)	Patient	Mixed sample (Edbrooke-Childs et al., 2016)

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
Goldring Patient–Provider Scale of shared decision making (GPPS)	SDM process	12	-	Patient	Depression (Lee King et al., 2015)
Health Care Climate Questionnaire (HCCQ)	SDM process	6	Likert scale (1-5)	Patient	Mixed sample (Wright-Berryman and Kim, 2016)
Informed Decision Making Scale (IDMS)	SDM process	9	Likert scale (0-2)	Observer	Mixed sample (Braddock et al., 2002; Matthias et al., 2014)
Involvement Indicators Scale	SDM process	7	5-point Likert scale	Patient	Mixed sample (Tambuyzer and Van Audenhove, 2013)
Measure of Patient-Centered Communication (MPCC)	SDM process (Exploring Both the Disease and the Illness Experience; Understanding the Whole Person; Finding Common Ground)	-	-	Observer	Mixed sample (Campbell et al., 2014)
National Survey of Children with Special Health Care Needs (NS-CSHCN) <sup>1,2</sup>	SDM process	4	Likert scale (1-4)	Parents	Mixed sample of children (Butler, Weller and Titus, 2015) Children with ADHD (Butler et al., 2015; Lipstein et al., 2016)
Observing patient involvement in decision making' (OPTION)	SDM process	12	Likert scale (0-4)	Observer	Mixed sample (Goossensen, Zijlstra and Koopmanschap, 2007; Goss et al., 2008; McCabe et al., 2013) Depression (Loh et al., 2006; Scholl, Kriston,



Journal: Mental Health Review Journal

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
					Dirmaier and Harter, 2012; Aljumah and Hassali, 2015; LeBlanc et al., 2015) Children with ADHD (Brinkman et al., 2013)
Patient Assessment of Chronic Illness Care (PACIC)* <sup>1</sup>	SDM process	6	Yes/No	Patient	Antidepressant users (Solberg et al., 2014)
<a href="#">Patient Participation Scale from Man-Son-Hing (MSH-scale)</a>	SDM process	6	Likert scale (1-5)	Patients	Depression (Loh, Leonhart, et al., 2007; Loh, Simon, et al., 2007)
Patient Perception of Patient-Centeredness questionnaire (PPPC)	SDM process	14	Variable response options	Patient	Mixed sample (Bonfils et al., 2014; Campbell et al., 2014)
Perceived involvement in care scale (PICS)	SDM process	13	Likert scale (1-5)	Patient	Depression (Loh, Simon, et al., 2007; Simon et al., 2012)
Perceptions of Care (PoC)	SDM process	16	Likert scale (1-4) Yes/no	Patient	Mixed sample (Rise and Steinsbekk, 2015)

Formatted: Font: (Default) +Body (Calibri), Superscript

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
Physician Participatory Decision-Making (PDM) Style scale	SDM process	3	Likert scale (1-5)	Patient Professional	Depression (Wills and Holmes-Rovner, 2003; Swanson et al., 2007). Children with ADHD (Honeycutt et al., 2005).
Shared Decision Making Questionnaire 9-item (SDM-Q-9)	SDM process	9	Likert scale (0-5)	Patient	Mixed sample of inpatients (Zisman-Ilani et al. 2017 <sup>6</sup> ) and outpatients (De las Cuevas et al. 2013; Rodenburg-Vandenbussche et al. 2015; Alvarez et al., 2016) with severe mental illnesses such as schizophrenia and depression Depression (Kriston et al., 2010; Kriston, Harter and Scholl, 2012; Scholl, Kriston, Dirmaier and Harter, 2012)
Shared Decision Making Questionnaire - Physician Version (SDM-Q-Doc)	SDM process	9	Likert scale (0-5)	Professional	Mixed sample (Rodenburg-Vandenbussche et al., 2015 <sup>b</sup> ). Depression (Kriston, Harter and Scholl, 2012; Scholl, Kriston, Dirmaier, Buchholz, et al., 2012)
Service Satisfaction Questionnaire (SSQ)	SDM process	8-10	4-point Likert scale	Patient Parents	Children/adolescents referred to mental health services (Callaghan et al., 2004)
Survey of Health Care Experiences of Patients – inpatient version (I-SHEP)	Perceived involvement (Hospital-nurses; Care information; Doctors)	37	-	Patient	Mixed sample (Bowersox et al., 2013)

Formatted: English (U.S.)

Formatted: Font: (Default) +Body (Calibri), English (U.S.)

Formatted: English (U.S.)

Formatted: Font: (Default) +Body (Calibri), English (U.S.)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49

Journal: Mental Health Review Journal

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
-	SDM process	7	Likert scale(1-5)	Patients Parents	Children/adolescents with "serious emotional disturbance" (O'Brien et al., 2013)
<b>DECISION OUTCOMES</b>					
	Knowledge	7-18	Multiple choice True/False	Patient Surrogate	Schizophrenia (Hamann et al., 2006) Depression (Wills and Holmes-Rovner, 2003; Simon et al., 2012; LeBlanc et al., 2015) Dementia (Einterz et al., 2014) Children with ADHD (Brinkman et al., 2013)
Combined Outcome Measure for Risk Communication and Treatment Decision-Making Effectiveness (COMRADE)	Perceived effectiveness of the DM process (Satisfaction with communication; Confidence in decision)	20	5-points Likert scale	Patient	Mixed sample (van der Krieke et al., 2013) Schizophrenia (Hamann et al., 2006)
Satisfaction with Information about Medicines Scale (SIMS)	Satisfaction with information	17	5 categories (dichotomized)	Patient	Bipolar (Bowskill et al., 2007)
Satisfaction With Decision scale (SWDS)	Satisfaction With Decision	6	Likert scale (1-5)	Patient	Depression (Wills and Holmes-Rovner, 2003)
SURE	Decisional conflict	4	Yes/No	Patient	Mixed sample (Rosenberg et al., 2016)
Decisional Conflict Scale (DCS)	Decisional conflict	16	Likert scale (0-4)	Patient	Depression (Wills and Holmes-Rovner, 2003; Simon et al., 2012; LeBlanc et al., 2015)

Formatted: Centered, Space After: 0 pt,  
Line spacing: single, Adjust space  
between Asian text and numbers, Font  
Alignment: Auto

Journal: Mental Health Review Journal

Table 1. Summary of measures of SDM for mental Health

Measure name	Construct (and subscales) assessed	Items	Response scale	Perspective	Mental health condition
					Children with ADHD (Brinkman et al., 2013) Schizophrenia (Bunn et al., 1997)
Decision Regret Scale (DRS)	Satisfaction With Decision	5	Likert scale (1-5)	Patient	Depression (Simon et al., 2012)

<sup>1\*</sup> For these instruments, that assess broader aspects of care than SDM, items about patient involvement/SDM were selected and treated as a psychometric scale (internal consistency reported).

<sup>2</sup> [These instruments also assess perceived involvement.](#)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49

Journal: Mental Health Review Journal

Table 2. Other studies assessing SDM in mental health

Study (Author and year)	Mental health condition	Constructs assessed (number of items)	Perspective
(Arora and McHorney, 2000)	Depression	Preference for participation (1)	Patient
(Ali et al., 2015)	Mixed sample	Perceived involvement (2)	Professional
(Burnett-Zeigler et al., 2011)	Mixed sample	Perceived involvement (1)	Patient
(Clever et al., 2006)	Depression	Perceived involvement (1)	Patient
(De las Cuevas et al., 2011)	Mixed sample	Preference for participation (3), Perceived involvement (1), Feeling informed (2)	Patient
(Dijkstra, Jaspers and van Zwieten, 2008)	Antidepressant users	Treatment intention (1 item with 9 options)	Patient
(Hamann, Mendel, et al., 2011)	Schizophrenia	Preference for participation (Card sorting), Decisional self-efficacy (1)	Patient
(Hamann et al., 2014)	Depression	Perceived involvement (1)	Patient
(Klingaman et al., 2015)	Mixed sample	Preference for participation (3)	Patient
(Landis et al., 2007)	Depression	Perceived involvement (6)	Patient
(Park et al., 2014)	Mixed sample	Preference for participation (3)	Patient
(Paton and Esop, 2005)	Schizophrenia	Perceived involvement (5)	Patient

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49

Table 2. Other studies assessing SDM in mental health

Study (Author and year)	Mental health condition	Constructs assessed (number of items)	Perspective
(Trujols et al., 2012)	Addiction	Perceived involvement (2)	Patient
(Vohra et al., 2014)	Autism	Perceived involvement (1)	Patient
(Woolley et al., 2010)	Depression	Perceived involvement (1)	Patient
(Zikmund-Fisher et al., 2010)	Depression	Perceived involvement (9)	Patient







Santa Cruz de Tenerife, June 7, 2017

Dear Editor,

Please find enclosed our re-revised manuscript entitled "*Measurement issues of shared decision making in mental health: Challenges and Opportunities*" (Manuscript ID MHRJ-01-2017-0004) by Lilisbeth Perestelo-Perez, Amado Rivero-Santana, Yolanda Alvarez-Perez, Yaara Zisman-Ilani, Emma Kaminskiy, Pedro Serrano-Aguilar, for its consideration as a review article in Mental Health Review Journal.

We would like to thank the reviewers and you for your careful revision and thoughtful comments on our paper. All the comments have been carefully taken into consideration for the preparation of our revised. We appreciate the constructive feedback that without doubt has improved our original.

Yours sincerely,

**Lilisbeth Perestelo-Perez, MPsych, Ph.D.**

Servicio de Evaluación y Planificación  
Dirección del Servicio Canario de la Salud  
Camino Candelaria, 44. C.S. El Chorrillo  
38109. El Rosario. S/C Tenerife. Spain.  
lperperr@gobiernodecanarias.org  
lilisbethp@gmail.com  
Tel. +34 922 684019 (Ext 241)

We sincerely thank the reviewers for constructive criticisms and valuable comments, which were of great help in revising the manuscript. Accordingly, the revised manuscript has been improved with new information and additional interpretations.

Our responses to the reviewers' comments are given below:

#### **Reviewer report**

**Based on the comments from the first pair of reviewers I believe the manuscript has significantly improved. I also think that the article provides a welcoming overview of available SDM measurement scales that will be useful in future research and hopefully also to clinical work.**

**I do have some comments that I believe will benefit the manuscript before being published.**

#### **Introduction**

**In the introduction, I suggest that the authors develops the connection between SDM in mental health and recovery (in the last paragraph on page 3 and in the first paragraph on page 4). Recovery seems particular relevant as SDM in areas such as medication may influence the individual's recovery process, and community integration. An article by Storm & Edwards 2013 may provide some useful input on the connection between SDM, patient centered care and recovery in mental health.**

Following the reviewer's suggestion, we have included a paragraph in the introduction (p. 3) commenting the concept of recovery and its relation with SDM.

#### **Methods**

**The paragraph with the heading "Types of measurements with SDM" will fit better in the introduction just before the purpose of the study on page 4.**

We agree with the reviewer's suggestion and have moved that paragraph to the introduction, before the study aim.

**Page 5: Please provide more details about the study selection form under the heading "Review of key measurement instruments in SDM in mental health".**

More details about the study selection form are provided in page 6.

**Page 6: who reviewed/ read the 242 articles?**

Review of the full texts was made by Amado Rivero-Santana (AR) and Lilisbeth Perestelo-Perez (LP) (p. 6). For most excluded studies it was only necessary to check data about whether instruments applied fitted our inclusion criteria or the population included a differentiated mental health subsample, because abstracts were not completely explicit about those aspects.

**Page 7: I miss information in the text about the flow chart presented in table 1.**

We now have commented in the text the two more common causes of exclusion of studies.

#### **Discussion**

**Page 13: What are potential challenges with triangulating patient, family and provider perspectives?**

1  
2  
3 Assessing all the perspectives involved could help to detect disagreements or potential  
4 conflicts that could act as barriers for an optimal care. Specifically, knowledge about the role of  
5 mental health patients' relatives in treatment decisions is very scarce, as this review shows. On  
6 the other hand, previous research has shown that patients, professionals and external  
7 observers' perceptions of patient's involvement are poorly correlated. Research should  
8 explore what causes those different perceptions of the same behavior interaction, and how  
9 those discrepancies influence patients' empowerment and recovery.

10  
11 **As in the introduction, I would recommend developing the link between SDM and benefit of**  
12 **SDM for patients in terms of recovery and being able to live a meaningful life in the**  
13 **community. I believe this link will build a stronger argument for measuring SDM as part of**  
14 **day-to-day routine clinical practice.**

15  
16  
17 We now have included in the discussion a mention to the recovery model.

18  
19  
20  
21  
22 **Additional Questions:**

23  
24 1. Originality: Does the paper contain new and significant information adequate to justify  
25 publication?: **I think that the article provides a welcoming overview of available SDM**  
26 **measurement scales that will be useful in future research and hopefully also to clinical work.**

27  
28 **I do have some comments that I believe will benefit the manuscript before being published.**

29  
30 2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the  
31 relevant literature in the field and cite an appropriate range of literature sources? Is any  
32 significant work ignored?: **In the introduction, I suggest that the authors develops the**  
33 **connection between SDM in mental health and recovery (in the last paragraph on page 3 and**  
34 **in the first paragraph on page 4). Recovery seems particular relevant as SDM in areas such as**  
35 **medication may influence the individual's recovery process, and community integration. An**  
36 **article by Storm & Edwards 2013 may provide some useful input on the connection between**  
37 **SDM, patient centered care and recovery in mental health.**

38  
39  
40 **Authors' answer:** Following the reviewer's suggestion, we have included a paragraph in the  
41 introduction (p. 3) commenting the concept of recovery and its relation with SDM.

42  
43 3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or  
44 other ideas? Has the research or equivalent intellectual work on which the paper is based  
45 been well designed? Are the methods employed appropriate?: **the paper's argument is built**  
46 **on appropriate theory and concepts.**

47  
48 4. Results: Are results presented clearly and analysed appropriately? Do the conclusions  
49 adequately tie together the other elements of the paper?: **results are clearly presented**

50  
51 5. Practicality and/or Research implications: Does the paper identify clearly any implications  
52 for practice and/or further research? Are these implications consistent with the findings and  
53 conclusions of the paper?: **Page 13: What are potential challenges with triangulating patient,**  
54 **family and provider perspectives?**

55  
56  
57 **Authors' answer:** Assessing all the perspectives involved could help to detect disagreements  
58 or potential conflicts that could act as barriers for an optimal care. Specifically, knowledge

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

about the role of mental health patients' relatives in treatment decisions is very scarce, as this review shows. On the other hand, previous research has shown that patients, professionals and external observers' perceptions of patient's involvement are poorly correlated. Research should explore what causes those different perceptions of the same behavior interaction, and how those discrepancies influence patients' empowerment and recovery.

**As in the introduction, I would recommend developing the link between SDM and benefit of SDM for patients in terms of recovery and being able to live a meaningful life in the community. I believe this link will build a stronger argument for measuring SDM as part of day-to-day routine clinical practice.**

**Authors' answer:** We now have included in the discussion a mention to the recovery model.

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: **The quality of language is ok**

--

