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Chapter 3

Decisional Conflict in mental health care: a cross-sectional study

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Abstract

Purpose

Decisional conflict refers to the degree to which patients are engaged in and feel comfortable about important clinical decisions. Until now, the concept has received little attention in mental health care. We investigate the level of decisional conflict in mental health care and whether this is influenced by socio-demographics, treatment setting, diagnoses and locus of control.

Methods

Cross-sectional study among 186 patients in Dutch specialist mental health care using the Decisional Conflict Scale, which measures five dimensions of decisional conflict: information, support, clarification of values, certainty, decisional quality. Descriptive statistics and forward stepwise linear regression analyses were used.

Results

Patients report relatively high levels of decisional conflict, especially those with more external locus of control. Having a personality disorder and higher education also increases decisional conflict on the dimensions support and clarification of values, respectively. Less decisional conflict was experienced by patients with psychotic disorders on the dimension certainty and by women on the information domain.

Conclusions

Decisional conflict is common among patients in specialist mental health care and is very useful for assessing the quality of clinical decision making. Measuring decisional conflict and knowledge about influencing factors can be used to improve patients' participation in clinical decision making, adherence to treatment and clinical outcomes.

Introduction

Decisional conflict (DC) refers to the degree to which patients are engaged in and feel comfortable about important clinical decisions that are made in health care.¹⁻⁴ Clinical decision making is regularly associated with feelings of uncertainty, because choices between competing actions have to be made, involving risk, loss, regret or challenge to personal life values.^{1,5} DC is a transactional construct which means that the degree of experienced DC is related to the characteristics of and the collaboration between the members of the patient-clinician dyad.^{2,4} DC can be positively influenced by the application of Shared Decision Making (SDM).^{3,6-10,11} SDM is the collaborative approach in which patients and clinicians share available information from both perspectives and where patients are supported in participating actively in decision making about treatment.¹² In mental health care, attention for the implementation of SDM is increasing.¹³⁻¹⁷ As research in primary and general health care has already shown, DC is an appropriate concept to assess the quality of the decision making process and the impact of interventions aiming to improve SDM.^{3,6,18,19} However, in mental health care, the use of DC to evaluate clinical decision making is relatively new.

As shown in figure 1, DC is a multidimensional concept. DC consists of conditions that influence the decision making process such as feeling informed about options, benefits and risks, having clarity about personal values and feeling supported and not pressured in making a choice. These conditions can decrease the level of perceived uncertainty by patients about treatment options and as a result increase the experienced quality of the decision making.^{2,9,20}

Preventing a high level of DC is very important in clinical practice, as patients with less DC experience a better decision making process resulting in a satisfactory decision.^{6,19} A low level of DC has positive effects on patients' adherence to treatment, well-being and treatment outcome, whereas unresolved DC has a negative impact on decisional delay, nervousness and regret, and can lead to departure from active treatment, poorer clinical outcomes, and is associated with a higher intention to sue clinicians in cases of harm from treatment.^{3,19-24}

It is of clinical importance to identify whether patients experience DC, since in primary and general health care, several studies⁶⁻¹⁰ and in mental health care a single study¹¹, demonstrated that the application of SDM in clinical practice reduces DC. If clinicians know which patients experience a high level of DC, they will be more alert to facilitate SDM⁶⁻¹⁰ and pay more attention to the patient-clinician relationship, which has a central role in the process of sharing decisions.^{2,4,25,26}

The aim of the present study is to investigate to which degree patients in specialist mental health care currently experience DC when making decisions about treatment. In addition, we explore which socio-demographic and clinical characteristics are associated with patients' perception of DC (Figure 1). Since, to our knowledge, no cross-sectional explorative study has been conducted in mental health care aiming to investigate the level of DC and its influencing factors, our hypotheses were based on evidence about the level of DC in other health care sectors and clinical expectations about DC in mental health care.

We first hypothesized that more personal control in daily life is associated with less decisional conflict.²⁷ Our second hypothesis was that people with personality disorders experience less personal control in daily life and therefore report more DC. Third, we hypothesized that people who are younger^{6,9,20,28}, are female^{18,20}, and have a higher level of education^{9,28,29,30}, prefer to participate actively in decision making about their health care and experience less DC.

Methods

Participants and procedure

This is a cross-sectional study exploring the level of DC and whether this is associated with socio-demographic and clinical characteristics. The study is performed on the baseline data of a cluster randomised controlled trial aiming to investigate the effectiveness of shared decision making using outcome measurements as a source of information.³¹ To capture the variety of patients in different treatment settings in specialist mental health care, the study sample consisted of a heterogeneous group (regarding gender, age, education level, treatment setting and diagnoses) of 186 patients treated in seven participating

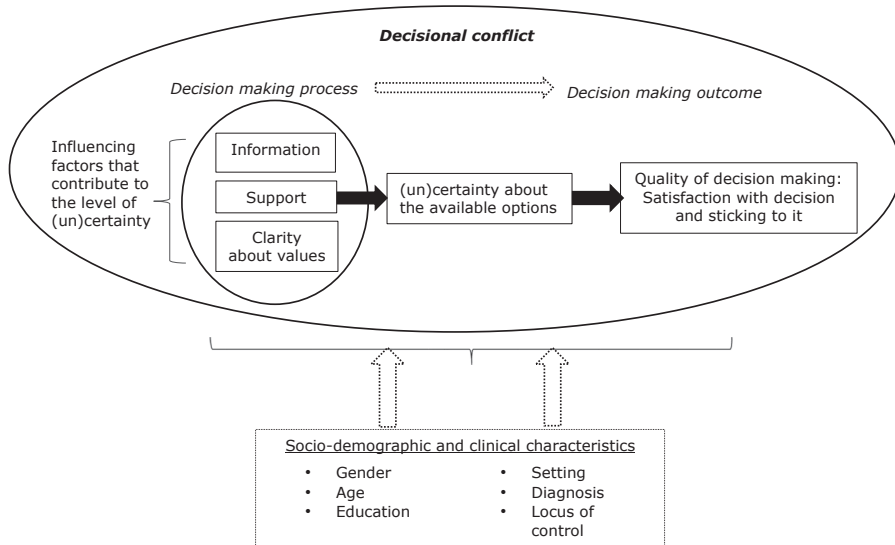


Figure 1. The construct Decisional Conflict (dependent variable) with the socio-demographic and clinical characteristics as independent variables.

departments across the Netherlands. There were no significant differences between intervention and control group enrolled in the trial on independent and dependent variables. We therefore merged the participants into one study sample for the present study.

At the start of treatment or, when in long term treatment, at the evaluation date, all patients were consecutively asked by their clinician to participate in the study. Patients were excluded if they did not speak and read Dutch. Patients enrolled after receiving face to face and written information about the study and signing an informed consent form. Patients were free to participate and could refuse participation at any time during the research period without any consequences for their treatment. The Medical Ethics Committee of the VU University Medical Centre reviewed the study and declared that the Medical Research Involving Human Subjects Act (WMO) did not apply to this study (reference number: 2015.237). Therefore, an official approval of this ethics committee was not required.

Data collection

Participating patients were invited by email or post to complete self-report questionnaires about education level, locus of control and decisional conflict.

This measurement was conducted just after the intake consultation, or treatment evaluation session, when decision making about treatment took place. The other variables were registered on the informed consent form (gender, age) and extracted from the electronic patient records (treatment setting, diagnosis). Data collection was coordinated by independent research assistants. Financial support for this study was provided by the National Network for Quality Development in mental health care (grant number PV140003).

Measures

Decisional conflict

Decisional conflict was measured in patients using the revised version of the 16 items Decisional Conflict Scale (DCS)³ translated into Dutch.³¹

Besides a total score, the updated version of the DCS includes five dimensions:

- Feeling informed about treatment options (information, 3 items);
- feeling supported and not pressured by others in choosing between options (support, 3 items);
- having clarity about one's own values, which are important in decision making (clarification of values, 3 items);
- experiencing certainty in choosing the best suitable options (certainty, 3 items);
- feeling comfortable, satisfied and committed regarding the decision being made (decision quality, 4 items).

The internal consistency of the total score and five dimensions of the Dutch version of the DCS calculated in this study population is good, with Cronbach's alphas of the total scale $\alpha = .94$ and the five dimensions information $\alpha = .88$, support $\alpha = .66$, clarification of values $\alpha = .88$, certainty $\alpha = .84$, decisional quality $\alpha = .85$.

Items are given a score value of: 0 = 'strongly agree', 1 = 'agree', 2 = 'neither agree nor disagree', 3 = 'disagree', 4 = 'strongly disagree'. To calculate the total scale and scores of the five dimensions the item scores are summed, divided by the number of items and multiplied by 25. The scores thus range from 0 (no decisional conflict) to 100 (extremely high decisional conflict). According to the meaningful thresholds described in the manual³, the results on the DCS could

be divided into three groups: scores under 25 (no to little DC), from 25 up to and including 37.5 (some degree of DC) and scores higher than 37.5 (clinically significant or high degree of DC)³. These thresholds were used in studies in primary²⁰ and general health care.¹⁹ Psychometric testing of the English version of the DCS in general health care demonstrated good test-retest reliability of the overall score (0.81) and adequate Cronbach's alpha coefficients (alphas > 0.78) of the total score and five dimensions. The construct validity, responsiveness to change and predictive validity of the English DCS were also confirmed.³ Until now, the DCS has been mainly used in primary and general health care settings (for example chronically ill, asthma and cancer patients).^{10,19-21,28} In Dutch youth mental health care the original version of the DCS³² was used among parents of patients up to 12 years of age.^{11,33}

Socio-demographic characteristics

In this study the following independent variables were collected: gender (men=0, women=1), age, education level and locus of control. Completed education was categorized in three levels: primary school and lower secondary education (0), higher secondary or intermediate vocational education (1), bachelor and master level (2).

Clinical characteristics

Setting and primary diagnosis were extracted from the electronic patient records. Diagnosis was based on the primary clinical diagnosis assessed by clinical judgement, and summarized in five main groups (psychotic, depressive, bipolar, anxiety, personality disorders) ordered in the DSM IV classification³⁴ and a rest category. Each group of diagnoses was transformed into a dichotomous variable (yes vs. no). Treatment setting was divided into two categories: cure and care. Cure treatment mainly focuses on curing the disease and usually takes less than two years. Care is treatment for severe mental illness, usually lasts more than two years and is primarily aiming to improve functioning of patients with a chronic disorder.

Locus of control

Locus of control was assessed by the Mastery Scale.³⁵ This self-report questionnaire measures the degree to which people perceive they can control factors that influence their life situation. This instrument consists of

five negatively worded items (e.g., 'I have little control over the things that happen to me') with five ordered response categories from 1 (strongly agree) to 5 (strongly disagree). A total score is calculated by summing the scores of all items (range 5-25). A higher score means more internal locus of control, thus a better ability to control the circumstances of one's life. The Mastery Scale shows good construct, predictive validity and internal consistency.³² In this study population the internal consistency of the Mastery Scale is high ($\alpha = .85$).

Statistical analysis

First the Cronbach's alphas of the total scale and five dimensions of the Decisional Conflict Scale (DCS) and the Mastery Scale were computed. If patients had answered at least 80% or more of the items, missing items were imputed with the mean value of the completed items. Socio-demographics, clinical characteristics and the degree of DC were calculated using descriptive statistics. The relationships of the socio-demographic and clinical characteristics with the level of DC were investigated in four blocks, using forward stepwise multiple linear regression. The first block to be entered comprised demographic characteristics (gender, age, education level). Secondly, the treatment setting and thirdly the primary diagnoses were added to the model. Finally, the model was completed with locus of control. This approach was chosen because we expected a strong association between locus of control and DC and we also intended to investigate if the influence of the other factors (demographics, diagnosis and treatment setting) on DC was mediated by locus of control. The regression coefficients, p-values, 95% confidence intervals (CI) and R-Squares are reported. Data were analysed with SPSS for Windows, version 22.

Results

Participants

In total 227 patients gave informed consent to participate, 18% dropped out and 186 patients participated in the study. Reasons for drop out were: withdrawal of informed consent (54%), not responding to reminders (32%) and being unable to complete questionnaires because of decreased cognitive capacity or current crisis (14%). Table 1 gives a complete overview of the characteristics of the study sample. 59.7% of the study population consisted of women. The mean age of participants was 47.2 (\pm 18.0) years. Education, treatment

setting, main diagnoses and locus of control reflect the variation of patients participating in this study. Decisions were made about the following topics: diagnostic research, type of therapy and medication, the time of starting and ending treatment, personal treatment goals, day activities and social network.

Table 1. Participants' characteristics

Socio-demographics	
Gender	Female 111 (59.7%) Male 75 (40.3%)
Age	mean 47.2 (SD 18.0) (between 18 and 83 years)
Educational level	Primary school or Lower secondary education: 68 (36.6%) Higher secondary or intermediate vocational education: 87 (46.8%) Bachelor or Master degree: 31 (16.7%)
Clinical characteristics	
Setting	Cure 100 (53.8%) Severe Mental Illness 86 (46.2%)
Primary diagnosis	Depressive disorder: 48 (25.8%) Personality disorder: 38 (20.4%) Psychotic disorder: 32 (17.2%) Anxiety disorder: 27 (14.5%) Bipolar disorder: 24 (12.9%) Other disorders *: 17 (9.1%)
Locus of control	Q1 11.0, Q2 13.0, Q3 16.0 ** Min.: 5, Max.: 25.

*Other disorders: dissociative disorder NAO, dementia NAO, mood disorder by alcohol, undifferentiated somatoform disorder, hypochondria and childhood disorder.

** First (Q1), second (Q2, median), third (Q3) quartiles and the minimum and maximum scores.

Decisional Conflict

Descriptive results of the scores on the DCS total scale and five dimensions are presented in Table 2. The highest degree of DC is experienced on the dimensions information and certainty. Decision quality demonstrated the lowest scores.

When the scores on the total scale of this study population are divided into the groups described in the DCS manual³, 17% of the patients belonged to the group with little or no DC (< 25), 38% to the 'some degree' group (≥ 25 and ≤ 37.5) and 45% to the group with a clinically significant high degree of DC (>37.5).

Table 2. Level of Decisional Conflict (DC)

	Mean (SD)	Tertiles*
Total scale		
Total score (n=184)	38.8 (17.3)	T1: 29.69 T2: 45.31
Dimensions		
Information (n=183)	43.0 (21.2)	T1: 25.00 T2: 50.00
Support (n=185)	36.5 (20.1)	T1: 25.00 T2: 41.67
Clarification of values (n=184)	38.7 (20.4)	T1: 25.00 T2: 50.00
Certainty (n=183)	43.9 (22.6)	T1: 33.33 T2: 50.00
Decisional Quality (n=184)	33.9 (18.6)	T1: 25.00 T2: 37.50

* First (T1) and second (T2) tertiles.

Associations with Decisional Conflict

First, the results of the stepwise linear regression analyses exploring associations with the total scale of DC are described and shown in Table 3. Second, the final models of the five dimensions are presented (Table 4).

Total scale

In block 1 the socio-demographic variables demonstrated no significant associations with DC. After adding block 2 'treatment setting' to the model, also no significant association was observed. These results mean that independent of gender, age, educational level and treatment setting patients experience a similar level of DC. Block 3, primary diagnoses, showed a significant association between personality disorder and the total scale. Patients with a personality disorder reported a significantly higher level of DC (B_1 8.20, $p = .009$, CI 2.09-14.32). The final model demonstrated the association between locus of control and DC. People who reported a more internal locus of control, reported less DC (B_1 -1.46, $p = .000$, CI -1.98 - -.93). As expected, the influence of a personality disorder on DC was mediated by locus of control. The association between the primary diagnosis personality disorder and locus of control was significant (B_1 -2.26, $p = .005$, CI -3.83 - -.68). The final model explained 14% of the degree of DC.

Table 3. Associations between socio-demographic and clinical characteristics and the total score of the Decisional Conflict Scale.

	Variables	B	p-value	95% CI		R ²
				lower	upper	
Block 1	Gender	No significant predictors				
Socio-demographics	Age					
	Education					
Block 2	Cure/care	No significant predictors				
Setting						
Block 3	Constant	B ₀ 37.07				
Diagnoses	Personality disorder	B ₁ 8.20	.009	2.09	14.32	.037
Block 4	Constant	B ₀ 58.60				
Final model	Mastery	B ₁ -1.46	.000	-1.98	-.93	.141
Locus of control						

Dimensions

As expected, locus of control showed a significant association with all dimensions of DC. Patients who reported a more internal locus of control, reported less DC on the dimensions information (B₁ -1.31, p = .000, CI -1.97 - -6.43), support (B₁ -1.24, p = .000, CI -1.86 - -.62), clarification of values (B₁ -1.34, p = .000, CI -1.97 - -.70), certainty (B₁ -1.79, p = .000, CI -2.47 - -1.10) and quality of the decision (B₁ -1.44, p = .000, CI -2.01 - -.87). The influence of the primary diagnoses psychotic and personality disorders was also significant. Patients with a psychotic disorder showed less DC on the dimension certainty (B₂ -8.83, p = .034, CI -17.00- -.66) and in the case of a personality disorder, more DC was reported on the dimension support (B₂ 10.84, p = .002, CI 3.99-17.69). Furthermore, the socio-demographic variables gender and education had a significant influence. Women reported less DC on the dimension information (B₂ -6.57, p = .033, CI -12.61- -.54), and significantly more DC was shown for patients with higher education on the dimension clarification of values (B₂ 4.35, p = .035, CI .32-8.38). The final models demonstrated an explained variance between 9.5% and 16.1%.

Table 4. Associations of socio-demographic and clinical characteristics with the five dimensions of the Decisional Conflict Scale.

	Variables	B	p-value	95% CI		R ²
				lower	upper	
information	Constant	B ₀ 64.71				
	Mastery	B ₁ -1.31	.000	-1.97	-6.43	.095
	Gender	B ₂ -6.57	.033	-12.61	-.54	
support	Constant	B ₀ 51.17				
	Mastery	B ₁ -1.24	.000	-1.86	-.62	.148
	Personality disorder	B ₂ 10.84	.002	3.99	17.69	
clarification of values	Constant	B ₀ 53.33				
	Mastery	B ₁ -1.34	.000	-1.97	-.70	.102
	Education	B ₂ 4.35	.035	.32	8.38	
certainty	Constant	B ₀ 69.65				
	Mastery	B ₁ -1.79	.000	-2.47	-1.10	.161
	Psychotic disorder	B ₂ -8.83	.034	-17.00	-.66	
decisional quality	Constant	B ₀ 53.52				
	Mastery	B ₁ -1.44	.000	-2.01	-.87	.119

Discussion

This paper presents the findings from a cross-sectional study aiming to investigate the level of Decisional Conflict (DC) among patients in specialist mental health care about decision making in treatment; furthermore it explores the influence of socio-demographic and clinical factors on DC. We included various patient groups, who are treated in different treatment settings within specialist mental health care. This was thought to capture the variety in DC and factors associated with DC best. The study reveals that DC is common among patients in specialist mental health care. The degree of DC is relatively high on the overall score and all five dimensions of DC, while it varies between patients. Patients who experience DC feel uncomfortable about the decision being made and do not experience an optimal decision making process. As hypothesized, patients' locus of control showed the strongest association with DC. Less internal locus of control was significantly associated with more DC overall and on all five dimensions. Furthermore, having a personality disorder was, as expected, associated with more DC. The association between personality disorder and DC is mediated by locus of control. Therefore, in the final models, the influence of personality disorder is evident only in one dimension (support). Psychotic patients reported less DC on the dimension certainty, and women on the

information domain. In contrast to our hypothesis, patients who have attained a higher educational level reported significantly more DC on the dimension clarity of values. Other hypothesized factors (age and treatment setting) were not associated with DC.

To our knowledge, this is the first cross-sectional study which explored DC and its influencing factors among patients in specialist mental health care. When comparing this study population with studies using DC in other health care settings, our patients reported a relatively high level of DC. For instance, in patients with mild to severe asthma 36% scored a high degree of DC¹⁹, compared to 44% in our study. In an analysis of five primary care studies in Canada²⁰, where the categories some and high degree of DC were taken together, 10% to 31% of the patients belonged to this category. In our study, the percentage was 82%.

Experiencing a relatively high level of DC might be explained by the complexity of the problems treated in specialist mental health care and therefore the difficult choices about treatment that have to be made. It is therefore very important to pay attention in the decision making process, in order to adequately inform patients about their disorder, about appropriate and distinctive treatment options and involve them in the dialogue. That said, the data in this study on DC were gathered just after the intake consultation or treatment evaluation session, when possibly decision making about treatment has not yet been fully completed, and the patient-clinician working alliance, which has a central role in decision making^{2,4,25,26}, is sometimes still at an early stage.

The findings of this study that less internal locus of control, having a personality disorder and being male significantly increase the level of DC are in line with our hypotheses. The finding that having a psychotic disorder is associated with a decreased risk of DC on the subscale certainty might be explained by the often longer duration of treatment given by the same multidisciplinary team. Therefore, on the one hand this patient group have a trusting relationship with their clinicians, may already participate in decision making and are satisfied about the decision making. However on the other hand, these patients possibly more easily accept treatment decisions, because they are used to a more passive role in decision making or worry about legislative treatment as a consequence

when not agreeing with the clinician. However, we did not find a connection between DC and severe mental illness, which usually represents patients with a longer treatment duration with a relatively large proportion of psychotic patients. The somewhat surprising association between higher education and more DC on the subdomain 'having clarity about one's own values' might be explained by the fact that these higher educated people are better informed about treatment choices and may have known the complexity of the clinical decision making. Therefore it would be difficult for them to obtain clarity about which benefits, risks and side effects of the options matter most to them.

Implications for clinical practice

The high level of DC among mental health patients has direct clinical relevance. These patients do not experience an optimal decision making process with low decisional quality. Therefore, as research in general health care has shown, these patients are more at risk for decisional delay, nervousness, decisional regret, non-adherence to treatment, a higher intention to complain about treatment, decreased quality of life and a poorer clinical outcome.^{3,19-24} To tailor the clinical decision making to the needs of the patient, we recommend taking account of the influencing factors on DC, measuring these with the Decisional Conflict Scale³ and discussing the results with the patient. Patients who report a high level of DC should be supported, to enable them to better participate in the dyad of decision making about choices in treatment. In addition, enhancing the knowledge and skills of clinicians in applying SDM by training and booster sessions is recommended to foster patient participation in clinical decision making.

Strengths and limitations

Strengths of this study include the innovative approach of exploring DC and its influencing factors in mental health care, and the relatively large group of patients recruited in real world clinical practice. The sample included patients encompassing a variety of disorders, age groups, educational levels and treatment settings. We chose this approach, in order to capture the variety we aimed to study and to improve external validity. Finally, the data collection took place by an independent data management team, which diminished the likelihood of socially desirable answers and the influence of the clinicians and research team on the results.

In spite of the aforementioned strengths it should be noted that this study has a number of limitations as well. First, because of a lack of normative data we cannot draw firm conclusions on the severity of DC in mental health care. We only could compare with studies in which the same revised version of the DCS was used, and thus where the DC scores were computed in the same way. However, we know which patient groups are at risk and who might benefit best from the application of shared decision making. Secondly, we had limited explanatory data to assess the association between organizational, clinician and treatment characteristics with the level of DC. We also lacked qualitative background information, which can explain why patients experience a high level of DC. In future studies, we recommend exploring the association between DC and additional characteristics, such as length and type of treatment, decisional topics, the working alliance between patient and clinician and the possible various views of patients and clinicians. The latter is relevant, because DC is a transactional concept, and therefore it would be interesting to have data from the clinicians' views in order to compare their appreciation of the quality of the decision making process. It is also worthwhile knowing more about the reasons why patients reported a high level of DC.

Conclusions

Decisional Conflict is a multidimensional concept that captures the degree to which patients are engaged and comfortable with clinical decision making. It has been developed among patients with physical illness and is also very useful in mental health care. To our knowledge, this is the first cross-sectional study to explore DC and its influencing factors in mental health care, showing that patients report relatively high levels of the overall score and all five dimensions of DC. Specific patient groups, especially patients with a more external locus of control report a higher degree of DC. Knowledge about socio-demographic and clinical factors, distinguishing the different dimensions of DC including the influence of modifiable conditions, can enhance clinical decision making and may improve adherence to treatment and clinical outcomes.

References

1. NANDA. *Taxonomy I-Revised*. St. Louis, MO: author. 1990
2. LeBlanc A, Kenny DA, O'Connor AM, Légaré F. Decisional conflict in patients and their physicians: a dyadic approach to shared decision making. *Med Decis Making*. 2009; 29: 61-7.
3. O'Connor AM. *User-Manual-Decisional Conflict Scale* (16 item statement format). Ottawa Hospital Research Institute; 1993, updated 2010. https://decisionaid.ohri.ca/docs/develop/User_Manuals/UM_decisional_conflict.pdf
4. Légaré F, LeBlanc A, Robitaille H, Turcotte S. The decisional conflict scale: moving from the individual to the dyad level. *Z Evid Fortbild Qual Gesundheitswes*. 2012; 106: 247-5.
5. Song MK, Sereika SM. An evaluation of the decisional conflict scale for measuring the quality of end-of-life decision making. *Patient Educ Couns*. 2006; 61: 397-7.
6. Hölzel P, Kriston L, Härter M. Patient preference for involvement, experienced involvement, decisional conflict, and satisfaction with physician: a structural equation model test. *BMC Health Serv Res*. 2013; 13: 231-10.
7. Sepucha KR, Borkhoff DM, Lally J, Levin CA, Matlock DD, Ng CJ, et al. Establishing the effectiveness of patient decision aids: key constructs and measurement instruments. *BMC Med Inform Decis Mak*. 2013; 13: S12-11.
8. Stacey D, Légaré F, Lewis K, Barry MJ, Bennett CL, Eden KB, et al. Decision aids for people facing health treatment or screening decisions (review). *Cochrane Database of Syst Rev*. 2017. doi:10.1002/14651858.CD001431.pub5
9. Becerra-Perez MM, Menear M, Turcotte S, Labrecque M, Légaré F. More primary care patients regret health decisions if they experienced decisional conflict in the consultation: a secondary analysis of a multicentre descriptive study. *BMC Fam Pract*. 2016; 17: 156-11.
10. Coylewright M, Branda M, Inselman JW, Shah N, Hess E, LeBlanc A, et al. Impact of socio-demographic patient characteristics on the efficacy of decision aids. *Circ Cardiovasc Qual and Outcomes*. 2014; 7: 360-8.
11. Westermann GMA, Verheij F, Winkens BJ, Verhulst FC, Van Oort FVA. Structured shared decision-making using dialogue and visualization: A randomized controlled trial. *Patient Educ Couns*. 2013; 90: 74-81. doi: 10.1016/j.pec.2012.09.014
12. Elwyn G, Forsch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P. Shared Decision Making: a model for clinical practice. *J Gen Intern Med*. 2012; 27: 1361-7.
13. Patel SR. Recent advances in Shared Decision Making for Mental Health. *Cur Opin Psychiatry*. 2008; 21: 606-7.
14. Barr PJ, Scholl I, Bravo P, Faber MJ, Elwyn G, McAllister M. Assessment of patient empowerment-a systematic review of measures. *PLoS One*. 2015; 13 May. doi:10.1371/journal.pone.0126553.
15. Härter M, Elwyn G, van der Weijden T. Policy and practice developments in the implementation of shared decision making: an international perspective. *Z Evid Fortbild Qual Gesundheitswes*. 2011; 105: 229-5. doi:10.1016/j.zefq.2011.04.018.
16. ten Haaft G, van Veenendaal H. Versnellen van gedeelde besluitvorming in Nederland: opmaat naar een onderzoeks-/innovatieprogramma Samen beslissen [Increasing Shared Decision Making in the Netherlands], ZonMw, CZ. 2016 <https://www.zonmw.nl/nl/actueel/nieuws/detail/item/versnellen-van-gedeelde-besluitvorming-in-nederland/>. Accessed April 2016.
17. Pieterse A, Brand P, Basoski N, Stiggelbout A. Een investering van arts en patiënt in betere zorg: Alles wat u moet weten over gedeelde besluitvorming [An investment of clinician and patient in quality of health care: Everything you need to know about shared decision making]. *Medisch Contact*. 2017; 12: 34-3.
18. Légaré F, O'Connor AM, Graham ID, Wells GA, Tremblay S. Impact of the Ottawa Decision Support Framework on the agreement and difference between patients' and physicians' decisional conflict. *Med Decis Making*. 2006; 26: 373-18.
19. des Cormiers A, Légaré F, Simard S, Boulet LP. Decisional conflict in asthma patients: a cross sectional study. *J Asthma*. 2015; 52: 1084-8.

20. Thompson-Leduc P, Turcotte S, Labrecque M, Légaré F. Prevalence of clinically significant decisional conflict: an analysis of five studies on decision-making in primary care. *BMJ Open*. 2016. doi:10.1136/bmjopen-2016-011490.
21. Hickman RL, Daly BJ, Lee E. Decisional conflict and regret: consequences of surrogate decision making for the chronically critically ill. *Appl Nurs Res*. 2012; 25: 271-5.
22. Katapodi MC, Munro ML, Pierce PF, Williams RA. Testing of the decisional conflict scale: genetic testing hereditary breast, ovarian cancer. *Nurs Res*. 2011; 60: 368-10.
23. Knops AM, Goossens A, Ubbink DT, Legemate DA, Stalpers LJ, Bosssuyt PM. Interpreting patient decisional conflict scores: behaviour and emotions in decisions about treatment. *Med Dec Making*. 2013; Jan: 78-7.
24. Sun Q. Predicting downstream effects of high decisional conflict: meta-analyses of the decisional conflict scale. University of Ottawa. 2005. doi: 10.20381/ruor-18514
25. Eliacin J, Salyers MP, Kukla M, Matthias MS. Factors influencing patients' preferences and perceived involvement in shared decision-making in mental health care. *J Ment Health*. 2015; 24: 24-5. doi:10.3109/09638237.2014.953695.
26. Eliacin J, Salyers MP, Kukla M, Matthias MS. Patients' understanding of shared decision making in a mental health setting. *Qual Health Res*. 2015; 25: 668-11. doi:10.1177/1049732314551060.
27. Randenborgh A, Jong de-Meyer R, J. Hüffmeier J. Decision making in depression: differences in decisional conflict between healthy and depressed individuals. *Clin Psychol Psychother*. 2010; 17: 285-14.
28. Sim JA, Shin JS, Park SM, Chang YJ, Shin A, Noh DY, et al. Association between information provision and decisional conflict in cancer patients. *Ann Oncol*. 2015; 26: 1974-7.
29. Underhill ML, Hong F, Berry DL. When study site contributes to outcomes in a multi-center randomized trial: a secondary analysis of decisional conflict in men with localized prostate cancer. *Health Qual of Life Outcomes*. 2014; 12: 159-9.
30. Dillon EC, Stults C, Wilson C, Chuang J, Meehan A, Li M, et al. An evaluation of two interventions to enhance patient-physician communication using the observer OPTION measure of shared decision making. *Patient Educ Couns*. 2017; 100: 1910-8. doi:10.1016/j.pec.2017.04.020.
31. Metz MJ, Franx GC, Veerbeek MA, de Beurs de E, van der Feltz van der-Cornelis CM, Beekman ATF. Shared decision making in mental health care using Routine Outcome Monitoring as a source of information: a cluster randomised controlled trial. *BMC Psychiatry*. 2015; 15: 313-12.
32. O'Connor AM. Validation of a decisional conflict scale. *Med Decis Making*. 1995; 15: 25-6.
33. Westermann GMA. Ouders adviseren in de jeugd-ggz. Het ontwerp van een gestructureerd adviesgesprek. Maastricht: Datawyse/Universitaire Pers. 2010. <http://repub.eur.nl/res/pub/22397/>
34. American Psychiatric Association (APA). Diagnostic and statistical manual of mental disorders (4th ed., text rev.). DC Author, Washington. 2000.
35. Pearlin LI, Lieberman MA. The stress process. *J Health Soc Behav*. 1981; 22: 337-20.