The effects of a shared decision-making intervention in primary care of depression: A cluster-randomized controlled trial

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Abstract

Objective: Patient-centred depression care approaches should better address barriers of insufficient patient information and involvement in the treatment decision process. Additional research is needed to test the effect of increased patient participation on outcomes. The aim of this study was to assess, if patient participation in decision-making via a shared decision-making intervention leads to improved treatment adherence, satisfaction, and clinical outcome without increasing consultation time.

Methods: Cluster-randomized controlled intervention study based on physician training and patient-centered decision aid compared to usual care in primary care settings in Südbaden region of Germany. Twenty-three primary care physicians treating 405 patients with newly diagnosed depression were enrolled. Patient involvement was measured with the patient perceived involvement in care scale (PICS) and a patient participation scale (MSH-scale). Patient satisfaction was measured by the CSQ-8 questionnaire. Treatment adherence was evaluated by patient and provider self-report. Depression severity and remission outcomes were assessed with the Brief PHQ-D.

Results: Physician facilitation of patient participation improved significantly and to a greater extent in the intervention compared to the control group. There was no intervention effect for depression severity reduction. Doctor facilitation of patient participation, patient-rated involvement, and physician assessment of adherence improved only in the intervention group. Patient satisfaction at post-intervention was higher in the intervention group compared to the control group. The consultation time did not differ between groups.

Conclusion: A shared decision-making intervention was better than usual care for improving patient participation in treatment decision-making, and patient satisfaction without increasing consultation time. Additional research is needed to model causal linkages in the decision-making process in regard to outcomes.

Practice implications: The study results encourage the implementation of patient participation in primary care of depression.

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1. Introduction

Depressive disorders are among the most common health problems seen by general practitioners. Unipolar depressive disorders are projected to be the second leading cause of the global burden of disease by the year 2030 [1]. Insufficiently treated depression is associated with a variety of adverse health, social, and occupational outcomes, resulting in substantially increased rates of morbidity, mortality, and other excess costs. Like most other Western countries, depression is prevalent in the German population (approximately 11.5% annual prevalence [2]), and depression care continues to be in need of quality improvement.

Most patients with clinically significant depression still do not receive adequate, guideline-concordant treatment [3,4], especially in the general health care sector. Patient-related barriers to treatment are important but have been under-researched in the testing of depression care quality improvement interventions. A high percentage of patients are reluctant to consider taking antidepressant medication; e.g., Peveler et al.
[5] documented a non-adherence rate of 34–58%. In a recent publication an antidepressant non-adherence rate of 57% was found [6]. In a review of patient depression treatment adherence, Pampallona et al. [7] included 14 studies and reported adherence rates between 35% and 97%.

Generally, effective physician–patient communication can increase the likelihood of favourable health outcomes [8], and encouraging patients to take an active role in their health care can influence treatment success [9]. Such positive effects of patient involvement are supported by Brody and colleagues who found an association between the patient’s active role during medical visits and improvements in general medical condition [10]. Besides clinical outcome, there are other variables that are influenced by the quality of doctor–patient communication. Patient satisfaction and patient adherence measures are often used as outcome variables in physician–patient communication studies [11]. The association between doctor–patient interaction and patient satisfaction is better documented compared to the relationship between doctor–patient interaction and adherence. In addition, interventions to enhance patient involvement in medical care are identified as effective for increasing an active patient role in the clinical encounter (e.g. [12]).

In depression, factors that are associated with non-acceptance of treatment have been well-studied [13–18], but less research has been done to test interventions to improve the quality of the patient-provider communication process regarding treatment options. This is a key gap in needed knowledge for improving usual clinical practice. For example, recent research has documented that lack of patient information [19], problems within the doctor–patient communication [20], and low patient participation in the medical decision-making process [21] are key predictors of patient reluctance to engage in treatment. Additional research is needed on effective ways to intervention with these barriers, especially patient participation in the treatment decision-making process.

In our prior research, we have found that depressed patients are interested in more information and engagement in shared decision-making than has previously been assumed, even in context of moderate and severe major depression [22]. Patients with depressive disorders have been shown to be more likely to take an active role in the decision-making process compared to patients with mild forms of hypertension, heart disease, and severe diabetes [23]. Delegating solo responsibility to the patient for making a decision regarding type of treatment (e.g., drug therapy, psychotherapy, etc.) to the patient does not result in improved treatment outcomes [24]. However, incorporating patient-stated treatment preferences does result in a higher acceptance of preferred treatments and a greater likelihood of actually doing treatment [16]. It has also been shown that the number of patients who discontinue drug therapy prematurely can be lowered when patients are allowed to decide which treatment they prefer [25].

Emerging research on patient-provider shared decision-making approaches has promise for informing improvements to depression care, although only a few studies with inconsistent results have examined patient participation in context of depression treatment. For example, von Korff and colleagues [26,27] have incorporated shared decision-making to enhance patient involvement in stepped collaborative care interventions for depression. However, the positive outcomes of the multifaceted intervention programs cannot be ascribed solely to the effect of improved patient participation. In a newly published prospective cohort study, Clever and colleagues [28] showed that the involvement of depressed patients in primary care is associated with greater likelihood of guideline-concordant care and clinically significant improvement in depression over time. However, there was no specific intervention to enhance patients’ involvement in decision-making, and the association between patient-provider communication and patient satisfaction is assumed. Additional research is needed to identify which decision-making variables play the most central role in intervention outcomes. Byrne et al. [29] review the work and specific interventions in this area and conclude that strategies involving patients in the decision-making process have substantial potential for enhancing patient engagement with treatment decision-making and planning, which could result in improved clinical outcomes for depression care. Tests of improved interventions also need to evaluate feasibility issues against usual care for depression, such as length of consultation time. This is important because of the current emphasis on testing the effectiveness and feasibility of interventions for “real world” clinical care settings [30]. In summary, the results of recent research on patient involvement in depression treatment decision-making support the assumption that improved patient involvement in treatment decision-making can lead to higher likelihood of adherence, satisfaction, and improved clinical outcomes. Depressed patients have been shown to have an interest in improved information and involvement regarding treatment decisions. Additional research is needed to test the effects of patient involvement on these outcomes with intervention study designs.

1.1. Study aim and research questions

The aim of this study was to evaluate the effect of a shared decision-making intervention compared to usual care on adherence, satisfaction, and clinical outcome for depression. The length of consultation time was also compared between the intervention and usual care in order to evaluate the feasibility of the intervention for usual care settings. Three research questions were addressed:

a. Are patient participation, treatment adherence, depression severity, and remission outcomes higher in a shared decision-making intervention group compared to a usual care control group?

b. Is consultation time longer in a shared decision-making intervention group compared to a usual care control group?

c. Is patient satisfaction with care higher in a shared decision-making intervention group compared to a usual care control group?

The evaluation of the shared decision-making intervention in depression care is embedded in a research consortium funded...
by the German Federal Ministry of health (www.shared-decision-making.org).

2. Methods

2.1. Sampling and research design

A randomized controlled trial was carried out with primary care physician as the unit of randomization. Thirty general practitioners from the German region of Südbaden were included in the study. Recruitment of the general practitioners was accomplished in co-operation with the Department of Primary Care of the University of Freiburg. All accredited general practitioners in Freiburg and all general practices that are associated as teaching practices with the Department of Primary Care at the University Hospital of Freiburg were defined as the sampling frame (N = 158) and were sent a letter of invitation to participate in the study. Thirty physicians (19%) accepted the study invitation. To compare the intervention with usual care, two-thirds of the general practitioners (N = 20) were randomly assigned to the intervention group by drawing blinded lots under supervision of the principal investigator M.H. and two researchers A.L. and D.S. The remaining third (N = 10) comprised the control group. The unequal distribution of physicians was by design due to the possibility of a higher dropout rate in the intervention group due to the additional time and effort required. The research design was a cluster randomization design because physicians were randomized to study groups and the patients recruited by each physician were viewed as clusters. The study was carried out between October 2002 and December 2004 and was approved by the University Hospital of Freiburg Ethics Committee. Further results resting on the baseline phase of this trial were already presented elsewhere, in which structural equation modelling showed that, in a specific pathway via adherence, patient participation in decision-making does influence clinical outcome in primary care of depression [31].

2.2. Observation time points

Physicians were asked to recruit patients with newly diagnosed depressive disorders for the study. Inclusion criteria were the GPs’ clinical judgment concerning a diagnosis of a depression currently in need of treatment, no psychotic symptoms, a minimum age of 18 years, and functional language and literacy abilities to understand and fill out the questionnaires. The diagnosis of the depression was confirmed with the patient health questionnaire (see Section 2.4). Following the consultation where the treatment decision-making was done, the patients completed a questionnaire measuring patient involvement, depression severity and sociodemographic characteristics. The physicians documented the length of their consultation for each patient. After 6–8 weeks, the patients completed a second questionnaire measuring adherence and treatment outcome. At the same time, the physicians rated their assessment of the patients’ adherence. This procedure was carried out in the first data collection period (pre-intervention). Next, the shared decision-making intervention was implemented within the intervention group (physician training plus decision aid and patient information for the use with subsequently recruited patients). No intervention was done for the control group physicians. In the second data collection period (post-intervention) newly diagnosed patients with depression were enrolled in both study groups following the same data collection procedure. Patients were surveyed again at the beginning of the treatment and 6–8 weeks later to evaluate outcomes. Patient satisfaction was measured for all patients during the second data collection period. The care of depressed patients in the control group followed usual practices for management of newly diagnosed patients. Control group physicians did not participate in the intervention group training program.

2.3. Intervention

The intervention was a multi-faceted program based on shared decision-making concepts. The program included physician training, a decision board for use during the consultation that was handed out to the patients after the medical encounter, and printed patient information that combined evidence-based knowledge about depression care with specific encouragement for patients to be active in the decision-making process.

Physicians in the intervention group completed modules on guideline-concordant depression care. The modules also included content on enhancing skills for involving patients in the decision-making process during the medical encounter. The theoretical framework for the shared decision-making portion of the modules was based on the work of Towle and Godolphin [32] and Elwyn and colleagues [33–35]. Specific aspects of the modules included specialized lectures with accompanying questions and discussion rounds, facilitation practice, role-playing, and video exemplars of high quality shared decision-making. Standardized case vignettes and case studies from the general practice were used. The training took place within a 6-month time period which included five scheduled training program events, each including four discrete modules. Attendance was consistently high: 17 physicians (85%) attended the first event, 15 (75%) the following two events, 16 (80%) attended the fourth event, and 19 (95%) attended the last event. Eleven physicians (55%) attended all five events and nine (45%) at least three training sessions. Additional details about the conceptual basis of the training program, the program events, specific modules, and evaluation of the training program is published elsewhere [36].

All intervention physicians were given decision aids and patient information leaflets for dissemination to the patients. The decision aid was used during the decision-making consultation. It contained details about the symptoms of the disease to certify the diagnoses, information about the treatment options, their pros and cons and a support for the patients’ value clarification. The patient information leaflet was based on the Clinical Practice Guideline on Depression in Primary Care of the Agency for Health Care and Policy
Patient involvement was measured by the Patients’ Perceived Involvement in Care Scale [38] and a scale concerning patient participation adapted from Man-Son-Hing et al. [39]. The Man-Son-Hing-instrument assesses the extent of patient involvement in decision-making from the patient’s perspective. Overall patient satisfaction with clinical care was measured by the German version of the CSQ-8 questionnaire [40]. The evaluation of depression severity and clinical outcome was measured with the Brief PHQ-D, the short form of the patient health questionnaire [41], which facilitates a DSM-IV criteria-based screening for depression. All these measures have shown to have good psychometric properties. Evaluation of treatment adherence was measured by an investigator-developed scale based on five-point Likert scale items assessing the steadiness of following the treatment plan from the patients’ and the physicians’ point of view (English translation from German: Patient question: How steadily did you assess the patients’ steadiness of following the treatment plan?). This adherence measure represents acceptable squared correlations (from .33 to .43) and standardized regression weights (from .57 to .66) [31]. Consultation time was documented in minutes by the physicians following each consultation.

2.4. Measures

Patient involvement was measured by the Patients’ Perceived Involvement in Care Scale [38] and a scale concerning patient participation adapted from Man-Son-Hing et al. [39]. The Man-Son-Hing-instrument assesses the extent of patient involvement in decision-making from the patient’s perspective. Overall patient satisfaction with clinical care was measured by the German version of the CSQ-8 questionnaire [40]. The evaluation of depression severity and clinical outcome was measured with the Brief PHQ-D, the short form of the patient health questionnaire [41], which facilitates a DSM-IV criteria-based screening for depression. All these measures have shown to have good psychometric properties. Evaluation of treatment adherence was measured by an investigator-developed scale based on five-point Likert scale items assessing the steadiness of following the treatment plan from the patients’ and the physicians’ point of view (English translation from German: Patient question: How steadily did you assess the patients’ steadiness of following the treatment plan?). This adherence measure represents acceptable squared correlations (from .33 to .43) and standardized regression weights (from .57 to .66) [31]. Consultation time was documented in minutes by the physicians following each consultation.

2.5. Data analysis approach

Socio-demographic data for physicians and patients were collected for sample description purposes. For the patient sample, t-tests (for interval level data) and χ² tests (for categorical data), were calculated to test for any differences between patient samples recruited in the different groups at the different points of measurement. The physician sample was examined in a similar way to detect possible differences between study groups. All analyses were performed using the SPSS 13.0 statistical software package and Microsoft Excel 2002.

Analysis of outcomes was performed via analysis of covariance (ANCOVA) with adjustment for clustering effect. All variables that were associated with group assignment or measurement point were controlled for. Within-group comparisons were carried out to characterize changes over time in the intervention and control group respectively. Subsequently, a general ANCOVA model was fit to examine the main effects and interaction effects of the group assignment and measurement points. The statistical significance criterion was set to .05.

Due to the hierarchical structure of the data (with physicians being the unit of randomization and patients being the unit of analysis), an adjustment for clustering was needed [42]. For this purpose, the variance inflation factor (VIF, also called design effect) was calculated from the intra-cluster correlation coefficient (ICC). VIF describes the factor by which the total sample size must be increased in case of a cluster design to have the same power as an individual design. F values and d.f. were adjusted using the VIF and the number of clusters in all ANCOVA-modelled outcome analyses [42]. The needed intra-cluster correlation coefficients (ICCs), which can be interpreted as the proportion of the total variance in the data that is due to the clusters, were estimated by the analysis of variance (ANOVA) method described by Fleiss [43]. The basis for the estimation was the pooled sample at the first point of measurement (prior to any intervention). For the patient satisfaction outcome measure, no data were available for the first point of measurement; thus, the ICC coefficient was estimated from control group data at the second measurement point.

In the study protocol no differentiation between primary and secondary outcomes was undertaken. Thus, all analyses were of explorative nature and should be interpreted accordingly.

In case of patient participation outcomes and consultation length, data were collected immediately after the first consultation in each period were analyzed. In case of treatment adherence, data gathered after 6–8 weeks’ treatment in each period were analyzed. Data on patient satisfaction were collected only at the second measurement point and were analyzed accordingly. To assess clinical effects, a composite outcome, the depressive symptom severity reduction, was calculated. This measure displays the percentage reduction of depressive symptom severity after 6–8 weeks’ treatment in comparison to the baseline in each period of the study. The following formula was used:

\[
\frac{\text{PHQ}_{\text{baseline}} - \text{PHQ}_{\text{treatment}}}{\text{PHQ}_{\text{baseline}}} \times 100\%,
\]

where PHQ indicates the sum score of the depression scale of the German version of the patient health questionnaire. In the depression score reduction analysis, patients were included only if they scored at least five points on the scale (at least mild depression) at baseline.

3. Results

3.1. Physician sample

Five of the 20 (25%) physicians in the intervention group and two of the 10 (20%) control group physicians subsequently decided against participating in the study, resulting in 15 intervention group and eight control group physicians remaining in the study. The intervention physicians enrolled 263 patients and the control physicians 142 depressed patients (see flowchart of study participants by study condition in Fig. 1).

Two of the 10 physicians in the control group (20%) and five of 15 in the intervention group (33%) were female. The mean age of the participating general practitioners was 48.4 years with a standard deviation of 8.0 years (control group 47.4 ± 7.2
years, intervention group 48.9 ± 8.4 years). The average years professional experience was 13.0 ± 7.0 years (control group 10.6 ± 7.4 years, intervention group 14.3 ± 6.7 years). Gender, age, and professional experience did not differ significantly between the study groups (p > .10).

3.2. Patient sample

Four hundred and five patients with newly diagnosed depressive disorders were included in the study. Patient characteristics are presented in Table 1. In the intervention

<table>
<thead>
<tr>
<th>Patient characteristics</th>
<th>Control group</th>
<th>Intervention group</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n = 76</td>
<td>Post n = 66</td>
<td></td>
</tr>
<tr>
<td>Sex (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>30.5</td>
<td>32.7</td>
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<tr>
<td>Female</td>
<td>69.5</td>
<td>67.3</td>
<td></td>
</tr>
<tr>
<td>Age (years) mean (S.D.)</td>
<td>40.8 (13.2)</td>
<td>41.0 (13.7)</td>
<td></td>
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<tr>
<td>Family status (%)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Single</td>
<td>42.4</td>
<td>49.1</td>
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<tr>
<td>Married</td>
<td>40.7</td>
<td>32.1</td>
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<tr>
<td>Divorced</td>
<td>13.6</td>
<td>13.2</td>
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<tr>
<td>Widowed</td>
<td>3.4</td>
<td>5.7</td>
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<tr>
<td>Education level (%)a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>66.1</td>
<td>49.1</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>33.9</td>
<td>50.9</td>
<td></td>
</tr>
<tr>
<td>Depressive symptom severity mean (S.D.)</td>
<td>14.4 (5.1)</td>
<td>14.6 (5.3)</td>
<td>14.7 (5.5)</td>
</tr>
</tbody>
</table>

p: significance level; S.D.: standard deviation.

* At least diploma from German secondary school.
and control group over the two measurement points, the proportion of female patients ranged from 65.3% to 77.8% and mean age of patients ranged from 40.8 to 50.4 years. Most patients were either married (32.1–54.0%) or single (21.7–49.1%). A subset of the sample had a higher education level (at least diploma from German secondary school, 20.5–50.9%). Mean depression severity ranged from 13.7 to 14.7. Statistically significant differences were found between groups and measurement points for age, family status and educational level; therefore all outcome analyses were controlled for these variables.

3.3. Outcomes

The results for patient participation, treatment adherence, patient satisfaction, consultation time and clinical outcomes are shown in Table 2.

3.3.1. Patient participation

No increase for any measure of patient participation was found for the control group from pre- to post-intervention. In the intervention group, significantly higher patient participation from pre- to post-intervention was found for the doctor facilitation scale of the PICS, \( p = .001 \) and the Man-Son-Hing-patient participation scale, \( p = .010 \). The (group) × (measurement point) interaction effect for the doctor facilitation scale of the PICS was statistically significant, \( p = .028 \), and provides evidence for the effectiveness of the intervention in improving doctor facilitation of patient participation.

3.3.2. Treatment adherence

No differences were found for the patients’ assessment of their own adherence at either measurement point, and the (group) × (time) interaction effect was also statistically non-significant. For the physician assessment of adherence, there was a statistically non-significant trend for an increase in mean rating from pre- to post-intervention, \( p = .067 \), but the (group) × (time) interaction was statistically non-significant. The results for both types of ratings are consistent with the conclusion that the intervention did not make a difference beyond usual care in physician- or patient-reported treatment adherence.

3.3.3. Patient satisfaction

Satisfaction was significantly higher in the intervention compared to the control group at post-intervention, \( p = .014 \). Because satisfaction was measured only at post-intervention it is not possible to unambiguously relate the observed group difference in satisfaction to the effect of the intervention. However, the favorable results for patient satisfaction for the intervention group compared to the control group are consistent with patients perceiving the intervention as personally acceptable.

3.3.4. Consultation time

No differences were found between study groups for length of consultation.
The short form of the patient health questionnaire (PHQ) was used to measure depression severity. Clinical outcome was defined as the percentage of symptom severity reduction from the origin depression severity at the beginning of depression treatment. The average control group patient depression score after 6–8 weeks of treatment was 11.5 ± 6.0 points (corresponds to moderate depression) before the intervention and 7.6 ± 5.2 points (corresponds to mild depression) after the intervention. In the intervention group, the average patient depression severity was 8.7 ± 6.0 points (corresponds to mild depression) before the intervention and 6.9 ± 6.1 points (corresponds to mild depression) after the intervention. Although the average depression severity scores decreased in both groups, apart from a statistical trend for improvement in depression severity was 8.7 \( /C6\) points (corresponds to mild depression) before the intervention and 6.9 \( /C6\) points (corresponds to mild depression) after the intervention. Also the (group) \( \times \) (time) interaction was not significant.

4. Discussion and conclusion

4.1. Discussion

Even if the patient adherence results in our study are only moderately improved through the shared decision-making intervention, it indicates that patient participation strategies can foster adherence to drug treatment in primary care.

Since the treatment goal is primarily to achieve remission of depression, clinical outcomes are essential to evaluate. This study did not show statistically significant improvements in clinical outcome. Despite adequate adherence, a significant proportion of patients who receive an adequate course of treatment for depression achieve only partial, or even no clinically significant improvement in depression based on their initial treatment. This study did not specifically examine the extent to which adherence versus other factors such as treatment non-response may have contributed to the observed clinical outcome.

Possible reasons for not finding intervention effects in adherence could be the underestimation of the gap between trained skills and behaviour change in the medical encounter. Generating clinically important changes in the physicians’ interview style might require more time, a higher intervention dose, post-training incentives, or additional supervised practice. These types of enhancements to the intervention modules may improve physician skills, leading to better adherence and improved clinical outcome.

Peveler et al. [5] also did not find differences in depressive symptoms between treatment groups in a randomised trial with depressive patients for a comparison of a treatment leaflet group, drug counselling, or both, versus treatment as usual. In this study, leaflets had no significant effect on adherence.

An especially important finding of this study was that the intervention did not extend the consultation time beyond that required for usual care, providing evidence for the feasibility of implementing the intervention in usual care general practice settings. Since clinicians are often concerned about time constraints in usual care settings [44], this study provides evidence that a shared decision-making intervention for primary care depression does not necessary need to take longer to do compared to usual care.

Methodological limitations of the study can be found in the cluster design of the study, in which physicians rather than patients were randomly assigned to study groups. The power in this study was reduced by the occurrence of relatively high intra-cluster correlation coefficients that revealed that up to 50% of the variance in patient outcomes could be attributed to differences between physicians’ performance prior to any intervention. There were also significant differences in patient characteristics over the observation points. However, statistical control of covariates was done. The intervention group physicians had better treatment results prior to intervention compared to physicians in the control group. In part this can be explained by the differences in the patient populations, and this issue was addressed via use of analysis of covariance (ANCOVA). Calculating an interaction effect between group and time factors accounts for these baseline differences.

In the present study, it was decided to combine adherence measures (self-report and health provider report), but not to use objective methods such as serum drug levels. The decision to forego physiological measures in this study was primary for feasibility reasons. Some key disadvantages of physiological measures are time and cost investment, as well as external validity issues in terms of how the measurement procedure may alter patient behaviour. The validity of the subjective adherence measure in this study also could be questioned. DiMatteo and Haskard [45] concluded that there is not a gold standard adherence measure and advocated the use of multiple methods of adherence assessment (e.g. self-report, pill count, health provider report, physiological measures like blood assay, etc.). Within a structural equation modelling approach, a combined adherence measure from the two perspectives (provider and patient) could be justified as appropriate to explain adherence [31]. Future research could also include objective adherence measures.

Additional limitations may be found in the sample selection. It is possible that the physicians and patients who participated in the study might have had higher interest or motivation toward patient participation and study participation compared to those who did not participate in the study. The extent to which the study findings can be generalized is not certain, and additional research needs to be done to replicate the key findings of this study. Also it might appear conceptually inconsistent to assess the effects of a physician-based intervention with patient-based data. The size of the clusters in the present study was too limited to conduct a valid physician-based analysis. This problem is frequent in designs evaluating clinical interventions. To date, cluster randomized trials with adjusted patient-based or multilevel analyses provide the most robust type of study design [46,47].

A further limitation of the findings may be, that it is difficult to identify the extent to which the positive outcomes were related to exposure to the patient information, the decision aid,
and/or the physician training which should be addressed in former studies.

5. Conclusion

This is the first randomised controlled trial to specifically examine the effects of a shared decision-making intervention for primary care of depression. A shared decision-making intervention was better than usual care for improving patient satisfaction and patient participation in treatment decision-making. There was no effect of the intervention on clinical outcome or consultation time. Clinical outcome and treatment adherence improved only in the intervention group, and may therefore not be attributable to the effect of the shared decision-making intervention.

5.1. Practice implications

Despite several limitations, the results of this study provide a basis for additional research investigation of the effects of improved patient participation on depression and other key health outcomes. The results of this initial randomized trial are promising with regard to achieving improved outcomes within realistic time constraints of usual care settings. Additional research should be done on determining the most essential aspects of the intervention approach for improving outcomes, as well as modelling the causal linkages in the decision-making process with respect to key outcomes.

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