Assessing patients’ involvement in decision making during the nutritional consultation with a dietitian

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Abstract

Background Shared decision making (SDM) represents an interesting approach to optimize the impact of dietary treatment, but there is no evidence that SDM is commonly integrated into diet-related health care.

Objective To assess the extent to which dietitians involve patients in decisions about dietary treatment.

Methods We audiotaped dietitians conducting nutritional consultations with their patients, and we transcribed the tapes verbatim. Three trained raters independently evaluated the content of the nutritional consultations using a coding frame based on the 12 items of the French-language version of the OPTION scale, a validated and reliable third-observer instrument designed to assess patients’ involvement by examining specific health professionals’ behaviours. Coding was facilitated by the qualitative research software NVivo 8.

Results Of the 40 dietitians eligible to participate in the study, 19 took part. We recruited one patient per participating dietitian. The overall mean OPTION score was 29 ± 8% [range, 0% (no patient involvement in the decision] to 100% [high patient involvement)]. The mean duration of consultations was 50 ± 26 min. The OPTION score was positively correlated with the duration of the consultation \((r = 0.65, P < 0.01)\). Internal consistency and inter-rater reliability were both good (Cronbach’s alpha = 0.72; ICC = 0.65).

Conclusion This study is the first to use a framework based on the OPTION scale to report on dietitians’ involvement of patients in decisions about patients’ dietary treatment. The results suggest that involvement is suboptimal. Interventions to increase patients’ involvement in diet-related decision making are indicated.
Introduction

Shared decision making (SDM) has been defined as a process in which a health-related decision is shared by the patient and his/her health professional(s). With SDM, health professionals perform specific behaviours during the consultation: among others, they make it clear to the patient that a decision must be made; they present the risks and benefits of all options; they help the patient weigh the risks and benefits against his/her priorities and they help the patient make or defer the decision. SDM thus aims to help patients play an active role in decisions concerning their health. This is also the ultimate goal of patient-centred care (PCC). Indeed, some SDM behaviours have been marked as PCC-based interventions because they improve the communication and the relationship between health professionals and patients. SDM has also been described as a process which is embedded in a specific relationship and a process in which the clinician and the patient influence each other's cognitions, emotions and behaviours.

By its nature, SDM is best suited for clinical contexts where there is uncertainty about which treatment option to choose, either because the benefits and risks of the options are relatively balanced or because scientific evidence regarding the effectiveness of the options is lacking. Situations like these are most prevalent in chronic disease management. Studies have shown that SDM has strong potential for improving the satisfaction, adherence to treatment, knowledge and health of patients suffering from chronic disease. But SDM-based interventions in this context of care are still understudied.

Epidemiologic and clinical studies have demonstrated the benefits of dietary treatment or nutrients on risk factors for chronic diseases, including abnormal blood lipids, elevated blood glucose and high blood pressure. Consequently, numerous authoritative health agencies have recommended the adoption of a healthy diet as an important component in the prevention or management of chronic illnesses, such as cardiovascular diseases, diabetes, cancer and hypertension. The scientific literature also points to the fact that often either one of the number of dietary treatments for a given health condition may be beneficial. For example, studies of the Mediterranean diet, the dietary approach to stop hypertension (DASH), the low-fat diet and the portfolio diet have shown that in controlled research settings, these diets reduce the risk factors for cardiovascular disease.

Of course, the benefits of dietary treatment are most likely to be realized when patients adhere to the treatment closely. In fact, studies repeatedly show that the key determinant of the health benefits of dietary treatment is less the type of diet chosen (whether low-fat, high unsaturated fat, low-carbohydrate, etc.) than the degree of the individual's adherence to it. Considering that adherence depends on patient-clinician collaboration and is increased by effective communication skills on the part of the clinician, we could expect that the PCC-related behaviours practised in SDM could improve the nutritional and global health of individuals making a diet-related decision, perhaps over and above the nature of the diet per se. Indeed, even if the literature admits of ambiguity in the definition of patient-centredness, studies show that the PCC model is effective in promoting patients' dietary changes and long-term adherence to a diet.

Meanwhile, interest is growing in interventions that could enhance patients' adherence to health recommendations and improve chronic disease-related decisions by involving patients in decision making. A study of patients' satisfaction with diet counselling has shown that patients want to participate in decisions regarding their diet and are sensitive to service that fits their needs and wants. Thus, SDM represents an interesting approach for optimizing patient's decision making by promoting informed and value-based choices of dietary treatment. To the best of our knowledge, the scientific literature has not yet studied dietitians' efforts to involve patients in decisions regarding nutritional treatment. So far, most studies have explored physicians' SDM-related behaviours not dietitians' behaviours, and referred to clinical contexts other than diet and nutrition. Our objective with this study was
therefore to assess the extent to which dietitians involve patients in decisions about their nutritional treatment.

**Methods**

**Participants**

We contacted dietitians providing hospital nutritional care in the Province of Quebec, Canada, and invited them to participate in the study. The inclusion criterion was membership in the Professional Order of Dieticians of Quebec, Quebec’s professional regulatory body. Dietitians who volunteered to participate were asked to identify one patient encounter in which they felt a value-sensitive, nutritional treatment decision would take place. All patients consulting for a diet-related health condition were eligible to participate, regardless of age. In cases where the patient was under 18 years old, parents were included in the study.

We audiotaped nutritional consultations. After each consultation, the dietitian and the patient each completed a self-administered written socio-demographic questionnaire. Participants did not receive an honorarium, and all provided written informed consent. The Research Ethics Board of the Centre Hospitalier Universitaire de Québec gave the project ethical approval. The detailed protocol for this study has been published elsewhere. 28

**The OPTION scale**

The OPTION (Observing Patient Involvement) scale was developed by Elwyn and collaborators 29 to assess the extent to which clinicians involve patients in decisions during the health-care consultation. This validated and reliable third-observer instrument is designed to assess patients’ involvement by examining specific clinician behaviours. 29 The instrument rates 12 behaviours on a five-point scale ranging from 0 to 4, where 0 indicates that the behaviour was not practised and 4 indicates that the behaviour was executed well. The behaviours in question include defining the problem clearly, formulating treatment options, exploring patient’s expectations (ideas) and concerns (fears) about how the problem(s) should be managed, providing the patient with information, checking the patient’s understanding of the information provided and considering the patient’s preference of decision-making role. 29

The final OPTION score is calculated by adding the scores of the 12 items and standardizing the sum to generate a value between 0 and 100. The more the clinician involves the patient in decision making, the higher the OPTION score.

The developers of the OPTION scale 29 revised it to remedy psychometric issues. The new validated version endorses a shift from attitudinal to magnitude-based measurements. 30 Our study used the revised OPTION scale, translated and validated in French. 31

**Coding training and the coding procedure**

We audiotaped the consultations and transcribed them verbatim. We checked the transcripts for accuracy and kept a copy of the original audio recording available for reference when coding the transcripts. Three trained raters (HV, AL and SMD) independently coded the transcripts using the French-language version of the OPTION scale. Their training began with them reviewing the OPTION scale coding instructions. 32 The raters then independently coded a random sample of the transcripts of five consultations. Afterwards, they compared scores and discussed inconsistencies to reach a common interpretation of the 12 items. They then added coding criteria specific to decision making in the context of nutritional consultation. The raters were assisted by the principal investigator (SD) who helped them reach consensus about coding decisions. After reaching consensus, the raters coded a second random sample of the transcripts of five consultations. Once again, they discussed their scores and their interpretation of the 12 items. They then performed the official overall scoring. They started with the nine consultations that had not yet been coded and continued with the 10 consultations that had been used for the two pilot-testing steps, in random order.

We used NVivo qualitative research software (Version 8; QSR International, Melbourne, Vic., © 2012 John Wiley & Sons Ltd

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Australia) to train the raters on coding and to perform the coding itself. We imported the 19 transcripts into NVivo as internal sources and read them carefully. We then classified the 12 items of the OPTION scale into tree nodes. Tree nodes allow raters to select quotes related to an item of the OPTION scale before dragging the quotes to the corresponding node. We created child nodes for Item 4 to identify each dietary option that the dietitian listed for the patient, including the options of doing nothing. We also created child nodes for Item 5 to identify the pros and the cons that the dietitian exposed to the patient for each dietary option. Creating child nodes for these items facilitated our identification of the dietary options presented by the dietitian during the consultation, as it did our identification of the pros and cons of each. After having fully coded the consultation transcripts, we referred to the quotes classified in each tree node to calculate a score for each item of the OPTION scale.

Statistical analyses

We performed descriptive statistics to assess the extent to which dietitians involved patients in decisions about their dietary treatment. To assess the internal consistency and inter-rater reliability of our coding, we calculated Cronbach’s alpha and the inter-rater intraclass correlation (ICC). We calculated Spearman’s correlation coefficients to determine the associations between the OPTION score, the duration of the consultation and participants’ socio-demographic characteristics. We performed statistical analyses using SAS software (version 9.2; SAS Institute Inc., Cary, NC, USA).

Results

Participants’ characteristics

We contacted 40 dietitians, 19 of whom agreed to participate in the study (response rate = 47.5%). We report the socio-demographic characteristics of the dietitians and the patients in Tables 1 and 2. Patients were consulting a dietitian for various health conditions, the most frequent were as follows: a cardiovascular disease, diabetes (type I or II), a high-risk pregnancy, an eating disorder and a diet-related genetic disorder.

Inter-rater reliability and internal consistency of the OPTION scale

The agreement between the three raters during training was assessed and showed an ICC of 0.65 after the first pilot test rising to 0.85 after the second pilot test. Following training, the final overall inter-rater reliability of ratings on all 12

Table 1 Characteristics of participating dietitians

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n = 19</th>
<th>mean ± SD or n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>39.3 ± 11.0</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>19 (100)</td>
<td></td>
</tr>
<tr>
<td>Number of years in practice</td>
<td>13.5 ± 9.2</td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time permanent</td>
<td>13 (68)</td>
<td></td>
</tr>
<tr>
<td>Part-time permanent</td>
<td>1 (5)</td>
<td></td>
</tr>
<tr>
<td>Part-time on-call/temporary</td>
<td>5 (26)</td>
<td></td>
</tr>
<tr>
<td>Clinical setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient</td>
<td>7 (37)</td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td>4 (21)</td>
<td></td>
</tr>
<tr>
<td>Both inpatient and outpatient</td>
<td>8 (42)</td>
<td></td>
</tr>
<tr>
<td>Diploma other than Registered Dietitian</td>
<td>2 (11)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Characteristics of participating patients

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n = 19</th>
<th>mean ± SD or n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>40.2 ± 25.2</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8 (42)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11 (58)</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary school</td>
<td>5 (26)</td>
<td></td>
</tr>
<tr>
<td>High school or college</td>
<td>9 (47)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>5 (26)</td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>8 (42)</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>1 (5)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>6 (32)</td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>4 (21)</td>
<td></td>
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Four patients were <18 years old. For these patients, a parent answered questions about education and employment status.
Items was good (ICC = 0.65). Table 3 presents inter-rater reliability on individual items. The items that showed the greatest inconsistency between raters’ scores were Item 1 (the dietitian draws attention to an identified problem as one requiring a decision-making process) and Item 4 (the dietitian lists the patient’s dietary options that include taking no action) (Table 3). Cronbach’s alpha coefficient was of 0.72, indicating good internal consistency.

Dietitians’ behaviours

The overall mean OPTION score was 29 ± 8%, ranging from 10 to 40%. The mean duration of the consultation was 50.4 ± 26.0 min. The OPTION score was positively associated with the duration of consultation (r = 0.65, P < 0.01; Fig. 1).

On average, dietitians scored highest for the following behaviours: exploring patient’s expectations about how to manage the problem (Item 6); explaining the pros and cons of the dietary options to the patient (Item 5), discussing with the patient the possibility of reviewing or deferring the decision (Item 12) and listing dietary options that can include taking no action (Item 4). Dietitians scored lowest on assessing the patient’s preferred approach to receiving information to assist decision making (Item 3), indicating the need for a decision-making stage (Item 11), stating that there is more than one way to deal with the problem (Item 2) and eliciting the patient’s preferred level of involvement in decision making (Item 10) (Fig. 2).

No significant correlations were found between the OPTION score and any of the participant’s socio-demographic characteristics, including dietitians’ age (r = −0.19; P = 0.43) and dietitians’ number of years in dietetic practice (r = −0.13; P = 0.60).

Discussion

To the best of our knowledge, ours is the first study to use a validated and reliable third-observer instrument, the French-language version of the OPTION scale, to assess the extent to

Table 3 Descriptions and inter-rater reliability for each item on the OPTION scale (n = 19)

| OPTION scale items | ICC 
<table>
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<tbody>
<tr>
<td>1. The clinician draws attention to an identified problem as one that requires a decision-making process</td>
<td>0.12</td>
</tr>
<tr>
<td>2. The clinician states that there is more than one way to deal with the identified problem (equipoise)</td>
<td>0.54</td>
</tr>
<tr>
<td>3. The clinician assesses the patient’s preferred approach to receiving information to assist decision making (e.g. discussion, reading printed material, assessing graphical data, using videotape or other media)</td>
<td>0.56</td>
</tr>
<tr>
<td>4. The clinician lists options that can include the choice of ‘no action’</td>
<td>0.03</td>
</tr>
<tr>
<td>5. The clinician explains the pros and cons of options to the patient (taking ‘no action’ is an option)</td>
<td>0.63</td>
</tr>
<tr>
<td>6. The clinician explores the patient’s expectations (or ideas) about how the problem(s) are to be managed</td>
<td>0.54</td>
</tr>
<tr>
<td>7. The clinician explores the patient’s concerns (fears) about how the problem(s) are to be managed</td>
<td>0.67</td>
</tr>
<tr>
<td>8. The clinician checks that the patient has understood the information</td>
<td>0.76</td>
</tr>
<tr>
<td>9. The clinician offers the patient explicit opportunities to ask questions during the decision-making process</td>
<td>0.86</td>
</tr>
<tr>
<td>10. The clinician elicits the patient’s preferred level of involvement in decision making</td>
<td>na</td>
</tr>
<tr>
<td>11. The clinician indicates the need for a decision-making (or deferring) stage</td>
<td>0.62</td>
</tr>
<tr>
<td>12. The clinician indicates the need to review the decision (or deferment)</td>
<td>0.52</td>
</tr>
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</table>

1 ICC = intraclass correlation coefficient.
2 na = not available, (could not be calculated because the variance of one rater’s score was equal to zero).
which dietitians involve patients in decisions about their dietary treatment. Its results suggest that this involvement is suboptimal. Ours is also the first study to use a qualitative approach to scoring consultation transcripts with the OPTION scale. This new methodological approach guided raters through a more systematic classification of excerpts from transcripts. It proved to be particularly helpful in the context of nutritional consultations whose duration is considerably longer than that of medical consultations.33

The mean OPTION scores reported in our study are comparable to those reported in the studies of medical consultations between physicians and patients.34,35 Our finding of a positive association between the OPTION score and the duration of the consultation also agrees with the findings of other studies.36,37 This association relates to one of the most important barriers to the implementation of SDM as reported in the literature: namely time constraints.38 The individual ranking scores of the 12 items, in contrast, vary between studies.37,39,40 For example, our study reported low scores for Items 1 and 11, whereas other studies reported much higher scores for these items37,39,40; on the other hand, other studies reported low scores for Items 3 and 10 than we obtained.37,39–41

In our study, the highest score was obtained for Item 6 [exploring the patient’s expectations about how to manage the problem(s)]. This result agrees with the results from another exploratory study involving Canadian dietitians, which reported that dietitians believed that meeting patients’ needs and wants was critical to PCC even if it was sometimes difficult to decide who should determine those needs and to distinguish patients’ needs from their wants.42 Item 12 (discussing with the patient the possibility of reviewing or deferring the decision) also obtained a high score. This can be explained by the fact that most of the time, nutritional treatment implies a long-term intervention consisting of more than one consultation. The American Dietetic Association recommends that to influence health, patients should have at least two to six visits with a dietitian.12

The very low score obtained for Item 10 (eliciting patients’ preferred level of involvement in decision making) served to decrease dietitians’ global OPTION score. Previous studies about family physicians’ SDM-related behaviours37,39 have discussed similarly low scores for this item. Another previously reported issue that may explain the low score is that some dietitians feel that working as equal partners with clients threatens their professional knowledge and goes against their training.43 PCC is relatively new and is not really understood or integrated in dietitians’ day-to-day practice.43 It is plausible that in the current study, these barriers were
present and resulted in dietitians’ not assessing patients’ preferred level of involvement in decision making.

Some items’ mean scores showed unexpected contrasts. For example, dietitians’ scores for Item 5 (explaining the pros and cons of the options to the patient) and Item 4 (listing options, including the option of taking no action) were high, while their scores for Item 2 (stating that there is more than one way to deal with the problem) were low. It may seem surprising that dietitians listed and presented dietary options with their pros and cons with considerable skill, but showed less skill when comparing the patient’s dietary options (equipoise). The structure of the conversation during the consultation could explain this riddle. Most of the time, dietitians did not present the options and their pros and cons as a clear and structured list. Rather, they mentioned the options, pros and cons at different times in the exchange. This did not favour their explanation of the principle of equipoise or clear contrasting of the options.

SDM requires effective communication between health professionals and patients. To promote patients’ involvement in decision making, health professionals must demonstrate superior communication skills. This requirement can inhibit professionals’ practice of SDM-related behaviours during the clinical consultation. The dietetic practice literature has, however, reported dietitians’ superior communication skills that have been shown to raise patients’ satisfaction with regard to their relationship with a dietitian and to their dietary treatment. We can therefore hypothesize that dietitians’ communication skills may have helped them practise some of the SDM-related behaviours measured in this study.

Our study has limitations. A global limitation – and one that affects our main aim – is the extent to which any SDM tool, including the OPTION scale, can measure the performance of an SDM-related behaviour or skill in a specific health-care context. For example, some items may have been less relevant in our study context. To this end, as shown in others studies, comparison of OPTION scale efficiency with other SDM tools or adaptation of its content to the studied health-care context could have been appropriate to get the most suitable tool in this study. Furthermore, SDM occurs within a dyad, so it may be argued that it should also be analysed this way. But OPTION items only focus on health professionals’ behaviours, without considering patients’ behaviours or how the two parties influence each other’s cognition as regards SDM. The OPTION scale has recently been adapted into a dyadic format and could perhaps be used to measure how both dietitians and patients facilitate SDM. For now, however, our results must be interpreted with caution, as must the results of any study that uses current instruments to measure SDM-related behaviours.

In addition, given our small sample size (n = 19 dyads), our results cannot be generalized to clinical nutrition practice. Nonetheless, because our results (mean OPTION score, items ranking, etc.) are similar to the results of other studies regardless of the health-care providers’ profession (residents, family physicians, anaesthetists, etc.) or the sample size, they inform the knowledge base underlying SDM in healthcare, expanding it beyond the physician–patient relationship.

Conclusion

Having used the OPTION scale in the context of nutritional consultations for the first time, our study suggests that dietitians’ involvement of patients in decisions about their dietary treatment is suboptimal but roughly on a par with that found for physician–patient dyads. Given the extreme paucity of SDM research in the field of nutrition, our findings provide novel ideas for developing research and knowledge about the implementation of SDM in health care. Further research is needed to assess the determinants of dietitians’ and patients’ adoption of SDM behaviours, and how patients’ participation in diet-related treatment decisions affects their health, and to identify the interventions that will be most effective for increasing patients’ involvement in decisions about their dietary treatment.
Conflict of interest statement

None to declare.

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