A comparison of Dutch family doctors’ and patients’ perspectives on nutrition communication

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**Background.** In recent years, we have investigated both patients’ and family doctors’ communicative characteristics towards nutrition communication in general practice with several qualitative and quantitative studies. A sound comparison of the survey results between both conversation partners has not been made before.

**Objective.** The aim of the present study was to put together data obtained by earlier studies for the first time in order to make comparisons of patients’ and family doctors’ communicative characteristics regarding nutrition communication.

**Methods.** In The Netherlands, 603 patients completed a face-to-face interview-assisted questionnaire (65% response rate) and 267 family doctors completed a questionnaire (45% response rate).

**Results.** When comparing communicative characteristics, patients stronger believed that nutrition was an influence on health than family doctors. They also attributed a greater role to personal hygiene, stress and heredity, while family doctors were more convinced of the role of alcohol use and smoking on health. Patients more often rated their own nutrition knowledge as good than family doctors. In contrast, family doctors showed higher interest in nutrition and nutrition information than patients. As a result, a collinear model for family doctors and nutrition communication towards patients was provided.

**Conclusions.** Significant differences between patients and family doctors were found for several communicative characteristics towards nutrition communication. It is important that family doctors become convinced that patients perceive them as a reliable and expert source of nutrition information. It is recommended that family doctors raise nutrition awareness among patients. Finally, we advise family doctors to pay attention to nutrition communication styles.

**Keywords.** Communication, family doctors, interaction, nutrition, patients.

**Introduction**

Twenty years ago, van Dusseldorp *et al.* performed the first study on nutrition communication in general practice and found that in 14% of all consultations nutrition appeared to be the topic of conversation between family doctors and patients. In studies undertaken before 1995, the role of family doctors in nutrition communication was often assessed from a negative point of view by only stressing barriers. Studies from 1995 or later also focused on family doctors’ attitudes towards nutrition communication. Our literature study undertaken in 2005 showed that frequencies of nutrition advice in general practice varied a lot, depending on differences between countries, measurement methods and subjects. American family doctors most frequently talked about nutrition. In observational studies, it was discussed in at average 25% of the consultations, while in surveys the percentage was around 15 of the consultations.

Nutrition is thus a topic of conversation in general practice. The question how both patients and family doctors think about nutrition communication is answered. Until now, there are no published reports on the results of an integration of the perspectives of both patients and family doctors. In this article, the following research question will be answered: how can we integrate both the perspective of patients and the
perspective of family doctors in order to provide recommendations for more effective nutrition communication?

In the discussion of the results, we will make use of the published literature to put the results into perspective. For the family doctor, it is important to know patients’ actual nutrition knowledge and their beliefs and attitudes about nutrition in order to get insight into their information needs. Also their motivations and behaviour with respect to nutrition seem to be important. We will call this package the communicative characteristics of patients. On the other side, it is important to explore the actual nutrition knowledge of family doctors and their beliefs and attitudes towards nutrition communication. This also applies to their motivations and behaviour with respect to nutrition communication. In this way, family doctors also have a package of communicative characteristics. In order to provide recommendations for more effective nutrition communications, both the perspective of patients and the perspective of family doctors need to be integrated.

We end with a collinear model for family doctors and nutrition communication towards patients.

Methods

Questionnaires
A face-to-face interview-assisted questionnaire was developed through a process of focus group sessions with patients.7 The questionnaire contained several questions, for example food associations, perceived relevance and information needs regarding food topics, preferred information sources and nutrition awareness.8,9

On the basis of focus group sessions with family doctors,10 a questionnaire for family doctors was developed. This questionnaire assessed among others family doctors’ perceptions of life style, nutrition communication and nutrition information and nutrition communication styles.11

Questions which were asked in the questionnaire of patients as well as family doctors are shown in Table 1.

Study population
With respect to patients, our study population consisted of Dutch adults aged 18–80 years. Children and the elderly were excluded. A stratified sample of 923 respondents was taken from the GfK Script Panel, which was representative of the Dutch population regarding gender, age, education level and residence. In total, 603 respondents were interviewed (65% response rate). Each interview lasted about 40 minutes.

With respect to family doctors, our study population consisted of Dutch family doctors, who were practising for 5–25 years. We only included family doctors, who were known to have an independent accommodation.

Table 1 Selection of questions from questionnaires of patients and family doctors

<table>
<thead>
<tr>
<th>Question</th>
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<td>b. Heredity 1–2–3–4–5–6–7–8–9–10</td>
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<td></td>
<td>c. Physical activity 1–2–3–4–5–6–7–8–9–10</td>
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<td>d. Smoking 1–2–3–4–5–6–7–8–9–10</td>
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<td>e. Personal hygiene 1–2–3–4–5–6–7–8–9–10</td>
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<td>f. Stress 1–2–3–4–5–6–7–8–9–10</td>
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<td></td>
<td>g. Nutrition 1–2–3–4–5–6–7–8–9–10</td>
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<td>Nutrition knowledge:</td>
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<td>(2) A little bit important</td>
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<td>(4) Very important</td>
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<td>Interest in nutrition information:</td>
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<td>(1) Not interested</td>
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<td>(2) A little bit interested</td>
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Family doctors who were on the payroll of another family doctor were excluded. A representative sample was taken, stratified for gender and type of practice. A postal questionnaire was sent to 600 family doctors, and three reminders were sent 2, 4 and 6 weeks after the first mailing. In total, 267 family doctors returned the questionnaire (45% response rate). It took family doctors about 30 minutes to complete the questionnaire.

Analysis

Simple descriptive statistics were used to describe patients’ and family doctors’ communicative characteristics. Univariate analysis tests were used to analyze significant differences in communicative characteristics between patients and family doctors. Data were analyzed with SPSS 13.0.

Results

Patients’ perspective on nutrition communication
First, the communicative characteristics of patients regarding nutrition communication through family doctors were studied. Patients believed that smoking has most influence on health. According to them, nutrition was the fourth factor out of seven factors, behind
smoking, stress and physical activity. They did not believe that alcohol use had a great influence on health. The mean scores are shown in Table 2.

Our quantitative study showed that patients appeared to have different food associations. In our survey, most patients thought about tasty food at first glance (47%), followed by preparing meals (29%), shopping (24%), healthy food (19%) and necessity of food (13%). Six per cent of the patients perceived their own nutrition knowledge as bad, 55% as fair and 39% as good (Table 2).

Only 1% did not think nutrition important, 17% a little bit important, 55% fairly important and 27% very important (Table 2). Twelve per cent were not interested in nutrition information, while 31% was a little bit interested, 44% fairly interested and 12% very interested (Table 2).

Food topics, such as balanced diet, fruits and vegetables and eating less fat, were perceived as personally relevant by most patients (78%, 75% and 55%, respectively). However, this high-perceived relevance was not translated into a need for information about these topics. Only 26% expressed a need for more information about balanced diet. For fruits and vegetables and eating less fat, the percentages were 24 and 29. On the other side, only 21% perceived losing weight as personally relevant, but more than half of this group appeared to be interested in more information about losing weight.

For most food topics, family doctors were mentioned as an important source for nutrition information. Most patients believed that family doctors were the best nutrition information source with respect to losing weight, lowering cholesterol and food allergy. Patients believed that family doctors were the most reliable (41%) and accessible (31%) nutrition information source. Dieticians were the only source with a higher perceived expertise (38% versus 34%) and clearness (32% versus 27%). Our study showed that 31% of the patients mentioned that they had discussed nutrition with their family doctor before. A quarter of the patients mentioned that they used the Internet to get nutrition information.

**Family doctors’ perspective on nutrition communication**

Next, for comparison we looked at the communicative characteristics of family doctors regarding nutrition communication towards patients. Family doctors believed that smoking attributed most to health (negatively) (Table 2). According to family doctors, nutrition was on the third place, behind smoking and physical activity. They did not expect much from the role of personal hygiene in health.

Family doctors perceived their own nutrition knowledge as fair on a scale from bad to good (Table 2). Eight per cent perceived this knowledge as bad, 67% as fair and 25% as good. They believed this knowledge was sufficient to deal with basic nutrition issues related to health.

There was no family doctor who did not regard nutrition as important to patients’ health, 2% found it a little bit important, 55% fairly important and 42% very important (Table 2). Twelve per cent were not interested in nutrition information, 31% a little bit interested, 44% fairly interested and 12% very interested (Table 2).

Communication with patients about nutrition was perceived as their task by most family doctors, especially when it touches secondary (86%) and tertiary prevention (95%) compared to primary prevention (66%). Referral to other health professionals was seen as an important task for family doctors by 88%, while provision of specific information was perceived as an important task for dieticians by 93%. Therefore, family doctors mentioned that for nutrition issues they most often co-operated with dieticians among all health professionals: only 2% never worked together with a dietician. According to 61% of the family doctors, both family doctors and dieticians had the task to motivate patients.

For their own nutrition information, family doctors relied on medical journals (85%), dieticians (84%) and post-graduate courses (80%). Sixty-one per cent mentioned that they searched the Internet for nutrition information.

**Integration of perspectives**

Questions in the questionnaire of both patients and family doctors, which were exactly the same, were put
together in a new data file to compare them with uni-
variate analysis methods (see Table 1). Table 2 shows
the differences in these communicative characteristics
between patients and family doctors. Patients believed
more strongly that nutrition was of influence on health
than family doctors. They also attributed a greater role
to personal hygiene, stress and heredity, while family
doctors were more convinced of the role of alcohol use
and smoking on health. Patients more often rated their
own nutrition knowledge as good than family doctors.
In contrast, family doctors showed higher interest in
nutrition and nutrition information than patients.

On the basis of our studies, we developed a collinear
model for family doctors and nutrition communication
towards patients (Fig. 1). In this model, our model for
nutrition awareness among patients7 and our model
for nutrition communication style of family doctors10
were combined. Several family doctors' individual vari-
able (such as perceptions of nutrition communica-
tion) and environmental variables (such as health
professionals variables) might influence the choice of
one of the five nutrition communication styles. We
suggest that family doctors behave like chameleons,
by adapting their style to the specific circumstances,
like context, time constraints and patients' health com-
plaint. Consequently, family doctors' nutrition com-
unication style might influence patients' individual vari-
able (such as involvement with nutrition) and en-
vironmental variables (such as perceived attributes of
family doctors as neutral information source). Pa-
ients' nutrition awareness might increase as a result.

Discussion

First, we provide the main conclusions about the pa-
tients' and family doctors' communicative characteris-
tics towards nutrition communication in general
practice separately. Furthermore, differences in the
communicative characteristics between patients and
family doctors will be discussed. Finally, recommenda-
tions for more effective nutrition communications in
general practice will be suggested.

Our study among patients showed that they expect
nutrition communication from family doctors. Accord-
ing to patients, family doctors were the most impor-
tant nutrition information source: they were perceived
as most reliable and accessible and after dieticians the
most expert and clear. Previous studies also found that
family doctors were preferred as information source
over other potential sources.12,13 Our study showed
that patients differed in their level of nutrition aware-
ness. Especially psychosocial factors, such as involve-
ment with nutrition, had an influence on nutrition aware-
ness (explained variance 54%).9 As found in an-
other study,14 women tend to be more nutrition aware
than men. Moreover, older people were more nutrition
aware than younger age groups. Patients with lower nu-
trition awareness were more convinced that the family
doctor was a suitable nutrition information source.9
This can be explained by their lower level of involve-
ment with nutrition and therefore more need to rely on
reliable and expert sources. When approaching patients
with low nutrition awareness, one should take account
that their association with food is mainly taste related.

Our study among family doctors showed that nutrition
was discussed in 14% of the consultations, which
implies that nutrition is a daily topic. The same percent-
age was found in a previous study two decades ago.1
They spoke on average for 5 minutes about nutrition.11
More than half of the family doctors (56%) said that
they generally took the initiative to talk about nutrition.
11 They perceived nutrition as important and their
task to discuss nutrition with their patients in accor-
dance with other studies.6,23 Family doctors were more
eager to talk about nutrition, when it was related to
a health complaint. Nutrition was most often discussed
in case of overweight/obesity (73%), diabetes mellitus
(72%), hypercholesterolaemia (68%), irritable bowel
syndrome (45%) and coronary heart disease (44%).11
Another Dutch study showed that family doctors per-
ceived weight problems and diabetes mellitus as the
most important nutrition-related topics.15 However,
family doctors' self-efficacy to communicate about
overweight was rather low. They expressed a need for
resources with respect to nutrition information and
training. Besides nutrition, physical activity should be
stressed in consultations with obese patients. Attention
to overweight and obesity in the vocational training
programmes of family doctors' trainees might be useful.
Taking the general communication styles of family doc-
tors16 as a starting point, we managed to develop
a model for nutrition communication style. Most family
doctors appeared to use a motivational nutrition com-
munication style. Nutrition communication styles were
mainly influenced by psychosocial variables. High ex-
plained variances were found for any of the five nutri-
tion communication styles (30 till 57%). Family
doctors used a combination of nutrition communication
styles. If family doctors communicate about nutrition in
general, they preferred a motivational nutrition com-
munication style (explained variance 48.0%). If they
communicate about overweight, they favoured a con-
frontational nutrition communication style (explained
variance 40.3%).11 It might be valuable to point out
the available nutrition communication styles in voca-
tional training programmes of family doctors' trainees.

Comparisons between patients' and family doctors'
communicative characteristics were made when possi-
ble. Differences in the perceptions of the role of be-
haviour and heredity in health can be explained by
a high level of external health locus of control among
patients. Family doctors were more strongly convinced
of factors, which were internally controlled. Possibly,
family doctors’ experiences with unmotivated patients attributed to this.

The difference in the level of nutrition knowledge can be explained by the fact that family doctors were balancing their nutrition knowledge too much against their other specialties. It may be that consultations with expert patients made them feel even unsure about nutrition.

A possible explanation for the higher interest in nutrition and nutrition information among family doctors is that family doctors are being more and more confronted with patients who suffer from nutrition-related diseases, such as obesity. Especially older family doctors may not have been educated in nutrition topics and as a result express a need for more nutrition information. This interest is also reflected in their information seeking behaviour: family doctors searched the Internet more often for nutrition information than their patients.

The collinear model was intended as a framework by which family doctors might more effectively communicate about nutrition with their patients. It is important that family doctors recognize that they are highly esteemed by their patients, also with respect to providing nutrition information. We advise to join to the recommendations for effective nutrition communications as stated in the literature review on the basis...
of 350 studies. It refers to the use of personal relevant factors, tailoring and taking account of the stages of change for nutrition behaviour and the long-term maintenance of this behaviour. Tailoring the information needs of interested subgroups of patients seems to be effective. This implies that family doctors should communicate with the elderly about lowering cholesterol and with female patients and overweight patients about losing weight, having the greatest chance that the message connects. Taking account of the fact that family doctors were highly trusted by patient with low nutrition awareness, it is suggested that family doctors should stimulate their nutrition awareness by offering nutrition information, which is personally relevant for them. It is advised that family doctors match the nutrition information to a couple of personal characteristics. Personal feedback about their nutrition behaviour seems to be important, even as the recommended daily amounts and the average amounts for people in the same age category serve as a matter of comparison. Personally relevant also means that information should be tailored to the stage of change of the patient. To keep up with expert patients, family doctors should be aware of reliable websites about nutrition. For effective nutrition interaction between family doctors and patients it is necessary that both conversation partners actively share information with each other and co-operate to help solve the problem. Finally, family doctors should realize that they can apply different nutrition communication styles. The choice for a certain style seems to depend not only on family doctors’ perceptions about nutrition communication but also on the type of health complaint of the patient.

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Declaration

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References


