Postprint Version	1.0
Journal website	http://www.pec-journal.com/article/S0738-3991(13)00503-X/abstract
Pubmed link	http://www.ncbi.nlm.nih.gov/pubmed/24360508
DOI	10.1016/j.pec.2013.11.004

This is a NIVEL certified Post Print, more info at <http://www.nivel.eu>

Talking about psychosocial problems: An observational study on changes in doctor–patient communication in general practice between 1977 and 2008

LIGAYA BUTALID^A, JOZIEN M. BENSING^A, B, PETER F.M. VERHAAK^A,

ABSTRACT

Objective: To examine whether GPs' communication styles have changed since the introduction and implementation of clinical guidelines for psychosocial problems in Dutch general practice in the 1990s.

Methods: From a database of 5184 consultations videotaped between 1977 and 2008, 512 consultations assessed by GPs as 'completely psychosocial' were coded with RIAS (Roter Interaction Analysis System). The 121 consultations prior to and 391 consultations after implementation of guidelines were analyzed whether communication styles have changed over time.

Results: We found that GPs were more likely to consider consultations to be mainly (17%) or completely (12%) psychosocial after the implementation of guidelines. They gave more biomedical and psychosocial information and advice in the second period compared to the first period. We also found that empathy decreased over time (frequency of empathic statements by GPs changed from 2.9–3.2 to 1.4–1.6 between periods).

Conclusion: Communication in psychosocial consultations has changed; GPs have become more focused on task-oriented communication (asking questions, giving information and advice) and less on showing empathy.

Practice implications: GPs face the challenge of integrating an evidence-based approach of applying guidelines that promote active symptom exploration with understanding patients' personal contexts and giving room to their emotions.

1. INTRODUCTION

Developments in medical and psychological care influence the way general practitioners (GPs) deal with psychosocial aspects of patients' presented problems. In 1959, GPs of the Dutch College of General Practitioners stated that GP care had to be continuous, integrative and personal^[1]. With this agreement, GP care was explicitly placed in a broader societal and emotional context and not limited to a biomedical framework. GPs started to emphasize the importance of understanding the meaning of illness for patients rather than merely diagnosing medical diseases^[2]. Problem behavior of patients (behavior related to psychosocial aspects of patients' life) was considered as starting point for GPs to deal with patients' health complaints^[3]. During a doctor's visit, GPs should get a clear and complete idea of patients' reasons to seek GP care. A system to classify patients' reasons for encounter was developed (RFEC: Reason for Encounter Classification) to motivate GPs to use these reasons as starting point for further action, such as providing treatment or advice^[4]. In a Dutch study on morbidity in general practice in the period 1978–1982, all minor psychological problems were coded by an overall label 'emotional disorders', while only classic psychiatric diseases – such as dementia, schizophrenia, and manic depressive disorder – were categorized separately^[5]. In this study, over 80% of the registered mental disorders were classified into the overall label 'emotional disorders'. This indicates an emphasis on acknowledging general emotional problems, rather than diagnosing psychiatric diseases. During this period, also attention was paid to the prevention of somatic fixation; a process in which patients or GPs focus exclusively on the physical aspects of complex health problems that may also include psychosocial aspects, such as anxiety or depression^{[6], [7] and [8]}. In 1987, the Dutch National Association of General Practitioners described the tasks and responsibilities of GPs, which was used as the main framework for the profession of GPs^[9]. In line with previous ideas on continuous, integrative and personal care, it was again emphasized that family care and taking into account emotional aspects of health problems were part of GPs tasks and responsibilities. In the 1970s and 1980s, GP care was characterized by an approach in which GPs were motivated to understand the patient as a 'whole' and to understand the personal contexts surrounding patients' presentation of psychological, social, or physical health problems. From the 1990s, more emphasis was placed on evidence-based medicine with the introduction of clinical guidelines in Dutch general practice. GPs' need to categorize social and psychological problems grew and they were more often encouraged to diagnose psychological disorders with psychiatric classification schemes such as the Diagnostic Statistical Manual (DSM) of the American Psychiatric Association^[10]. For example, somatic symptoms associated with psychosocial problems, could now be diagnosed as somatization disorders as described in the DSM. The DSM approach of categorizing mental distress by counting symptoms was also applied in the development of clinical guidelines for psychological problems in general practice. In

1994, the Dutch College of General Practitioners published the national clinical guideline for depression ^[11]. In the years that followed, clinical guidelines for other psychological problems, such as anxiety disorders were introduced ^[12]. Today, there are eight clinical guidelines specifically for psychological problems and the use of guidelines is widely implemented in general practice in the Netherlands ^[13]. In the past decades, the integrative approach of understanding patients within their personal contexts (*What is the meaning of the illness for the patient?*) has been replaced by a more evidence-based approach in which symptoms are listed and categorized (*How can the illness of the patient be defined?*).

These changes in the approach of psychosocial problems in general practice may also have implications for the communication between doctors and patients in the consultation room. In line with Rogers' client-centered approach, in which empathy and unconditional positive regard were keywords, GPs were encouraged to let patients talk freely during consultations in the 1970s and 1980s ^[14]. Studies on doctor–patient communication show the importance of listening, personal attention and empathy during consultations ^[15] and ^[16]. However, there are indications that GPs' communication styles have changed and GPs engage more in giving information in recent years ^[17]. Possibly, the introduction of clinical guidelines for psychosocial problems in general practice have motivated general practitioners to focus more on providing a structured consultation by specific question asking and giving information or advice, rather than inviting patients to talk freely. While shifts in communication styles by GPs were found during consultations discussing hypertension ^[17], it is unknown whether these shifts are also visible during consultations that are psychosocial in nature. GPs tend to communicate differently when psychosocial issues are perceived, compared to consultations in which only biomedical problems are perceived ^[18] and ^[19]; we therefore cannot automatically assume that previously found shifts in communication styles toward giving more information during hypertension consultations also account for consultations psychosocial in nature.

1.1. Hypotheses

The aim of this study is to investigate whether changes in general practice regarding psychosocial problems also influenced doctor–patient communication in the consultation room. We consider the introduction of clinical guidelines (1990s) as a major turning point in the history of general practice in the Netherlands and we therefore compare consultations prior to and after the implementation of these guidelines.

First, we investigate how often GPs attribute psychosocial aspects to health problems prior to and after the implementation of clinical guidelines. Attention to psychosocial aspects of health complaints has been promoted starting from the inception of the Dutch College of General Practitioners in 1956, but may also be affected by the emphasis put on evidence-based medicine in the 1990s. We therefore expect that GPs less often attribute psychosocial aspects of health problems in recent years.

Second, we hypothesize a change in symptoms discussed during consultations considered psychosocial by GPs. Consultations considered psychosocial by GPs can

contain talk about either psychological, social, or physical symptoms. With the increased focus on diagnosing psychological disorders according to guidelines, we expect an increase of explicit psychological symptoms discussed during consultations, and a decrease of social symptoms (such as marital or work-related problems) that generally do not lead to diagnosing psychological disorders. Third, we hypothesize a shift toward a more structured and focused communication style by GPs in recent years. We expect an increase over time in question asking and giving information or advice by GPs. We also expect less room for patients to talk freely about emotions, and therefore less affect oriented communication by GPs, such as showing empathy. Especially during consultations in which psychosocial problems are not openly discussed, we expect that GPs are less likely to engage in emotion related talk.

2. METHODS

2.1. Videotaped consultations

Consultations in general practice in the Netherlands were videotaped in the period from 1977 to 2008 as part of previous studies on doctor–patient communication^{[20], [21], [22], [23], [24], [25], [26] and [27]}. We included consultations from six previous study samples (1977–1980, 1982–1984, 1989, 1995, 2000–2001, 2007–2008) and assigned these samples to the two periods of interest (prior to clinical guidelines: 1977–1980, 1982–1984 and 1989; versus after introduction of guidelines: 1995, 2000–2001, 2007–2008). The total database of available videotaped consultations consisted of 5184 consultations (1895 consultations in the first period, 3289 consultations in the second period). First, for each consultation, the GP assessed the degree to which psychosocial aspects determined the consultation on a scale from 1 to 5 (1 = completely somatic; 2 = mainly somatic; 3 = both somatic and psychosocial; 4 = mainly psychosocial; 5 = completely psychosocial). This assessment of psychosocial aspects was executed similarly on all study samples (“Can you indicate on a 5-point scale whether psychosocial aspects also play a role in the complaints?”). Second, we specified whether psychological, social or physical symptoms were presented by patients for the consultations that were considered by GPs as completely psychosocial (150 consultations in the first period, 394 consultations in the second period). We used the International Classification for Primary Care (ICPC) codes that were available for all consultations in the database to specify the three symptom groups. Third, we observed and analyzed communicative behavior. Owing to deterioration in the technical quality of some videotaped consultations, we excluded 31 consultations (28 consultations in the first period, 3 in the second period). Moreover, one consultation was excluded because we did not have patient characteristics (e.g. age) of this consultation. Our analyses of verbal communication were conducted on 512 consultations (121 consultation in the first period, 391 consultation in the second period), assessed by the GP as ‘completely psychosocial’.

Total visit durations were timed in seconds for all videotaped consultations in the database.

The studies were carried out in accordance with Dutch privacy legislation. All participating physicians and patients gave their informed consent.

2.2. Measures of communicative behavior

Communication patterns were rated using the Roter Interaction Analysis System (RIAS), which is a widely-used international observation system with proven validity and reliability^[28]. In the RIAS-coding system the communication units are defined as utterances – the smallest discriminable speech segment to which a classification may be assigned. The RIAS distinguishes task-oriented utterances (asking questions, giving information, counseling) from affect-oriented utterances (personal remarks, showing empathy, reassurance). Although different observers were involved in coding the consultations of the datasets, all coders had been extensively trained according to the same training protocol using the RIAS-manual^[29] and^[30]. The manual was updated several times between the different time periods. However, there were no relevant changes in the updated manuals that interfered with the data analyses^[16]. In all study samples, approximately 10% of the observed consultations were coded by two or more coders to calculate inter-rater reliability. The double coding of consultations was done in-between coding. The different coders regularly met and discussed any questions regarding the RIAS coding scheme to minimize discrepancies between coders. The inter-rater reliability of RIAS categories with a mean concurrence higher than 2% was consistently found to be satisfactory; for the study samples 1977–1980 and 1982–1984 we calculated a mean intra class correlation (ICC) of 0.85 (range 0.60–0.98) and for the 2007–2008 sample the mean intra class correlation (ICC) was 0.75 (range 0.25–0.99). In the study samples from 1989, 1995 and 2000–2001 previously calculated reliability coefficients as calculated with Pearson's *r* ranged from 0.57 to 0.94.

2.3. Statistical analyses

To take into account the variation in communication skills between GPs, we used multilevel models with random intercepts (multilevel Poisson regression analysis for count variables). The multilevel models consisted of consultations (level 1) nested within GPs (level 2). The number of consultations per GP in the sample varied between 1 and 15. However, since 80% of the GPs had five or less consultations included in the present study, we could not calculate or report on intraclass correlations. We included dummy variables for both periods (1977–1989 versus 1995–2008) and examined estimated frequencies for the three types (psychological, social and physical symptoms). First, we used multilevel Poisson regression models to estimate frequencies of communication categories by GPs per consultation. In these analyses, we included duration of consultation, as well as patient's age and gender, and GP's age and gender as centered covariates. Second, based on these

estimates we tested whether there were differences in communication categories between the two periods.

3. RESULTS

3.1. Consultation characteristics

Medical and demographic characteristics of the study sample are provided in Table 1. The patients in the second period (1995–2008) were significantly older than those in the first period ($t(510) = 3.59, p \leq .001$). The percentages in gender of patients did not differ significantly between the two periods (Pearson's $\chi^2(1) = 0.82, p = .37$). Mean duration of consultations in the first period was 11 min and 13 s; in the second period consultations had a mean duration of 14 min and 55 s – significantly longer than during the first period ($t(510) = 5.03, p \leq .001$). Moreover, the GPs in the second period (1995–2008) were older ($t(200) = 5.76, p \leq .001$) and had more years of working experience ($t(174) = 3.69, p \leq .001$) compared to the first period (1977–1989). The percentage female GPs was higher in the second period (31% versus 7%) compared to the first period (Pearson's $\chi^2(1) = 10.15, p \leq .01$). To control for differences in consultation and GP characteristics between the two periods, we included these variables as centered covariates in our analyses.

[TABLE 1]

3.2. Changes in number and percentages of consultations considered psychosocial

In the first period, 8% of the total consultations were completely psychosocial according to the GP (see Fig. 1). In the second period, 12% of the consultations were completely psychosocial. Likewise, the percentage of consultations considered mainly psychosocial was higher in the second period (17%) compared to the first period (13%). Furthermore, GPs considered relatively fewer consultations to be completely somatic (34%) or mainly somatic (20%) in the second period compared to the first period (39% completely somatic, 22% mainly somatic). These percentages in the degree to which psychosocial aspects determined the consultation assessed by GPs differed significantly between the two periods (Pearson's $\chi^2(4) = 40.25, p < .001$).

[FIGURE 1]

Within the group of consultations that were assessed as completely psychosocial ($N = 544$), the number and percentages of the three symptom groups (psychological symptoms, social symptoms and physical symptoms) for both periods are displayed in Fig. 2. We found that symptoms discussed during consultations differed significantly between years (Pearson's $\chi^2(2) = 24.90, p < .001$).

The expected increase of explicit psychological symptoms discussed during consultations was not visible from our data. However, in line with our expectations, we found a decrease of social symptoms discussed during consultations considered psychosocial in nature by GPs. The percentage of consultations involving physical symptoms was higher in the second period (56% in 1995–2008 versus 42% in 1977–1989). GPs determined more consultations to be completely psychosocial when only somatic symptoms were discussed during recent consultations.

3.3. Changes in verbal communication by GPs

The estimated frequencies (with 95% confidence intervals) of communicative categories by GPs per consultation for the three consultation types are displayed in Table 2.

[TABLE 2]

We found significant changes in task-oriented communication between the two periods, such as asking questions, and giving information and counseling; GPs gave more biomedical information and counseling – for instance explanations about medication usage – during the second period, in consultations involving psychological symptoms (Chi-square = 11.18, $p \leq .001$) and physical symptoms (Chi-square = 13.66, $p \leq .001$). Consultations involving social symptoms showed a decrease in biomedical information and counseling (Chi-square = 8.41, $p \leq .01$), but an increase in psychosocial questions (Chi-square = 17.39, $p \leq .001$). There was also an increase in psychosocial questions for consultations involving psychological symptoms (Chi-square = 3.86, $p \leq .05$) and in psychosocial information and counseling (psychological: Chi-square = 9.96, $p \leq .01$, social: Chi-square = 4.92, $p \leq .05$, physical symptoms: Chi-square = 11.13, $p \leq .001$).

We found significant changes between the two periods in affect-oriented communication; GPs engaged in more personal remarks ('chit-chat') during the second period in consultations involving physical symptoms (Chi-square = 6.43, $p \leq .05$). Empathy decreased over time when psychological (Chi-square = 9.51, $p \leq .01$) or social symptoms (Chi-square = 6.97, $p \leq .01$) were discussed. GPs also showed less concern and reassurance during recent consultations (psychological: Chi-square = 7.16, $p \leq .01$, social: Chi-square = 25.90, $p \leq .001$, physical symptoms: Chi-square = 22.97, $p \leq .001$).

4. DISCUSSION AND CONCLUSION

4.1. Discussion

During the period 1995–2008, GPs were more likely to consider consultations to be mainly or completely psychosocial by comparison with the period 1977–1989. When looking at the symptoms discussed during consultations that are considered psychosocial in nature by GPs, we found that the percentage of consultations involving psychological symptoms remained the same between the two periods. However, we found a relative increase in physical symptoms and a decline in social symptoms over time. Regarding verbal communication by GPs in these consultations, we found an increase in task-oriented communication (asking questions, giving information and advice). Although personal remarks increased for consultations involving physical symptoms, we found a decline in empathy and reassurance in recent years.

4.1.1. Diagnosing and treating psychological disorders

We expected an increased focus on diagnosing psychological disorders over time. However, the percentage of psychological symptoms in our sample did not change. Although GPs are using national clinical guidelines for psychological problems such as depression and anxiety since the 1990s, they do not necessarily more often apply psychological categorization during their consultations. Studies on ‘mindlines’ (collectively reinforced internalized tacit guidelines) show that GPs rely on informal as well as formal sources and are not merely dependent on clinical guidelines to deal with psychological problems^[31]. Regarding their communication styles, we found that GPs did not ask more biomedical or psychosocial questions in recent years when psychological symptoms were discussed during consultations. However, there was an increase in biomedical information and advice over time. Likely, GPs consult guidelines when providing patients with information and advice on biomedical treatment (e.g. medication) of psychological disorders such as depression. The increase in information and advice, while the number of questions by GPs remained the same over time, indicate a shift in attention from the first half (uncovering patients’ health problem) to the second half of the consultation (decision making process).

4.1.2. GPs’ tasks regarding social problems

In line with our expectations, we found that patients and GPs less often discussed social symptoms during consultations assessed by GPs as completely psychosocial. This finding may be related to changes in GPs’ perceptions about their tasks and responsibilities. In a previous study, it was found that in 2001 GPs less often indicated that dealing with patients’ social problems, such as marital problems or work-related problems, was part of their tasks and responsibilities as compared to 1987^[32]. Social factors, including family situations of patients, were mentioned

explicitly in the tasks and responsibilities as described in 1987 by the Dutch National Association of General Practitioners^[9]. In the revised description of GPs' tasks and responsibilities, that was published in 2012 by the Dutch National Association of General Practitioners and the Dutch College of General Practitioners, family factors were less explicitly mentioned^[33]. When discussing social symptoms, GPs engaged less in biomedical communication but more in psychosocial communication (asking questions and giving information and advice) in recent years. This indicates that GPs' communication styles have become more tailored to social aspects when social symptoms are explicitly presented during consultations.

4.1.3. Dealing with patients' physical presentation of psychosocial issues

We found that GPs more often relate physical symptoms to psychosocial aspects in recent years; possibly they have become more aware of 'hidden' psychosocial problems. Part of these physical symptoms are medically unexplained physical symptoms (MUPS); symptoms that are presented somatically by patients, but cannot be linked by GPs to a physiological cause. Although GPs seem to attribute psychosocial aspects of physically presented symptoms more often, GPs in our study did not engage in more psychosocial questions or more empathy. However, patients with medically unexplained physical symptoms indicate to have a wish for more emotional support during consultations^[34]. A previous study showed that the majority of patients who present their symptoms somatically and do not explicitly mention psychosocial problems were found to readily acknowledge a psychosocial contribution to their distress^[35]. GPs should consider patients' preferences for emotional support and take a more active role in making hidden psychosocial problems more explicit during consultations. A comprehensive biopsychosocial approach in which both somatic and psychosocial aspects are jointly explored is necessary to prevent frustration on both sides (GP and patient) when dealing with medically unexplained physical symptoms^[36].

4.1.4. GPs' responsiveness to emotions

Affective communication has different functions; while personal remarks and 'chit-chat' contribute to fostering the relation between GPs and patients, the function of empathy and reassurance is to respond adequately to emotions^[37]. Our study shows that in recent years, GPs engage more often in personal remarks, but are less responsive to emotions. Previous studies that focused on other GP consultation types found similar declines in empathy^[17] and^[27]. The decrease in empathy expressed by GPs is not specific to consultations that are considered psychosocial; however, it can be argued that attention to emotions is essential to support patients with psychosocial problems. Recent research on doctor–patient communication have established links with placebo effects, acknowledging communicative factors, such as empathy and reassurance, as an important part of the healing process for patients^[38]. As studies on placebo effects and communication have shown, there is a relatively consistent effect

of providing support and reassurance by doctors on patients' health outcomes^[39]. In addition, patients consider empathy to be one of the most important aspects of the doctor–patient interaction when looking at videotaped medical consultations^{[40], [41]} and^[42]. To further investigate GPs' responsiveness to emotions, future studies on GPs' reactions directly following patients' expression of concerns (sequential research methods) could provide more insight on how GPs deal with worries of patients.

4.1.5. Strengths and limitations of the study

A strong point of this study is that we examined consultations using videotaped real-life general practice consultations from 1977 to 2008, enabling a comparison of doctor–patient communication over a thirty year period. Video recording is a valid method of examining doctor–patient communication: the influence of the video recorder on participants is marginal^[43] and^[44]. In addition, videotaped participants were not aware of the fact that the analyses would focus on psychosocial problems. A possible weakness of the study is that different topics can be discussed within one general practice consultation; a patient may present several symptoms, some of which symptoms are unrelated to the psychosocial problem identified by a GP. To ensure that psychosocial problems were the main topic discussed, we selected consultations based on GPs' assessment of the consultation as being completely psychosocial and divided these consultations into three types (psychological, social or physical symptoms) according to the International Classification of Primary Care (ICPC). Another point of attention is that we did not include consultations in which patients were not able to clearly express their psychosocial problems and were therefore not recognized by GPs as being completely psychosocial. However, GPs are often unable to identify psychosocial issues during consultations^[45] and^[46].

Since we did not have data on patients' possible unvoiced agendas during consultations, we had to base our sample on GPs' assessments of psychosocial aspects. Future research should also include patients' assessments of psychosocial issues related to their health problems, in order to examine whether GPs communication styles during consultations differ for identified psychosocial problems versus unrecognized psychosocial problems. Finally, we focused on the communicative behavior of GPs and not on the communication by patients. A rationale for this choice is that developments such as the implementation of clinical guidelines influence GPs' behavior primarily, and can only have an indirect effect on the way patients communicate during consultations.

4.2. Conclusion

Communication during consultations, which are considered psychosocial in nature by GPs, has changed; when comparing consultations prior to and after the implementation of national clinical guidelines in the 1990s, communication styles of GPs have become more task-oriented, characterized by asking questions, giving

information and advice. GPs are less focused on affective communication (empathy and reassurance) in recent years.

4.3. Practice implications

Our study supports a shift in GPs' approach to psychosocial problems; the integrative approach of understanding patients within their personal contexts has been replaced by a more evidence-based approach. The evidence-based approach promotes exploring symptoms in a systematic manner, however, patients in recent years seem to have less room to express emotions freely. We believe that especially during consultations that are psychosocial in nature, GPs should prioritize engaging in affective communication. GPs were previously found to use more emotion-handling skills and engage in more strategies for managing emotional problems after following a training program^[47]. While affective communication can be considered a skill, which can be thought in training, communication is also considered an attitude or 'way of being'^[48]. Therefore, more explicit attention to adopting an 'open' attitude that provides room for patients to talk freely is needed. GPs now face the challenge of integrating evidence-based approaches with understanding patients' personal contexts and giving room to their emotions.

Acknowledgements

We are grateful for the patients and general practitioners who participated in the studies and gave permission to videotape their medical visits. We confirm that all patient/personal identifiers have been removed or disguised so the patients described are not identifiable and cannot be identified through the details of the story. Furthermore, we would like to thank Doutzen Koopmans, Veerle Steenhuis and the coders of previous studies for coding the videotaped consultations, Richard van Kruysdijk for his technical support with the videotaped consultations, and Peter Spreeuwenberg for his statistical advice. This work was supported by the Dutch Ministry of Education, Culture and Science. The previous studies in which the consultations were recorded were financed by the Dutch Ministry of Health, Welfare and Sport, The Netherlands Organization for Health Research and Development (ZonMw), and the research fund of the Innovation Fund of Health Insurers (RVVZ). The funding sources had no involvement in the study design, writing of the report, and the decision to submit the paper for publication.

REFERENCES

- [1] Nederlands Huisartsen Genootschap Commissie Wetenschappelijk Onderzoek. Woudschotenrapport: Rapport over de taak van de huisarts, de zogenaamde Woudschotenmaterie [Woudschoten report: Report on the role of the general practitioner] NHG, Utrecht (1959)
- [2] I.R. McWhinney Are we on the brink of a major transformation of clinical method *Can Med Assoc J*, 135 (1986), pp. 873–878
- [3] H. Lamberts Problem behaviour in primary health care *J R Coll Gen Pract*, 29 (1979), pp. 331–335
- [4] H. Lamberts, S. Meads, M. Wood Classification of reasons why persons seek primary care: a pilot study of a new system *Public Health Rep*, 99 (1984), pp. 597–605
- [5] J.H.M. Van Hoogen, F.J.A. Huygen, J.W.G. Schellekens, J.M. Straat, H.G.M. van der Velden Morbidity figures from general practice 1978–1982 Nijmeegs Universitair Huisartsen Instituut, Nijmegen (1985)
- [6] V.C.L. Tielens Consulten van huisartsen. Een onderzoek naar verschillen [Consultations of general practitioners. An investigation into differences] Katholieke Universiteit Nijmegen, Nijmegen (1987)
- [7] R. Grol To heal or to harm: the prevention of somatic fixation in general practice The Royal College of General Practitioners, London (1988)
- [8] S.H. McDaniel, T. Campbell, D. Seaburn Treating somatic fixation: a biopsychosocial approach *Can Fam Physician*, 37 (1991), pp. 451–456
- [9] Landelijke Huisartsen Vereniging Basistakenpakket van de huisarts [Dutch National Association of General Practitioners. Tasks and responsibilities of the general practitioner] LHV, Utrecht (1987)
- [10] American Psychiatric Association Diagnostic and statistical manual of mental disorders. DSM-IV American Psychiatric Association, Washington (1994)
- [11] .W.J. Van Marwijk, H.G.L.M. Grundmeijer, M.M. Bruerer, H.O. Sigling, J. Stolk, M.G. Van Gelderen et al. NHG-Standaard Depressie [Clinical guideline depression of the Dutch College of General Practitioners] *Huisarts Wet*, 37 (1994), pp. 482–490
- [12] G.J.H. Neomagus, B. Terluin, L.P.J. Aulbers, J. Hekman, F.B. Van Heest, K. Van der Meer et al. NHG-standaard Angststoornissen [Clinical guideline anxiety disorders of the Dutch College of General Practitioners] *Huisarts Wet*, 40 (1997), pp. 167–175 Cited By in Scopus (16)
- [13] NHG-standaarden Nederlands Huisartsen Genootschap (2013) Available from: http://nhg.artsennet.nl/kenniscentrum/k_richtlijnen/k_nhgstandaarden.htm [accessed 12.08.13]
- [14] C.R. Rogers On becoming a person. A therapist's view of psychotherapy Houghton Mifflin, Boston (1961)
- [15] P.S. Byrne, B.E.L. Long Doctors talking to patients. A study of the verbal behavior of general practitioners consulting in their surgeries Her Majesty's Stationery Office, London (1976)
- [16] C. Van Dorp Luisteren naar patiënten. Een analyse van het medisch interview [[Listening to patients. An analysis of the medical interview]] *De Tijdstroom*, Lochem (1977)
- [17] J.M. Bensing, F. Tromp, S. Van Dulmen, A. Van den Brink-Muinen, W. Verheul, F.G. Schellevis Shifts in doctor–patient communication between 1986 and 2002: a study of videotaped general practice consultations with hypertension patient *BMC Fam Pract*, 7 (2006), pp. 62–68
- [18] M. Deveugele, A. Derese, J. De Maeseneer Is GP-patient communication related to their perceptions of illness severity, coping and social support *Soc Sci Med*, 55 (2002), pp. 1245–1253

- [19] M. Deveugele, A. Derese, D. De Bacquer, A. Van den Brink-Muinen, J. Bensing, J. De Maeseneer Is the communicative behavior of GPs during the consultation related to the diagnosis? A cross-sectional study in six European countries *Patient Educ Couns*, 54 (2004), pp. 283–289
- [20] P.F.M. Verhaak Een evaluatie van de samenwerking tussen huisartsen en psycholoog in Capelle aan de IJssel [An evaluation of the cooperation between GPs and psychologist in Capelle aan de IJssel] Nederlands Huisartsen Instituut, Utrecht (1979)
- [21] P.F.M. Verhaak Detection of psychologic complaints by general practitioners *Med Care*, 26 (1988), pp. 1009–1020
- [22] J. Bensing Doctor–patient communication and the quality of care *Soc Sci Med*, 32 (1991), pp. 1301–1310
- [23] J.M. Bensing, M. Foets, J. Van der Velden, J. Van der Zee De Nationale Studie van ziekten en verrichtingen in de huisartspraktijk: achtergronden en methoden [The National Study of diseases and actions in general practice: background and methods] *Huisarts Wet*, 2 (1991), pp. 51–61
- [24] A. Van den Brink-Muinen, P.F.M. Verhaak, J.M. Bensing, O. Bahrs, M. Deveugele, L. Gask et al. Doctor–patient communication in different European health care systems: relevance and performance from the patients' perspective *Patient Educ Couns*, 1 (2000), pp. 115–127
- [25] A. Van den Brink-Muinen, A.M. Van Dulmen, F.G. Schellevis, J.M. Bensing Tweede Nationale Studie naar ziekten en verrichtingen in de huisartspraktijk: oog voor communicatie: huisarts-patiënt communicatie in Nederland [The second National Study of diseases and actions in general practice: an eye for communication: doctor–patient communication in the Netherlands] NIVEL, Utrecht (2004)
- [26] A. Van den Brink-Muinen, S.M. Van Dulmen, H.C. De Haes, A.P. Visser, F.G. Schellevis, J.M. Bensing Has patients' involvement in the decision-making process changed over time *Health Expect*, 9 (2006), pp. 333–342
- [27] J. Noordman, P.F.M. Verhaak, I. Van Beljouw, S. Van Dulmen Consulting room computers and their effect on general practitioner–patient communication *Fam Pract*, 27 (2010), pp. 644–651
- [28] D. Roter, S. Larson The Roter interaction analysis system (RIAS): utility and flexibility for analysis of medical interactions *Patient Educ Couns*, 46 (2002), pp. 243–251
- [29] D.L. Roter The Roter method of interaction process analysis (unpublished manual). Baltimore (1987)
- [30] D.L. Roter The Roter method of interaction process analysis (unpublished manual). Baltimore (1993)
- [31] J. Gabbay, A. Le May Evidence based guidelines or collectively constructed 'mindlines'? Ethnographic study of knowledge management in primary care *Brit Med J*, 329 (2004), pp. 1013–1017
- [32] M.J. Van den Berg, E.D. Kolthof, D.H. De Bakker, J. Van der Zee Tweede nationale studie naar ziekten en verrichtingen in de huisartspraktijk: de werkbelasting van huisartsen [The second National study of diseases and action in General Practice: workload of general practitioners] NIVEL, Utrecht (2004)
- [33] Landelijke Huisarts Vereniging Nederlands Huisartsen Genootschap. Toekomstvisie huisartsenzorg. Modernisering naar menselijke maat (2013) Available from: <http://www.tkv2022.nl/> [accessed 12.08.13]
- [34] P. Salmon, A. Ring, C.F. Dowrick, G.M. Humphris What do general practice patients want when they present medically unexplained symptoms, and why do their doctors feel pressurized *J Psychosom Res*, 59 (2005), pp. 255–262

- [35] L.J. Kirmayer, J.M. Robbins Patients who somatize in primary care: a longitudinal study of cognitive and social characteristics *Psychol Med*, 26 (1996), pp. 937–951
- [36] J.M. Bensing, P.F.M. Verhaak Somatisation: a joint responsibility of doctor and patient *Lancet*, 367 (2006), pp. 452–454
- [37] H. De Haes, J. Bensing Endpoints in medical communication research, proposing a framework of functions and outcomes *Patient Educ Couns*, 74 (2009), pp. 287–294
- [38] J.M. Bensing, W. Verheul The silent healer: the role of communication in placebo effects *Patient Educ Couns*, 80 (2010), pp. 293–299
- [39] Z. Di Blasi, E. Harkness, E. Ernst, A. Georgiou, J. Kleijnen Influence of context effects on health outcomes: a systematic review *Lancet*, 357 (2001), pp. 757–762
- [40] C.A. Roberts, M.S. Aruguete Task and socioemotional behaviors of physicians: a test of reciprocity and social interaction theories in analogue physician-patient encounters *Soc Sci Med*, 50 (2000), pp. 309–315
- [41] J.M. Bensing, M. Deveugele, F. Moretti, I. Fletcher, L. Van Vliet, M. Van Bogaert et al. How to make the medical consultation more successful from a patient's perspective? Tips for doctor and patients from lay people in the United Kingdom, Italy, Belgium and the Netherlands *Patient Educ Couns*, 84 (2011), pp. 287–293
- [42] M.A. Mazzi, J. Bensing, M. Rimondini, I. Fletcher, L. Van Vliet, C. Zimmerman et al. How do lay people assess the quality of physicians' communicative responses to patients' emotional cues and concerns? An international multicentre study based on videotaped medical consultations *Patient Educ Couns* (2011)
<http://dx.doi.org.proxy.library.uu.nl/10.1016/j.pec.2011.06.010>
- [43] E. Arborelius, T. Timpka In what way may videotapes be used to get significant information about the patient–physician relationship *Med Teach*, 12 (1990), pp. 197–208
- [44] T. Coleman Using video-recorded consultations for research in primary care: advantages and limitations *Fam Pract*, 17 (2000), pp. 422–427
- [45] A.F. Wright Unrecognized psychiatric illness in general practice *Br J Gen Pract*, 46 (1996), pp. 327–328
- [46] R. Martinez, S. Reynolds, A. Howe Factors that influence the detection of psychological problems in adolescents attending general practices *Br J Gen Pract*, 56 (2006), pp. 594–599
- [47] D.L. Roter, J.A. Hall, D.E. Kern, L.R. Barker, K.A. Cole, R.P. Roca Improving physicians' interviewing skills and reducing patients' emotional distress. A randomized clinical trial *Arch Intern Med*, 155 (1995), pp. 1877–1884
- [48] K. Zoppi, M. Epstein Is communication a skill? Communication behaviors and being in relation *Fam Med*, 34 (2002), pp. 319–324

TABLES AND FIGURES

Table 1
Medical and demographic characteristics of the study sample (consultations considered completely psychosocial by GPs)

Patient characteristics	1977–1989 (N = 121)				1995–2008 (N = 391)			
	Mean	sd	Range		Mean	sd	Range	
Age	38.2	16.0			44.6	17.7		
Years								
Gender								
Male	45	37%			128	33%		
Female	76	63%			263	67%		
Symptoms and diagnoses (based on ICDPC chapters) ^{a,b}								
P: Psychological	51	34%			142	36%		
Z: Social problems	37	35%			46	12%		
A: General and unspecified	33	22%			90	23%		
L: Musculoskeletal	21	14%			90	23%		
R: Respiratory	19	13%			42	11%		
N: Neurological	16	11%			43	11%		
X: Female genital system and breast	14	9%			19	5%		
S: Skin	13	8%			35	9%		
K: Circulatory	10	7%			45	11%		
D: Digestive	9	6%			55	14%		
H: Ear	4	3%			11	3%		
F: Eye	4	3%			9	2%		
U: Urology	3	2%			7	2%		
T: Endocrine, metabolic and nutritional	2	1%			11	3%		
B: Blood, bloodforming organs, lymphatics, spleen	1	1%			7	2%		
Y: Male genital system	1	1%			4	1%		
W: Pregnancy, childbirth, family planning	0	0%			10	3%		
GP characteristics ^c	1977–1989 (N = 42)				1995–2008 (N = 162)			
Age	Mean	sd	Range		Mean	sd	Range	
Years	40.6	7.4	29–56		47.3	6.5	32–62	
Gender								
Male	39	93%			111	69%		
Female	3	7%			51	31%		
Experience	Mean	sd	Range		Mean	sd	Range	
Years working as a GP	12.3	7.0	0–26		17.7	8.4	0–34	

^a Patients presented 1–4 complaints and not all patients explicitly presented their psychological or social problems; therefore, the percentages of the different chapters do not count up to 100%.

^b ICDPC: International Classification for Primary Care.

^c Age and working experience was missing for 2 GPs in the period 1977–1989. Working experience was missing for 26 GPs in the period 1995–2008. These data could not be recovered.

Fig. 1. Degree to which psychosocial aspects determined the consultation according to GPs.

Fig. 2. Symptoms discussed during consultations that are considered completely psychosocial in nature.

Table 2
Estimated frequencies of RIAS communication categories by GPs.

		1977–1989 ^{a,b} (N = 121)		1995–2008 (N = 391)		Chi ^{2c}
		Estimate	95% CI	Estimate	95% CI	
<i>Task-oriented communication</i>						
Biomedical questions	"How often do you experience pain?"	4.9 3.2 6.1	3.7–6.4 2.3–4.3 4.7–8.0	4.6 3.0 7.0	4.0–5.2 2.4–3.8 6.2–8.0	0.16 0.05 0.81
Biomedical info & counseling	"Take your medicines 3 times a day"	15.3 13.9 20.9	12.6–18.6 11.3–17.1 17.2–25.3	22.5 9.5 31.8	20.4–24.7 8.3–11.0 29.0–34.8	11.18*** 8.41** 13.66***
Psychosocial questions	"Do you feel anxious about it?"	6.2 4.4 3.0	4.8–8.0 3.3–5.8 2.3–4.0	8.3 9.1 3.8	7.3–9.5 7.6–10.9 3.3–4.3	3.86* 17.39*** 1.75
Psychosocial info & counseling	"You need to get out and meet other people"	5.3 12.0 2.7	3.9–7.3 8.8–16.4 2.0–3.8	9.6 18.4 5.2	8.2–11.1 15.3–22.0 4.4–6.0	9.96** 4.92* 11.13***
<i>Affect-oriented communication</i>						
Personal remarks, 'chit-chat'	"How was your holiday?"	4.2 4.9 3.5	3.2–5.6 3.7–6.6 2.6–4.6	5.6 4.8 5.2	4.9–6.4 3.9–5.8 4.6–5.9	2.97 0.03 6.43*
Empathy, verbal attention	"You must be worried"	3.2 2.9 2.0	2.2–4.8 1.9–4.4 1.3–3.1	1.6 1.4 1.3	1.3–2.0 1.0–2.0 1.0–1.6	9.51** 6.97** 3.56
Concern, reassurance	"I really think this will help"	2.5 2.4 3.4	1.8–3.5 1.7–3.5 2.4–4.7	1.4 0.6 1.3	1.2–1.8 0.4–0.9 1.1–1.6	7.16** 25.90*** 22.97***

^a Estimated with multilevel Poisson regression models.

^b Included covariates: consultation duration, age of patient, gender of patient, age of gp, gender of gp (working experience was not included in the models because of multicollinearity).

^c Significant Chi²-tests indicate significant differences between the two periods * $p < .05$, ** $p < .01$, *** $p < .001$.