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‘Let Mum have her say’: turntaking in doctor–parent–child communication

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Abstract

Recent legislation in the Netherlands requires that children should play a part in decision making regarding their own health care. So far, however, little attention has been given to the child’s participation in medical interviews. In order to get a grip on aspects of asymmetry and control in doctor–parent–child communication, the present study explores the turntaking patterns in this triad at the general practitioner’s surgery, and makes a comparison over the years. Videotaped observations of 106 medical interviews taken over a period of almost 20 years have been analyzed by means of the Turn Allocation System. The results show that the child’s control in the medical consultation is rather limited, though, over the years, the child participates more actively. The child’s conversational contribution appears to be strongly related to the age of the child. An important finding is the difference in the way GP and parent accommodate their turntaking patterns to the child; parental control appears to be constant over the years, and is not related to the age of the child, whereas the GP is considering the child’s age. The results are discussed in terms of implications for medical practice and health education. © 2000 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Doctor–parent–child communication; Doctor–parent–child triad; Turntaking; Asymmetry; Control

1. Introduction

Traditionally, children did not have a say in medical consultations. Most studies on medical communication have concentrated on the dyad doctor–adult patient, and the child’s contribution to the medical encounter has hardly been considered a

point of interest [1–5]. However, recent legislation, such as the Medical Treatment Agreement (WGBO) in the Netherlands, requires patients to participate actively in decision making concerning illness and treatment [6,7], and it is increasingly acknowledged that children too should be involved in decisions about their own health care [8–11].

The issue of asymmetry in doctor–patient interactions is one of the key-themes in the field of medical discourse [12–15]. The asymmetrical character is reflected, amongst other things, in the way the

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communication between doctor and patient is structured in terms of conversational contribution and processes of turn-allocation [14,16–19]. In the case of a juvenile patient, it is a matter of double asymmetry, the physician embodying both institutional and adult authority. Adult–child discourse is inherently not symmetrical, because of differences in status and in domain specific knowledge, including communicative competence [20,21].

Over the last three decades some important changes have taken place in doctor–patient communication in general. The development of the patient-centred approach and demands regarding shared decision making and informed consent evoked a shift in the participant roles in medical consultations [6,7,22–25]. As a result, the nature of the doctor–patient relationship has developed from a very asymmetrical towards a more egalitarian relationship, and patients have become more emancipated and autonomous over the years [26–28]. One might hypothesize that these changes would also affect the interaction in the doctor–parent–child triad.

The few studies that did pay attention to doctor–child communication, suggest that the child’s control in medical conversation is rather limited [29]. During medical encounters children only occupy a small portion of the discourse space [2,4,30,31], although the child’s contribution seems to increase over the years [32,33]. Physicians tend to elicit information from children, but exclude them from diagnostic and treatment information [34–36]. The doctor’s conversational style in interaction with the child is, by and large, restricted to the affective domain, such as social behaviour and joking [1,5,30,31]. In addition, children often seem to be excluded from direct interaction with the doctor by a controlling parent [4]. This negation of the child as an active participant does not seem to match with the development towards ‘shared decision making’, with an increased preference for the child’s participation in treatment decisions [8–11].

Changes in doctor–patient communication, and the specific role of the child in medical interaction can also be seen as an expression of major social changes that have taken place. Parenting has become less repressive and authoritarian, and adult–child interactions are increasingly characterized by a great-

er openness to the child [37,38]. The preference of a growing participation of the child is in line with the development of children as fellow citizens [39].

This change has been confirmed in developmental cognitive studies that underline that children can play a far more active role in taking initiatives when negotiating the aim and process of the interaction with adults than has been assumed [40,41]. Further, children also appear to be able to understand more about health and illness concepts [42–45]. A more direct communication between physician and child would contribute to a better relationship in terms of satisfaction and compliance, and a better health experience [1,43,44].

This study focuses on the child’s participation in doctor–parent–child interactions during the medical interview. Since little is known yet about the specific role of the child in this triad, our first objective is to provide a detailed description of the turntaking patterns in doctor–parent–child communication. Turntaking in conversation is an important element in defining and establishing relationships, and presents the opportunity to explore the amount of asymmetry between participants [14,16,17]. A useful distinction for conversational practise is made by Linell et al. [17] and Linell and Luckmann [14], by formulating four categories of control or dominance: ‘quantitative control’ (in terms of conversational contribution); ‘turntaking control’ (in terms of turn allocation and turntaking); ‘semantic control’ (in terms of the topic of conversation); and ‘strategic control’ (in terms of strategic interruptions). In this study we will focus on aspects of quantitative control, turntaking control, as well as strategic control.

Our second aim is to look for changes in the turntaking patterns. Considering the developments in doctor–patient communication in general, and the changes in adult–child interaction during recent decades, it seems relevant to make a comparison over the years. One might expect a less controlling GP and parent in the course of time.

In addition to the difference in participant status, the child’s communicative competence may influence the extent of his/her participation in medical conversation. Communicative competence, or pragmatic competence, implies conversational logic and the understanding of conversational structure, especially the ability to respond to questions and direc-

tives [46]. These conversational skills develop with age, and school-age children gradually learn the appropriate use of turntaking devices [21,47–49]. As conversational skills increase with age, as well as children's concepts of health and illness, one might expect older children to participate more substantially in the medical interview.

Summarizing, the following research questions will be addressed in this study.

1. How can the turntaking patterns in doctor–parent–child communication be characterized in terms of quantitative, turntaking, and strategic control?
2. Have any changes taken place in these turntaking patterns over the years?
3. How does the child's age affect turntaking in this triad?

2. Method

2.1. Sample characteristics

This study is based on 106 video recordings of medical interviews in the GP's surgery. All selected interviews concerned the triad doctor–parent–child, with the child visiting the GP for minor complaints, classified as either somatic (such as bronchitis, earache or stomach-ache) or psychosocial (such as headache, rash or bed-wetting). In the Dutch health care system, the general practitioner (GP), comparable to a family physician, has a gatekeeping role; patients do not have access to specialists or hospital care without referral, and 90% of all complaints are treated by GPs [50]. One in six consultations of a GP concerns a child under the age of 16, and in the Netherlands the GP is the first responsible health care provider for children, including primary care and preventive care [50,51]. The videos were drawn from a large collection ($n = 2500$) of medical interviews, collected since 1975, held by the Netherlands Institute of Primary Health Care (NIVEL). In 425 cases a child was involved; a first selection was made based on rigorous demands of technical quality. This was necessary since many of the earlier videos were of poor quality. The application of these and other relevant selection criteria (a triad of

doctor–parent–child, and the age of the child: 4–12 years), supplemented by matching type of complaint, resulted in a dataset of 106 consultations, containing a comparison over three periods: 1975–1978 ($n = 36$), 1988–1989 ($n = 36$), and 1993 ($n = 34$). As none of the participants participated in more than one period, this study can be typified as a comparative study, though not longitudinally in the strict sense. All participants involved were of Dutch origin. In the majority of the consultations (83%), the child was accompanied by the mother. The child's age was between 4 and 12 (mean age 8), and boys and girls were equally involved. All consultations concerned a new episode with a new complaint, and all children had previously seen the GP. When a second child was present, verbalizations to this other child were not included as part of the data. Fifty-eight GPs participated in the study; 22 in period 1 (mean 1.6 consultation), 15 in period 2 (mean 2.4 consultation), and 21 in period 3 (mean 1.6 consultation), the majority being male (91%). Table 1 shows an overview of the patient characteristics.

2.2. Duration

The duration of the consultation was measured in seconds. Consultations were deemed to start and finish upon the initiation and cessation of the verbal interaction between participants. Interruptions, such as phone calls, or practice staff entering the consulting room were considered to be components of normal consultation and thus included. Not included was time spent on complaints of the parent or siblings.

2.3. Coding system

The sequential patterns of turntaking were analyzed using the Turn Allocation System (TAS), based on the work of Aronsson and Rundström [4]. The unit of analysis was the 'turn', generally defined as 'what one says between two moments of silence' [52,53]. Along this definition, a turn can comprise one or more utterances; an utterance is defined as the smallest distinguishable speech segment, varying from a single word, a clause, or a complete sentence. All verbal turns of the three participants, like questions, remarks, or directions, have been analyzed in

Table 1
Characteristics of child patients per consultation

	Period 1 1975–1978 <i>n</i> = 36		Period 2 1988–1989 <i>n</i> = 36		Period 3 1993 <i>n</i> = 34		Total <i>n</i> = 106	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Age								
4–6	10	28	14	40	13	38	37	35
7–9	11	30	11	30	11	32	33	31
10–12	15	42	11	30	10	30	36	34
Sex								
Male	19	53	18	50	14	41	51	48
Female	17	47	18	50	20	59	55	52
Complaint								
Somatic	25	70	22	61	17	50	64	60
Psychosocial	11	30	14	39	17	50	42	40

terms of their initiatory and responsive character, i.e. in terms of initiative, allocation, and response. For example, for all responses to the initiatives the GP explicitly directed to the child (the ‘child allocated turns’: CATs), an analysis was made of who responded to the GP’s initiatives. Aronsson and Rundström were merely interested in the child allocated turns of the physician. However, in our study, the TAS analysis has been expanded to cover all participants: ‘parent allocated turns’ (PATs), ‘doctor allocated turns’ (DATs), and to ‘both participants allocated turns’ (BATs). The BATs were added to the observation system in those cases where the speaker addresses both other participants simultaneously, or in cases where it is not clear to whom the speaker is talking. The combination of three possible initiators (GP, parent, child), and three possible allocators (each of the two others of the triad separately or both together), results in a coding system of nine categories (see Table 3).

For assessing the sequential patterns with the TAS, all 106 medical interviews were transcribed in extenso, according to ethno-methodological rules, and adapted for the aim of this study [54,55]. Non-verbal communication was noted as far as it was relevant to the coding (especially eye-contact). Before coding all utterances of doctor, parent and child, the medical interview was divided into three segments: the medical history, the physical examination,

and the conclusion segment (diagnosis and prescription). This sequential pattern is characteristic of medical interviews [12]. In addition, the transcripts were segmented into turns, in accordance with the definition above. Turns included all talk explicitly directed at a specific person as indicated by e.g. first-naming and second-person singular form of address, the politeness form (the French ‘vous’, in Dutch ‘u’), and eye-contact. This resulted in a dataset of 8373 units. The intercoder reliability, based on ratings of 10 interviews by two independent raters, assessed by Cohen’s kappa was sufficient (0.69 on average; items more than 5% present).

2.4. Statistical techniques

Descriptive statistics were used to measure the conversational contributions of the three participants, in terms of initiatives, allocations and responses. Means of the dependent variables were calculated per consultation and consultation segment. Analysis of variance (ANOVAs) revealed no significant interaction effects on the independent variables. Next, for calculating the main effects, one-ways and multiple range tests (Bonferroni) on the dependent variables were performed, breaking down results by period, type of complaint, child’s age, and participant’s gender.

3. Results

3.1. Duration

The mean duration of the 106 consultations was 6.53 min (S.D. = 2.48), and increased over the years (5.33 vs. 7.22 vs. 7.44; $F = 5.77$, $P < 0.01$). Only in the first period did the somatic consultations take significantly less time than the psychosocial consultations (4.42 vs. 7.24; two-sided t -test $t = -2.81$, $P < 0.01$). The increase in duration over the years was associated with a longer duration of the somatic consultations in the course of time (4.43 vs. 6.53 vs. 7.21; $F = 6.37$, $P < 0.01$). With respect to the child's age and the participant's gender, no major differences in the mean duration were found.

3.2. Initiatives

First, the participants' relative conversational contribution during a consultation was measured. As Table 2 shows, the physician and the parent took the greater number of the initiatives; the child's contribution was restricted to 9.4%. A closer look at the segments of the consultation revealed that the physician took most initiatives while examining the child (medical history: 48.6% vs. medical examination: 55.8% vs. conclusion: 53.2%; $F = 5.63$, $P < 0.01$), whereas the parent took most initiatives during the phase of medical history (42.2% vs. 36.0% vs. 38.2%; $F = 4.25$, $P < 0.05$). The number of child initiatives was about the same in the three segments of the consultation.

Over the years, there was an increase in the child's initiatives, especially between the first and the second period (7.9% vs. 11.7% vs. 8.5%; $F = 2.99$, $P < 0.05$), mainly during the physical examination.

The age of the child appeared to be related to the child's conversational contribution, although not significant at 5% level; the older the child, the more s/he participated in the interview (age 4–6: 7.4%, age 7–9: 9.9%, age 10–12: 10.9%; $F = 2.98$, $P = 0.09$). No main or interaction effects were found regarding the number of initiatives of the participants and the type of complaint, nor with the participant's gender.

3.3. Initiatives combined with allocation

The next step was to determine the patterns of turn allocation: who was talking to whom? The linking of the initiatives to the allocations of the turns provided a picture of the amount of communication between the three interlocutors. Table 3 shows the results of this linking, specified for each participant over the three periods.

The GP allocated most turns to the parent (mean 35.6%), especially during the conclusion segment of the consultation (medical history: 28.5%, medical examination: 28.5%, conclusion: 42.2%; $F = 22.73$, $P < 0.001$). In only 12.9% of the turns did the GP directly address the child, mainly during the physical examination (segment 1: 14.0%, segment 2: 23.8%, segment 3: 9.6%; $F = 20.60$, $P < 0.001$). In five out of 106 consultations the GP did not allocate a single turn to the child. In only 2.7% of the turns did the

Table 2
Percentage of verbal turn initiatives per participant

	Period 1 1975–1978 <i>n</i> = 2214	Period 2 1988–1989 <i>n</i> = 3149	Period 3 1993 <i>n</i> = 3010	Total <i>n</i> = 8373	<i>F</i> -value	<i>P</i>
Child	7.9	11.7 ^a	8.5	9.4	2.99	0.05
Adult	92.1	88.3 ^b	91.5	90.6	2.99	0.05
Adults split up:						
Doctor	51.1	50.1	52.4	51.2		
Parent	41.0	38.2	39.1	39.4		

^a Period 1/2: $P = 0.07$.

^b Period 1/2: $P = 0.007$.

Table 3
Percentage of verbal turn initiatives combined with allocation over the years

Initiator	Allocation	Period 1 1975–1978 <i>n</i> = 2214	Period 2 1988–1989 <i>n</i> = 3149	Period 3 1993 <i>n</i> = 3010	Total <i>n</i> = 8373	<i>F</i> -value	<i>P</i>
Doctor	Parent	36.8	32.4	37.8	35.6	2.56	0.08
	Child	11.4	14.6	12.6	12.9		
	Both	2.9	3.1	1.9	2.7		
Parent	Doctor	35.3	32.4	35.0	34.2	3.66	0.05
	Child	5.2	5.2	3.9	4.7		
	Both	0.5	0.6	0.3	0.5		
Child	Doctor ^a	3.7	6.6	5.4	5.3	4.90	0.01
	Parent	2.4	2.3	2.3	2.3		
	Both ^b	1.8	2.8	0.8	1.8		

^a Significant at 0.05 level: period 1/2.

^b Significant at 0.05 level: period 2/3.

GP address parent and child simultaneously, mostly during medical history taking. Over the years, there was a tendential decrease of GP's turns allocated to the parent in the second period, followed by an increase in the third period (36.8 vs. 32.4% vs. 37.8%; $F = 2.56$, $P = 0.08$). On average, the proportion of child allocated turns by the GP hardly changed over the years. Only in the group of children aged 10–12, was there a significant increase in the GP's CATs in the second period (period 1: 11.4%, period 2: 21.5%, period 3: 18.1%; $F = 3.29$, $P < 0.05$).

Most turns by the *parent* were directed at the GP (mean 34.2%), especially during the segment of medical history taking. Only in 4.7% of the turns did the parent directly address the child, mainly during

the conclusion segment. Over the years, the patterns of turn allocation of the parent appeared to be very constant.

The *child* allocated most turns to the GP, mainly during the medical history segment (segment 1; 6.7%, segment 2: 5.1%, segment 3: 3.8%; $F = 3.91$, $P < 0.05$). The child addressed the parent in 2.3% of the turns, mainly during the last segment of the consultation. Only in 1.8% of the turns did the child address both adult participants simultaneously. In the second period, the child addressed the GP more directly, and directed more turns at GP and parent together. The child's turn allocations to the parent did not change in the course of time.

The turn allocations of doctor and child were strongly associated with the child's age. Table 4

Table 4
Percentage of verbal turn initiatives combined with allocation by the age of the child

Initiator	Allocation	Age 4–6	Age 7–9	Age 10–12	<i>F</i> -value	<i>P</i>
Doctor	Parent ^a	39.7	35.0	32.1	4.85	0.01
	Child ^b	10.1	12.1	16.4		
	Both ^c	1.2	3.3	3.5		
Parent	Doctor	35.8	33.8	32.9	7.66	0.001
	Child	5.3	5.5	3.6		
	Both	0.5	0.3	0.5		
Child	Doctor ^d	3.3	4.9	7.6	8.52	0.001
	Parent	2.1	2.8	1.9		
	Both	1.9	2.2	1.3		

^a Significant at 0.05 level: group 1/3.

^b Significant at 0.05 level: group 1/3.

^c Significant at 0.05 level: group 1/2 and group 1/3.

^d Significant at 0.05 level: group 1/3.

shows an overview of the turn allocations in relation to the child’s age.

The child’s age appeared to be a strong indicator for the GP’s allocation of turns: the older the child, the more the GP addressed the child directly, or together with the parent. In addition to this, the GP directed fewer turns at the parent as the child’s age increased.

Contrary to expectations, the parent did not seem to take the child’s age into account; the number of child allocated turns did not vary with the child’s age.

The proportion of doctor allocated turns of the child varied with the child’s age; the older the child, the more directly s/he addressed the GP. The above mentioned increase of the child’s doctor allocated turns in the second period was found only to be significant with the children aged 10–12 (period 1: 4.7%, period 2: 9.8%, period 3: 9.5%; $F = 5.18$, $P < 0.01$).

No main or interaction effects were found regarding any of the participant’s turn allocations and the type of complaint, nor with the participant’s gender.

3.4. Sequential patterns

The final step in the analysis was to look at the reaction patterns: how were the responses to the different types of turn allocation? Fig. 1 shows the verbal responses to the turns the GP directed at the child.

As stated above, the proportion of the GP’s child allocated turns was limited to 12.9%. However, in 53.9% of these turn allocations it was the parent who interfered by giving a response to the doctor. The next fragment provides an example of parental interference: [Fragment 1: the GP explicitly addresses a 10-year-old girl, and the mother repeatedly tries to take over the turn]

GP: Hello Rose, tell me what’s up
 Child: (pause)
 Parent: well (pause), Rose has not been feeling well for quite a long time
 GP: oh ((is looking at Rose))
 Parent: she has a sore throat
 Child: I have a sharp PAIN over here
 Parent: yes (pause), and last week she (interrupted)
 Child: last WEEK?
 Parent: let MUM have her say!

In 21.1% of these interferences both parent and child responded to the GP’s CAT, and in 32.8% the parent reacted alone. Over the years there were no changes in these sequential patterns. Again, the child’s age appeared to be an important factor; in the group of children aged 10–12 years, the pattern of the parent responding alone was limited to 23.2% (age 4–6: 36.3%, age 7–9: 39.8%, age 10–12: 23.2%; $F = 3.05$, $P < 0.05$). In addition, the older child tried to enlarge its contribution by responding more itself to the GP (age 4–6: 42.1%, age 7–9: 43.4%, age 10–12: 52.3%; $F = 2.34$, $P = 0.09$). There were no changes in the response patterns of the GP’s child allocated turns, nor variation related to the segment of the consultation, the type of complaint, or the participant’s gender.

Looking at the reaction patterns to the turns the GP and parent allocated to each other, the adult allocated turns, quite a different picture emerged (see Fig. 2).

In these adult interactions, the dominant reaction pattern was that the adult is responding alone; the child only interfered in 4.7% of these turn allocations. In the course of time, the amount of child interferences increased significantly in the second period (3.9% vs. 6.9% vs. 3.2%; $F = 4.58$, $P <$

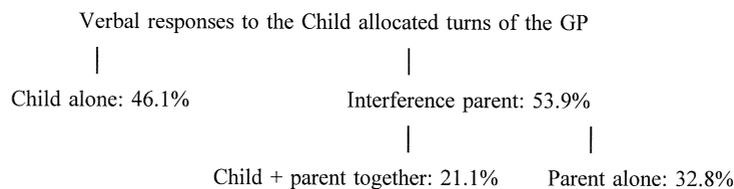


Fig. 1. Verbal responses to the child allocated turns of the GP.

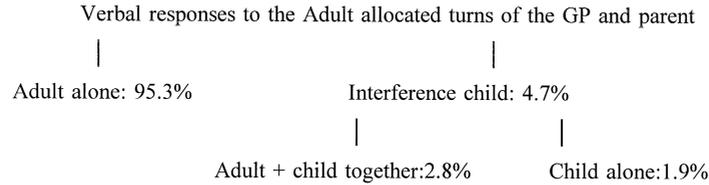


Fig. 2. Verbal responses to the adult allocated turns of the GP and parent.

0.01), especially by responding alone (0.9% vs. 3.2% vs. 1.5%; $F = 5.81$, $P < 0.01$). These interferences were strongly associated with the child's age; older children interrupted more than the younger ones (age 4–6: 2.1%, age 7–9: 5.6%, age 10–12: 6.6%; $F = 6.63$, $P < 0.01$), especially by responding together with an adult participant.

A more detailed analysis showed that the child was more likely to interfere during the doctor allocated turns of the parent. As Fig. 3 shows, the dominant reaction pattern to the doctor allocated turns of the parent was that of the GP responding alone.

The child interfered in about 5.5% of these turn allocations. The next fragment refers to a protesting interference by a child: [Fragment 2: the child believes that the reason for consulting the GP has to do with her knee, which is damaged]

Parent: She is down again, the headmaster of her school came over to complain

GP: Gee (pause)

Parent: and when (interrupted)

Child: Oh, nice to hear THAT now!

Over the years, the child's interference increased significantly in the second period (period 1: 4.5%, period 2: 8.4%, period 3: 3.3%; $F = 4.88$, $P < 0.01$), mainly by responding alone. The two older groups were more interfering than the group aged 4–6 (age

4–6: 2.7%, age 7–9: 6.2%, age 10–12: 7.7%; $F = 4.70$, $P < 0.01$), mainly by responding together with the GP.

4. Discussion

The first objective of this study was to characterize the turntaking aspects in the doctor–parent–child triad. The results show that the child's control in the medical interview at the general practitioner's is rather limited. In terms of Linell and Luckmann [14], we have to conclude that both adult participants possess the quantitative as well as the turntaking control in this kind of medical encounter, whereas the parent seems to be in strong strategic control. The results regarding *quantitative control* differ somewhat from the findings of previous studies on the distribution of conversational participation in medical encounters. Regardless of the dyadic or triadic character of these studies, the physician's contribution was about 60% [29], whereas in our study the GP's participation is about 51%. The child's conversational contribution to the medical encounter is limited to 9.4%, whereas the communication between doctor and child (including child–doctor communication) is about 18.2% (see Table 3). This amount of child participation is in accordance with previous studies [32,33], and somewhat lower

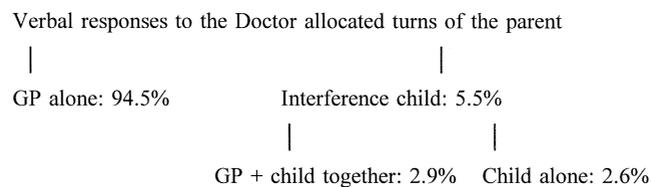


Fig. 3. Verbal responses to the doctor allocated turns of the parent.

than the 14% reported in Pantell's study [1], but higher than Aronsson and Rundström (8%) [4], and Van Dulmen (4%) [31]. These differences can possibly be explained by differences in the setting of the studies (pediatric consultation versus general practitioner's practice), and the mean age of the children involved (Van Dulmen: mean age 5.3; Pantell et al., Aronsson and Rundström, and present study: mean age about 8.5). By allocating most turns to each other, both adult participants are in strong *turntaking control*. Analysis of the responses to the various forms of turn allocation reveals that it is the parent in particular who is responsible for the exclusion of the child. Evidently, it is the parent who is in *strategic control* by interfering in more than half of the turns the GP explicitly directs at the child. In the mean time, the child, and especially the older child, tries to enlarge its contribution by interfering in the doctor allocated turns of the parent.

The results reveal a strong relationship between the segment of the consultation and the turntaking patterns of the participants. Our findings are in line with previous research [35], and show that, although the GP addresses the child frequently in the segment of medical-history-taking in order to obtain information, during the conclusion segment the discussion and advice regarding the treatment are primarily directed at the parent. The physical examination occupies a special place; in this segment the GP addresses the child most directly (e.g. by giving directives such as: 'well, show me your nasty ear'). At the same time, the increase of the child's conversational contribution mainly took place during this segment of the consultation. Obviously, the GP is in strong control during the physical examination, which forces the parent to step aside. This may provide the child more room to communicate directly with the GP. The discrepancy, however, of the GP considering the child old enough to provide information, but not capable of discussing treatment decisions, does not seem to have diminished over the years. This contrasts noticeably with recent research that states that children understand more about medical issues than has generally been assumed, and that even young children are capable of understanding health and illness concepts [42–45]. Nor does this discrepancy seem to match the demands regarding shared-decision making and informed consent

[6–11,23]. From the perspective of patient-centred care, the child's voice in the consultation should be as important as the parent's.

This study began with the premise that, in accordance with changes in doctor–patient communication and adult–child interaction, turntaking patterns in the doctor–parent–child triad would have changed *over the years*. Our data show that, in the course of time, the (older) child participates more actively in the medical interview by taking more initiatives towards the GP or GP and parent together, and by interfering more in adult interaction. At the same time, the GP tends to allocate fewer turns to the parent. In spite of these changes, the child's participation level in the medical interview is not very high. These changes do not continue in the third period; only the older children showed increased participation in the last period. Possibly the fact that only 4 years have passed between periods 2 and 3 is to be held responsible. We might expect that if the time between periods 2 and 3 had been longer, the development of increased participation by the child would have continued. Another explanation refers to differences in the GP's age and communication-training activities for the three groups. Data about these GP characteristics, however, were not available. As has been mentioned already, the turntaking patterns of the parent appear to be very constant over the years.

In line with the expectations, the child's *age* appears to be a very strong predictor for the child's participation; older children take more initiatives themselves, and at the same time the GP addresses the child more directly as the child's age increases, by allocating fewer turns to the parent. These results sustain previous findings [1,31–33]. Obviously, the variable 'age' tones down the effects of the variable 'time'; the changes over the years apply above all to the group of children aged 10–12.

An important finding of this study is the remarkable difference in the way the adult participants take into account the child's age. Apparently, the GP and the parent differ fundamentally in accommodating their conversational contributions to the child. The GP is considerate to the child's cognitive development, by addressing more directly the older child and allocating fewer turns to the parent as the child's age increases. As for the parent, the child's cognitive development does not seem to play a part at all;

parental control is constant over the years, regardless of the child's age.

The increase in the GP's child-orientation is in accordance with a general shift to more patient-centredness in doctor–patient communication, and in line with recent legislation that puts great emphasis on children's active participation in medical encounters. More direct communication between physician and child contributes to a better relationship in terms of satisfaction and compliance and a better health experience [1,44]. In terms of health education too, it is important that the GP guides the child towards management of illness and care; GPs should stimulate children to develop a sense of responsibility for their own health care.

The results concerning the parental control are in line with the findings of Aronsson and Ründstrom [4], who also found examples of strong parental control. One may speculate about the motives underlying these parental interferences. There is reason to believe that parental concern plays a key-role in the consultation process. Over the years it has repeatedly been stated that the failure of the doctor to address parental concern may lead to dissatisfaction and poor communication [30,56–58]. Recently, a nationwide study in the Netherlands revealed that parental concern was the greatest influence on the decision whether to consult a GP for their child [57]. Another explanation is that GP and parent enter the consultation with different expectations and purposes. The GPs aim to acquire reliable and relevant information and are, in general, aware why children should be consulted directly. The parents, on the other hand, feel responsible for their child, and expect the GP to rely on them to obtain information about their child's well-being. This mismatch of expectations may effect the turntaking patterns of GP and parent in terms of accommodation.

In evaluating the results of this study, firstly some remarks should be made on the representativeness of the number of selected interviews per period. The small number of interviews enabled us to investigate the patterns of doctor–parent–child communication in a very detailed way. Because of this small number it is not unequivocally possible to generalize the results. It is recommended to replicate the investigation with a larger number of consultations. More firm differences may be expected when periods 2 and

3 differ more in time. Possible effects of confounding factors such as age, communication-training activities or health care attitudes of the GP have to be taken into account.

Second, as this study focused on quantitative, turntaking, and strategic control, a number of interesting questions remain unanswered, e.g. the question about the nature and the topic of the turn allocations, and the function of the interferences.

Finally, as in this study only indigenous children were involved, we did not address the issue of ethnicity. In the Netherlands the number of children from ethnic minorities is set to grow [57], and one might hypothesize that the observed parental control might be less strong when the child has more command of the language spoken during the medical encounter than the parent has.

Despite these limitations, the Turn Allocation System offers a useful framework for studying the triadic interaction between doctor, parent and child in the medical interview. The TAS is specially designed to map sequences of initiatives and responses in the doctor–parent–child triad. Whereas most research on doctor–parent–child communication neglect the implications of a third participant's presence by restricting the analysis to dyadic interactions between doctor and parent or doctor and child, our study explicitly aims at describing the sequential turntaking patterns between all three participants. By restricting the analysis to two dyads, the phenomenon of parental control could not have been explored. Our findings show that for a thorough examination of triadic conversations one should not limit the analysis to (one of) the composing dyads.

5. Practice implications

The findings of this study do have a number of major implications for medical practice and for health promoting activities advocating improving appropriate behaviour patterns in dealing with illness in children. Obviously, in the case of the doctor–parent–child triad, there are still some gaps to bridge to reach the goal of talking *with* children instead of talking *to* children in medical encounters. The challenge facing the physician in triads like this, is to balance the needs of both children and parents. On

the one hand, the GP should try to develop appropriate and correct management practices regarding child patients in order to enable them to increase control over their health and medical care. On the other hand the GP has to cope with parental concern and responsibility. In addition, the GP should give parents the opportunity to express their expectations, which are likely to differ from those children. Parent's knowledge may also be important for the GP to understand how the child may best be approached [11]. This requires the GP to provide clarity, for the child as well as for the parent, about the desirable participant roles in triadic consultations. As asymmetry and participant status are not given or constant features of conversation, but open to negotiations between the participants [18,19,58,59], the GP should explain why it is important that the child itself should participate actively in the medical interview. It needs no explanation that in this movement towards an active participation of the juvenile patient the child's developmental stage has to be taken into account. From the perspective of health education and counseling, both parents and children should be informed of the necessity for children to develop responsibility for their own health and health care. In addition, parents need to be encouraged to stand back and enable their child's voice to be heard.

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