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Doctor–parent–child relationships: a '*pas de trois*'

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Abstract

Adult participants play a pivotal role in doctor–parent–child interactions at the general practitioner's (GP's) surgery. The child's opportunities to participate are rather limited and parental speaking for the child is, in a way, institutionally co-constructed. This study aimed at further characterizing the relationships within this triad by developing a typology of doctor–parent–child interactions, which classified adult behavior in terms of supporting versus non-supporting child participation. The child's participation was described in terms of display of involvement and turning for support. Analyses of 105 videos show that in most consultations, both GP and parent displayed non-supportive behavior. Despite the GPs' initial efforts to involve the child in the interaction, 90% of the consultations ended up in a non-participatory way. During this last segment of diagnosis and treatment information, the child's voice was hardly heard, as reflected in the minimal involvement displayed and the absence of turning to the parent for support. It is concluded that the bi-directional perspective chosen in this analysis allowed for a better understanding of the underlying mechanisms leading to the stereotypical picture in both literature and actual practice of triadic medical interactions being dominated by both adult participants. The low degree of child participation should not solely be seen as a consequence of adult behavior, but rather as a co-construction of all three participants. The results are discussed from a pedagogical perspective, and implications for medical practice are formulated.

Keywords: Doctor–parent–child relationship; Child participation; General practice; Triads; Medical communication; Support; Involvement

1. Introduction

Previous studies on doctor–parent–child communication emphasized the pivotal role of both adult participants in doctor–parent–child interactions. The child's opportunities to participate in the medical interview appear to be strongly related to characteristics of adult behavior [1,2]. Whereas parents, regardless of the child's age, tended to control the interaction by interfering in doctor–child interactions, physicians were more inclined to involve older children more directly in the medical interaction [1]. By focusing on the discursive construction of participant roles, we were able to show that these differences in adult accommodation were due to dissimilarities in the adults' orientations regarding the underlying participation framework [3].

In the past, there was a tendency to rely on parents as sources of information about their child's health status. However, it is increasingly being acknowledged that children can provide information themselves and should be involved in decisions about their own health care [4,5]. In addition, empirical studies have shown the health-promoting value of active child participation [6,7].

The present study aims at further exploring the relationships between general practitioner (GP), parent and child. Relationships between people both shape and reflect the expectations each participant has about the conduct of the other [8]. As relationships may have substantial implications for how the curing and caring process is to be accomplished and the extent to which needs and expectations will be met [9], more insight into the possible relationships between doctor, parent and child is imperative for the development of optimal medical care in this triad. The purpose of this paper is two-fold: (1) to develop a typology of doctor–parent–child relationships; (2) to provide empirical validation for the typology proposed with our data at the GP's surgery.

1.1. Towards a typology of doctor–parent–child relationships

Doctor–parent–child interactions are to be understood both in terms of a pedagogic relationship, and in terms of a provider–patient relationship. Children must learn to manage their own disease, so part of the goal of medical

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interaction is to create a developmental environment which offers the child the opportunity to learn how to participate in medical encounters [7,10]. The idea of guiding the child on his or her way to active participation matches the concept of 'guided participation' or learning through participation [11], and implies a focus on the active role of children in medical interaction and on the enabling or constraining characteristics of adult behavior. A first step for understanding this concept of guided participation was to develop a typology of doctor–parent–child relationships, which sets out the adults' interaction style along an interaction dimension, in terms of *supporting versus non-supporting* the child to participate in the medical interaction. This distinction refers to supportive, child-centered behavior versus non-supportive behavior and non-involvement of the child [12–14]. Models on doctor–patient communication denote this distinction in terms of a participatory relationship (in which patients are facilitated to assume a responsible role in the medical dialogue and in decision-making) as opposed to a non-participatory doctor–patient relationship [9,15]. The behavior of GP and parent can be characterized separately along this dimension.

1.1.1. Supportive adult behavior

The prototypical supportive triadic medical interaction is a situation in which both GP and parent encourage the child to take an active role in the medical encounter. The GP who assumes a supportive role displays child-oriented behavior, e.g. by inviting the child to formulate the problem definition, by directing medical questions at the child, and by involving the child in the discussion of the diagnosis and treatment. Parental behavior is characterized as supportive where the parent both verbally and non-verbally encourages the child to take an active role in the medical interaction. In addition, a supportive parent strives for effective doctor–child communication by remaining in the background and leaving the child enough room to respond to the questions asked by the GP, and by acting as an information provider or translator should the child misinterpret a question or lack background information.

1.1.2. Non-supportive adult behavior

The opposite of this supportive pattern is the situation in which no efforts are undertaken either by the GP or the parent to enable the child to join in the medical interaction. Both adult participants control the interaction and treat the child as a passive bystander in his or her own medical consultation. GPs who assume a non-supportive role display parent-oriented behavior, e.g. by explicitly inviting the parent to formulate the problem definition, by directing most questions concerning the medical condition at the parent, and by discussing all diagnosis and treatment information only with the parent. Parents who assume a non-responsive role are mainly doctor-centered and tend to speak for the child, e.g. by ignoring the child's contributions or by interrupting doctor–child interaction. As a consequence, the child's voice is largely absent in non-supportive doctor–parent–child interactions; the child is not considered capable of discussing his or her health problems and is excluded from the interaction.

It is important to realize that the GP and parent may display either similar or conflicting behavior in terms of supporting the child to participate in the medical interaction.

1.1.3. Child behavior

It should be emphasized that the behavior of GP and parent as described earlier refers to the adults' perspective on child participation as displayed in their verbal and non-verbal behavior. Concurrently, children may display different degrees of involvement in the medical interaction, and may differ in the extent to which they will turn to their parents for support. Advocating a bi-directional perspective, we want to emphasize the mutually influential nature of the interaction between doctor, parent and child.

1.2. Research questions

Opportunities for child participation depend on the segment of the medical interview; physicians tend to elicit medical information from children, but exclude them from diagnostic and treatment information [16,17]. Redefinition of participant roles can take place in particular within the transition of the consultation segments [3]. Therefore, in our analysis we follow the standard sequencing of the medical consultation (medical history-taking, physical examination, diagnosis and advice). As relationships are expected not to be static across the encounter, the adult participants' behavior needs to be characterized during the segment of medical history-taking as well as in the segment of diagnosis and information on treatment. On basis of previous research a decrease in the adults' supportive behavior in the course of the encounter is expected.

A developmental perspective is chosen; children progressively develop communicative skills, including meta-communication and domain-specific knowledge, as their cognitive and linguistic development progresses [18,19]. As we expect GP and parent to align their behavior to the child's age, it is hypothesized that the GP and parent will display supportive, child-centered behavior in interaction with *older* children in particular.

Over the past three decades, a number of important changes have taken place in doctor–patient communication and in adult–child interactions which might have influenced the doctor–parent–child relationship. First, the development of the patient-centered approach with an increasing emphasis on the patient's own responsibility, evoked a shift in the participant roles in medical consultations. As a result, patients have become more emancipated and autonomous over the years [9,15,20]. In addition, parenting has become less restrictive and authoritarian, and adult–child interactions are increasingly characterized by a greater openness towards the child [21,22]. In view of these developments, it is hypothesized that in the course of time the adults'

supportiveness will increase, as well as the child's display of involvement.

2. Method

2.1. Sample

The study is based on 105 video recordings of doctor–parent–child encounters at general practitioner's surgeries in The Netherlands. In all selected interviews, the child was seeing the GP for temporary illness and minor complaints. In the Dutch health care system, the GP, comparable to a family physician, has a gate-keeping role; patients do not have access to specialist or hospital care without referral, and 90% of all complaints are treated by GPs [23]. One in six consultations with a GP involves a child under the age of 16 years, and in The Netherlands it the GP who is initially responsible for children's health-care, which includes primary care and preventive care. The video recordings were drawn from a large collection of medical interviews with patients of all ages, which have been collected since 1975, and held by the Nivel (Netherlands Institute for Health Services Research). A 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 criteria (a triad of doctor–parent–child, and the age of the child: 4–12 years), supplemented by matching for age, gender and type of complaint of the child patient, resulted in a dataset of 36 videos for the period 1975–1978, 35 videos for 1988–1989, and 34 videos for 1993. The unequal distribution of time between the three periods is a consequence of the availability of data at the start of the project. Data from these three periods allowed a comparison to be made cross-sectionally, but not longitudinally, while the participants differed over the three periods. In the majority of consultations, the child was accompanied by its mother (83%). All children had previously seen the GP. Fifty-eight GPs participated in the study, the majority being male (91%).

2.2. Coding procedures

The analyses were conducted on the basis of extensive transcripts of all 105 consultations. We restricted the analysis to the segment of medical history-taking and the segment of diagnosis and advice, since in a lot of consultations the physical examination had not been taped. Non-verbal behavior was noted as far it was relevant for the coding (especially eye-contact). A qualitative overall impression of the supportiveness of both GP and parental behavior was given separately on the basis of four criteria for the medical history-taking segment and for the segment incorporating diagnosis and treatment information (Table 1).

As our focus was on the interactionally constructed character of doctor–parent–child relationships, we also examined child behavior. First, we examined the child's *display of involvement* in the interaction using of a three-point scale

Table 1
Observation scheme

	Yes	No
Supportiveness of GP during the medical history-taking segment		
Invites the child to formulate the problem definition		
Directs questions concerning the medical condition at the child		
Encourages the child to join in the medical dialogue, verbally as well as non-verbally (e.g. by seeking eye-contact, smiling or nodding)		
Addresses the child by first name or second person pronoun form		
Overall impression: supportive		
Supportiveness of parent during the medical history-taking segment		
Leaves the child room to respond to the GP's questions		
Stays in the background and acts as an information provider or translator should the child be unable to respond to the GP		
Encourages the child to join in the medical dialogue, verbally as well as non-verbally (e.g. by seeking eye-contact, smiling or nodding)		
Addresses the child by first name or second person pronoun form		
Overall impression: supportive		
Supportiveness of GP during the diagnosis and treatment information segment		
Directs counseling and advice at child or repeats information for the child		
Explains treatment information to the child, or repeats information for the child		
Encourages the child to join in the medical dialogue, verbally as well as non-verbally (e.g. by seeking eye-contact, smiling or nodding)		
Addresses the child by first name or second person pronoun form		
Overall impression: supportive		
Supportiveness of parent during the diagnosis and treatment information segment		
Leaves the child room to discuss treatment information and to respond to the medical information given by the GP		
Stays in the background and checks for understanding or paraphrases the medical information for the child		
Encourages the child to join in the medical dialogue, verbally as well as non-verbally (e.g. by seeking eye-contact, smiling or nodding)		
Addresses the child by first name or second person pronoun form		
Overall impression: supportive		

(1: active involvement; 2: passive involvement; 3: no display of involvement). Child behavior was labeled as an active display of involvement when the child took the initiative or actively responded to the adults. In those cases where the child's response to the adult was minimal (e.g. by means of back-channeling behavior), or where the child only non-verbally displayed non-verbally involvement in the interaction (e.g. by nodding when the parent answered the question, or by seeking eye-contact), child behavior was labeled as a passive display of involvement. No display of involvement was noted in those consultations where the child did not respond to adult behavior, or displayed a non-verbal lack of involvement, e.g. by looking around when being addressed. In addition, we examined whether or not children turned to their parents for support, verbally (e.g. by asking 'isn't it?'), or non-verbally (e.g. by seeking eye-contact with the parent). All consultations were coded by two trained observers. The interrater reliability (Cohen's Kappa) varied from good to excellent (GP behavior segment 1, $\kappa = 0.84$; GP behavior segment 3, $\kappa = 0.83$; parental behavior segment 1, $\kappa = 1.00$; parental behavior segment 3, $\kappa = 1.00$; involvement child segment 1, $\kappa = 0.86$; involvement child segment 3, $\kappa = 0.86$; support seeking behavior child segment 1, $\kappa = 0.84$; support seeking behavior child segment 3, $\kappa = 1.00$).

2.3. Statistics

Descriptive statistics were used to report interaction patterns in terms of the adults' supportive and non-supportive behavior, and the child's display of involvement and support seeking behavior. Percentages of the dependent variables were calculated per age group and per diagnosis and treatment segment separately. Next, Spearman's coefficient of rank correlation was employed to test age and time differences, and to study the relationship between adult behavior and child behavior. Finally, Mann–Whitney tests were performed to compare the interaction patterns in the diagnosis and treatment segment.

3. Results

3.1. Interaction patterns in the medical history segment

In most consultations, both GP and parent assumed a non-supportive role towards the child in the medical history-taking segment as Table 2 shows (72%).

GPs, however, more frequently encouraged the child to take part in the medical interaction compared to parents (28% versus 13%). As expected, both adults were more supportive towards older children (GPs: age 4–6 years, $n = 5$; age 7–9 years, $n = 6$; age 10–12 years, $n = 19$; $r = 0.35$, $P < 0.01$. Parents: age 4–6 years, $n = 2$; age 7–9 years, $n = 1$; age 10–12 years, $n = 11$; $r = 0.30$, $P < 0.01$). Only for the group of children aged 10–12 years, there was also a change in adult behavior as an effect of time: in the course of time, both GP and parent were more supportive towards older children (GPs: $r = 0.39$, $P < 0.05$; parents: $r = 0.41$, $P < 0.05$).

Table 2
Adult behavior in the medical history taking ($n = 105$)

	Doctor					
	Supportive		Non-supportive		Total	
	n	%	*n*	%	*n*	%
Parent						
Supportive	14	13	0	0	14	13
Non-supportive	16	15	75	72	91	87
Total	30	28	75	72	105	100

3.1.1. Both adults non-supportive

The most frequently occurring pattern of adult behavior (72%) was that both adults were non-supportive. It is the prototype of a paternalistic interview in which adults dominate the interaction and treat the child as a passive bystander. Parents spoke on behalf of their child and often tended to give a monologue in their presentation of the child's complaints, as shown in the following fragment:

Fragment 1: Consultation no. 109 (GP: general practitioner, P: parent, C: child, 10-year old girl)

1	GP → C:	Who's first, you or your mum?
2	C → GP:	I don't care (shrugs her shoulders)
3	P → GP:	Well, yesterday she was in bed with a headache ALL DAY LONG
4		(.) doing nothing but throwing up (.) and you told us to come back
5		if it happened more often (.) well (.) it is happening more often
6		that she eh (.)
7		gets those severe headaches
8	GP → P:	mm
9	P → GP:	and eh she can't eat (.) she really can't do anything
10		when she's got those headaches
11	GP → P:	sick and throwing up?
12	P → GP:	yes
13	C → GP:	yes
14	GP → P:	well eh (.) how long does such an attack last?
15	P → GP:	a day (.) a whole day long
16	GP → P:	and then she has to rest?
17	P → GP:	yes she's got to go to bed (.) otherwise then
...	...	...
24	GP → P:	the attacks last a day
25	P → GP:	yes

The GP co-constructs a dyadic interaction with the mother by accepting the parental formulation of the complaint, thereby emphasizing the mother's role as respondent for her child. No effort is undertaken to involve the child in the elaboration of the complaint. The child's position as a passive bystander is reflected in the adults' person reference; both GP and mother use the third person pronoun form to denote the girl (parent: lines 3, 6, 9 and 17; GP in line 16). This pattern of adult behavior was negatively related to the child's age. The younger the child the more GP and parent were non-supportive (age 4–6 years, $n = 32$; age 7–9 years, $n = 26$; age 10–12 years, $n = 17$; $r = -0.36$, $P < 0.01$). There was no effect of time, except for the 9–12 years aged (period 1, $n = 11$, period 2, $n = 3$, period 3, $n = 3$; $r = -0.46$, $P < 0.01$).

3.1.2. Both adults supportive

In contrast to the earlier described pattern, in 13% of the consultations both GP and parent displayed supportive behavior by encouraging the child to participate in the medical interview.

Fragment 2: Consultation no. 95 (GP: general practitioner, P: parent, B: both parent and child, C: child, 10-year old girl)

1	GP → C:	Carla, why have you come to see me?
2	C → GP:	a bump in my neck
3	GP → C:	a bump? And does it hurt?
4	C → GP:	eh (.) sometimes
5	GP → C:	sometimes (.) and how long have you had it?
6	C → GP:	I found out eh
7	C → P:	when did I find it?
8	P → C:	last week wasn't it?
9	C → GP:	last week
10	GP → C:	hmm (.) and has anything else been bothering you? Your throat?
11	C → GP:	yes
12	GP → C:	yes?
13	C → GP:	(nods)
14	C → GP:	it's behind here (.) so eh
15	GP → B:	yes that's possible (.) because this is where your drainage system for your
16		throat and nose is (indicates the place in his own neck)
17	GP → C:	did your ear trouble you too?
18	C → GP:	(shakes her head)
19	GP → C:	no? Well (.) we'll just have a look

By inviting the child to formulate the reason for seeing the doctor, the GP displays his first orientation towards active child participation. In addition, the GP encourages the girl to participate in the medical information exchange in order to arrive at a formulation of the specific complaint. During the entire segment, the GP explicitly addresses the child, either by her first name (line 1), or by using the second person singular pronoun form (lines 5, 10 and 17). The mother displays her orientation towards active participation by her daughter by remaining in the background; it is only in line 8, after the child's direct question for support, that the mother mediates between the GP and the child by providing information the child herself was not able to. This participatory pattern of adult behavior was found in encounters with older children in particular (11 out of the 14 supportive patterns involved children aged 10–12 years; $r = 0.36$, $P < 0.01$). Again, there was no effect of time, except for the group of children aged 10–12 years (period 1: $n = 1$; period 2: $n = 5$; period 3: $n = 5$; $r = 0.46$, $P < 0.01$).

3.1.3. GP supportive and parent non-supportive

In 15% of the consultations adult behavior represented a moderate alternative between the non-participatory pattern and the participatory pattern described previously. In this pattern, the GP encourages the child to participate actively in the medical encounter, whereas, the parent assumes a non-supportive role, as shown in the following fragment.

Fragment 3: Consultation no. 123 (GP: general practitioner; P: parent; C: child, 12-year old girl)

1	GP → C:	Melissa, can you tell me yourself?
2	C → GP:	yes (.) my back has been bothering me recently
3	GP → C:	(nods)
4	C → GP:	yes (.) eh
5	P → C:	tell him about the school doctor
6	C → GP:	yes (.) the school doctor said that I should come back
7		after a few examinations
8	GP → C:	yes
9	C → GP:	I had to come back in October but now it is
10		bothering me even more
11	GP → C:	can you tell me when it started?
12	C → P:	no (.) I really don't know
13	GP → P:	a year ago (.) half a year (looks at her mother)
14	P → GP:	in the sixth (.) in the sixth form
15	GP → P:	yes
16	P → GP:	the school doctor came
17	GP → P:	yes
18	P → GP:	and he eh (.) yes (gestures)
19	GP → P:	routine examination
20	P → GP:	routine examination (.) and then her back proved to be a bit crooked (gestures) on one side
21	GP → P	(nods)
22	P → GP:	one side was higher (gestures) than the other
23	GP → P:	the other side
24	P → GP:	and they would keep an eye on it (.) I think it was in October (parent goes into detail)

33	GP → C:	and now it bothers you more
34	C → GP:	yes
35	GP → C:	and eh (.) are you keen on sports?
36	C → GP:	tennis
37	GP → C:	tennis (nods) does it trouble you then?
38	C → GP:	no (.) not really
39	GP → C:	then it's not necessary to stop
49	C → GP:	no
50	GP → C:	now a silly question (.) you'll say that has nothing to do with it (.)
51		I'll explain it to you (.) have you already started your period?
52	C → GP:	no
53	GP → C:	not yet (.) I asked you because you grow the most
54		in the year BEFORE your first period
55		then you grow explosively (.) so ehh

In this fragment, the GP actively tries to establish a context for the girl to participate by addressing her by her first name when inviting her to describe the reason for attendance in line 1. When the girl cannot answer the GP's question (line 11–12), the GP implicitly acknowledges the mother to elaborate on her daughter's problem definition by seeking eye-contact. One might argue about the facilitative status of line 5 when the mother presses her daughter to introduce the topic of the school doctor, but fundamentally the parental behavior is non-supportive, especially in the extended formulation of the problem definition in lines 14–24. After the parent's extended answer, the GP resumes his orientation to the girl in line 33. In his elaborated explanation of the question about her period in line 50–55, the GP displays his orientation to guide the child towards active participation. This third pattern was also age-related, and occurred more frequently in older children (age 4–6 years, $n = 3$; age 7–9 years, $n = 5$; age 10–12 years, $n = 8$; $r = 0.36$, $P < 0.01$).

3.1.4. Child behavior

In the medical history segment, the majority of the children showed involvement in the medical interaction, either actively (48%), or passively (19%) (Table 3).

Older children displayed more active involvement, whereas younger children more frequently showed no involvement at all (active involvement: age 4–6 years, 16%; age 7–9 years, 30%; age 10–12 years, 54%; $r = 0.44$, $P < 0.01$; no involvement: age 4–6 years, 57%; age 7–9 years, 29%; age 10–12 years, 14%; $r = -0.44$, $P < 0.01$).

In only 22% of the consultations, children turned for support verbally or non-verbally, and these turns for support increased with the child's age (age 4–6 years, $n = 3$; age 7–9 years, $n = 6$; age 10–12 years, $n = 15$; $r = 0.33$, $P < 0.01$). Over the years, the oldest children less frequently displayed no turns for support (period 1, $n = 12$; period 2, $n = 5$; period 3, $n = 4$; $r = -0.36$, $P < 0.05$).

3.1.5. Interaction child behavior and adult behavior

The more supportive the adults were, the more the child displayed involvement ($r = 0.37$, $P < 0.01$) and the more the child turned for support ($r = 0.34$, $P < 0.01$). Not surprisingly, children showed least active involvement where both adults were non-supportive. In addition, in 85% of the consultations with non-supportive adult behavior, children did not turn to their parents for support. This passive, withdrawn child behavior also co-constructed the dyadic character of this type of doctor–parent–child relationship, and emphasized the child's position as a marginal participant. In encounters with both adult participants assuming a supportive role, children displayed more active involvement (64%) and turned the most frequently to their parents for support (57%). In the later years, children displayed more active involvement in consultations with this participatory pattern (involvement— period 1: $n = 0$; period 2: $n = 4$; period 3: $n = 5$; $r = 0.60$, $P < 0.05$).

In the moderate pattern with GPs assuming a supportive role and parents a non-supporting role, children displayed the most active involvement (81%) and turned to their parents for support to a moderate extent (31%).

3.2. Interaction patterns in the diagnosis and treatment segment

Compared with the first segment, there was an increase of consultations where both GP and parent displayed non-supportive behavior towards the child in the segment of

Table 3
Child behavior in the medical history taking ($n = 105$)

Adult behavior	Child shows involvement						Turns for support			
	Active		Passive		None		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
GP non-supportive + parent non-supportive ($n = 75$)	28	37	14	19	33	44	11	15	64	85
GP supportive + parent non-supportive ($n = 16$)	13	81	3	19	0	0	5	31	11	69
GP supportive + parent supportive ($n = 14$)	9	64	3	22	2	14	8	57	6	43
Total ($n = 105$)	50	48	20	19	35	33	24	22	82	78

Table 4
Adult behavior in the segment of diagnosis and treatment information ($n = 105$)

	Doctor					
	Supportive		Non-supportive		Total	
	n	%	*n*	%	*n*	%
Parent						
Supportive	6	6	1	1	7	7
Non-supportive	4	4	94	89	98	93
Total	10	10	95	90	105	100

diagnosis and treatment information (89%) (Table 4). This was mainly due to GPs changing from a supportive role during the first segment to a non-supportive role during the last segment of the consultation (Mann–Whitney $Z = -3.58$, $P < 0.001$). During the last segment, GPs adopted a supportive role in 10% of the consultations, and parents in only 7%.

Unlike in the first segment, adult behavior appeared not to be age-related, nor was there any effect of time. The adult participants displayed the same type of behavior during the last segment of the consultation (first segment: consensus in 89 out of 105 consultations, last segment: consensus in 100 out of 105 consultations; Mann–Whitney $Z = -2.12$, $P < 0.01$).

3.2.1. Both adults non-supportive

The following fragment is an example of non-supportive adults in the third segment. It is the continuation of fragment 3, in which the GP assumed a supportive role during the first segment. However, in the last segment both GP and parent displayed non-supportive behavior.

Fragment 4: Consultation no. 123 (continuation of fragment 3)

56	GP → P:	the best thing we can do is
57	GP → C	you can get dressed now (.) I've finished taking a look
58	GP → P:	so with all those pains she has (points to himself) I just think
59		she feels the vertebra against the chair
60	GP → P:	I just think her back shows a clear curvature
61		and eh the best you can do is to have an X-ray taken to measure
62		the angle (.) it is really important to know that
63	P → GP:	hmm
64	GP → P:	an X-ray shows the degree of angle
65		and if it diverges
66	P → GP:	yes
67	GP → P:	if it is within the limits (.) then you need not do anything about it

Despite the GP's initial efforts in the first segment to involve the child in the interaction, the GP takes a non-supportive role in the last segment by directing all treatment information to the parent. One could argue that this is a lost opportunity; by using the first person plural pronoun form 'we' in line 56 and by telling the girl to get dressed in line 57, the GP automatically changed the interaction into a dyadic encounter between GP and parent. When discussing the diagnosis and treatment the GP only addresses the parent (lines 61 and 67) and refers to the girl using the third person singular pronoun form (lines 58 and 59), thereby making the treatment decisions a joint responsibility of both GP and parent. No correlation was found between this pattern and the child's age, nor with the periods we investigated.

3.2.2. Both adults supportive

The opposite pattern, in which GP and parent both were supportive, occurred in only 6% of the consultations. An example is the following fragment (the continuation of fragment 2), in which both adult participants did continue their supportive behavior during the end of the consultation:

Fragment 5: Consultation no. 95 (continuation of fragment 2)

20	GP → C:	no (.) there's NO reason to worry (takes a book out of the cupboard)
21		look I'll show you
22	C → P:	(smiles at her mother)
23	P → C:	(mother gives the child an encouraging smile)
24	GP → C:	where you've got all those glands (.) and there are quite a lot of them
25		(.) eh (looks in the book)
26		look (.) here at the corner of the jaw you've got (.)
27		there they are (points them out in the book)
28	P → GP:	oh yes (also looks in the book)
29	C → GP:	you mean all that green?
30	GP → C:	yes (.) all those green little balls (.) and here they are behind your ear (indicates in book)
31	C → GP:	so here
32	P → GP:	and here too (fingers her own face) good heavens
33	GP → B:	and you don't notice them until they swell up

This fragment nicely demonstrates how the three participants jointly co-constructed a situation in which the child could actively participate in the medical encounter. The GP continues his supportive role towards the child by explicitly directing all diagnosis information toward the child. The GP reassures the girl (line 20) and provides additional information about the lymph glands by showing their location in a

Table 5
Child behavior in the segment of diagnosis and treatment information ($n = 105$)

Adult behavior	Child's level of involvement						Turns for support			
	Active		Passive		None		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
GP non-supportive + parent non-supportive ($n = 94$)	16	17	22	21	56	53	4	4	90	96
GP supportive + parent non-supportive ($n = 4$)	0	0	2	50	2	50	0	0	4	100
GP non-supportive + parent supportive ($n = 1$)	0	0	0	0	1	100	0	0	1	100
GP supportive + parent supportive ($n = 6$)	1	17	3	50	2	33	0	0	6	100
Total ($n = 105$)	17	16	27	26	61	58	4	4	101	96

book. In addition, the mother encourages (and acknowledges) her child to participate in the interaction in line 23, remains in the background, and shows her involvement in the interaction in line 32. The child herself shows optimal active involvement in the interaction, as demonstrated in lines 29 and 31. Again, no correlation was found between this pattern and the child's age, nor with the periods we investigated

3.2.3. Child behavior

In the last segment of the consultation, the majority of the children showed no involvement in the medical interaction (58%) (Table 5).

This lack of display of involvement was negatively related to the child's age. Younger children more frequently showed no involvement (No involvement: age 4–6 years, 29%; age 7–9 years, 17%; age 10–12 years, 14%; $r = -0.34$, $P < 0.01$). In almost all cases (96%) children did not seek support from their parents.

The supportiveness of the pattern of adult behavior during the last segment appeared not to be strongly related with the child's display of involvement, nor with the child's turns for support. Only in consultations with the adults assuming both a non-supportive role, there was a slight effect for the age of the child. In those non-participatory consultations, older children displayed involvement in the interaction more frequently (no involvement—age 4–6 years, $n = 26$; age 7–9 years, $n = 15$; age 10–12 years, $n = 13$; $r = 0.29$, $P < 0.01$). In addition, the only children who sought support during this pattern were aged 10–12 years ($r = 0.21$, $P < 0.05$).

3.3. Comments on shift in GP supportiveness

Despite the initial efforts (28%) by GPs to involve the child in the interaction, 90% of the consultations ended up in a non-participatory way. This finding was the rationale for an additional analysis of the twenty consultations concerned where a shift took place in GPs' behavior. In a number of these consultations, the non-participatory behavior of the physician could be traced back to factors such as the child's age or the child's behavior. Four consultations involved children aged 4–6 years who verbally or non-verbally displayed their incapability or unwillingness to take part in the interaction by crying or refusing to answer when addressed. In another four consultations, non-responsive child behavior, such as looking away when addressed, providing minimal answers or shrugging their shoulders was associated with a shift in the supportiveness of GP behavior. Characteristics of parent behavior appeared to be another influencing factor. In six consultations, parents emphatically expressed their concerns about their child's health, by directing a lot of questions at the GP after the segment of physical examination, or by discussing the various treatment options. In three encounters, the GP and parent had a different opinion about the necessity to consult a specialist. A final factor was that it was sometimes impossible to involve the child in the interaction from the beginning of the last segment, because the child was still in the examining room or the child had been instructed to get dressed, as illustrated in fragment 4.

4. Conclusion

The theoretical approach of classifying adult behavior in terms of supporting or non-supporting the child to participate in the medical interaction, and the choice for an interactional perspective enabled us to provide a more finely tuned characterization of the interaction in this triad. Although both GP and parent predominantly assume a non-supportive role in interaction with the child, GPs more frequently display supportive behavior, especially in the medical history-taking segment. This picture is in line with the often depicted stereotype of doctor–parent–child communication being restricted to the dyadic interaction between physician and parent [17]. In line with the expectations, the child's age did matter. Both adult participants were more supportive in the case of older children, and older children showed more involvement and turned for support more frequently. The participatory effect of GP behavior appeared to be an important factor; children display most active involvement in those consultations where the GP assumes a supportive role.

The results also show that doctor–parent–child relations are not static; there is a strong relationship between the segment of the consultation and the participatory effect of adult behavior. Ninety percent of the consultations conclude in a non-participatory manner, partly due to a decrease in the GPs' supportive behavior. The finding that GPs are less child-oriented towards the end of the consultation is in accordance with previous studies [16,24,25], which state that physicians seldom discuss treatment decisions with children. This contrasts noticeably with the recent demands of shared decision-making and informed consent [4,5]. From a pedagogic perspective, the attitude of treating children as non-participants seems to undermine the developmental potential of learning through participation. By excluding children from important parts of the medical interaction, they miss the opportunity to gradually develop a sense of responsibility for their own health care and become a competent member in medical interactions [7].

In the triadic interaction, parental behavior appears to be a qualifying factor in GPs shift from supportive to non-supportive behavior in the course of the consultation. By asking a lot of questions, or by empathically expressing their concern about their child's well-being, parents often forced the GP to focus the attention on them, and as a consequence the GP was no longer able to give the child his undivided attention. The parental need to express their concern and to be involved in treatment decisions was already emphasized in the first studies on doctor–patient communication [26], as well as in recent studies [27]. This parental control may explain the shifts in GP's supportive behavior towards the child. Noteworthy here, is the fact that these shifts in GP behavior were irreversible; the GP hardly ever resumed his or her supportive behavior towards the child after the dyadic discussion with the parent.

5. Discussion

By emphasizing the interactional perspective in this study, we opt for a bidirectional view on adult–child relations and challenge the traditional, unidirectional approach. Bidirectional theories of adult–child relations have shifted attention from unidirectional, impositional models to frameworks that highlight the two-way, mutual, and reciprocal influence in adult–child interactions [12,13,28]. The perspective of the child as an active agent makes it possible to consider how children act as agents and broadens the focus of research into doctor–parent–child relationships to include the influence of children. This approach is in line with the growing recognition of the need to consider children to be active contributors in their own socialization, both within the context of parent-child interactions [29,30], as well as within a medical context [7].

Future research should detail how doctor–parent–child relationships change longitudinally, over many visits. The results of the effects of time have only limited value, as they are cross-sectionally, and the sample being rather small. It is also challenging to investigate the relation between different types of doctor–parent–child relationships and outcome variables, such as satisfaction, and adherence to treatment. Due to the fact that we conducted secondary analyses, we were unable to question the participants on their assumptions regarding child participation, nor could we relate their satisfaction ratings with behavior variables. It is important to address these issues in future research, because non-complementary role expectations within the triad may interfere with the child becoming a competent member in medical interactions. In addition, the retrospective design made it impossible to study the impact of the participants' socio-demographic characteristics on doctor–parent–child relationships. Since most GPs in the data sample were male and the majority of accompanying parents were female, gender distribution was somewhat distorted, and the analysis of adult behavior was carried out as if there was no gender specific information. These issues should be addressed more extensively in future research.

Finally, the challenging question has to be addressed how to define patient-centered care in triadic medical interactions. Patient-centered care has been used to connote the optimal form of provider–patient relationships in terms of medically functional, informative, facilitative, responsive, and participatory [9,15]. As far as the doctor–parent–child triad is concerned, the provision of patient-centered care may place an additional burden on physicians, since the communicative needs of both parent and child may be quite different [27]. Further research is indispensable to address this issue more thoroughly.

5.1. Practice implications

GPs seem to be oriented towards facilitating child participation, while on the other hand, GPs are confronted with parents who largely advocate a passive child role. This may place the physician in a dilemma: holding on to his or her own professional opinion regarding child participation may conflict with the parental orientations. The adults' non-complementary views on child participation prevent the child from taking an active part in the medical encounter, and may lead to sub-optimal treatment in triadic interactions. It is recommended that physicians should more explicitly explain to both the child and the parent beforehand why active child participation is important and desirable.

Clarity about the desirability of child participation should be coupled with attention to parental concerns and communication needs. We focused on parental concern as a possible cause for the break in GPs' supportive behavior. In addition to the need of parents to express their concerns, they also expect physicians to use their expert knowledge in making the diagnosis [31,32]. As these parental communication needs may interfere with the opportunities for child participation, physicians should discuss the benefits of child participation with parents, and in addition address the

parents' own needs. Finally, since it is critical for physicians to gain a sense of the level of participation the child is capable of, and parents in general might be considered to have the most extensive knowledge of their child, we recommend GPs to emphasize and make use of parental expertise.

Considering the health promoting value of active child participation [6,7], it is important to be aware of the (non)particpatory influence of adult behavior in doctor–parent–child interactions. Only by collaboratively creating a developmental environment, both GP and parent may give children a voice in triadic medical encounters.

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