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# Doctor-parent-child communication. A (re)view of the literature

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## ABSTRACT

Studies on doctor-patient communication focus predominantly on dyadic interactions between adults; even when the patient is a child, the research focus is usually on doctor-parent interaction. The aim of this review study is to evaluate the state of the art of research into doctor-parent-child communication, and to explore the specific role of the child. Researchers have focused on diverse aspects of the communication in this triad, and, as a result, knowledge gained from studies in this area is poorly integrated. Most of the studies have ignored the implications of a child's presence in medical encounters. Although all studies claim to examine the interaction in the doctor-parent-child triad, most research methodologies used are based on dyads. Our claim, however, is that, because the interactional dynamics of a triad differ fundamentally from those of a dyad, triadic analyses are a prerequisite for a full account of the communication between doctor, parent and child. Suggestions are formulated for an adequate research frame regarding triads.

## INTRODUCTION

Although the first studies on doctor-patient communication took place in a pediatric setting (Korsch, Gozzi & Francis, 1968; Freemon, Negrete, Davis & Korsch, 1971; Korsch & Negrete, 1972), it is surprising that the specific role of the child in medical conversation has not been considered a point of interest. Research focuses mainly on dyadic interactions between adults. Even in the case of a doctor-parent-child triad, the child's contribution is frequently ignored (Pantell et al., 1982; Tannen & Wallat, 1983; Aronsson & Rundström, 1988, 1989), as is illustrated by Korsch et al. (1985, p. 865): 'In paediatrics patient refers to the patient's parent, most commonly the mother. Hence the patient and parent will be referred to interchangeably'. Korsch probably set the tone for this by identifying the parent as the patient, implicitly disregarding the child. Review studies hardly pay attention to doctor-child communication or to the influence of the presence of a third participant (Roter et al., 1988; Waitzkin, 1990; Charon et al., 1994; Ong et al., 1995; Boon & Stewart, 1998).

There are, however, theoretical as well as clinical indications that the child's role in medical conversation deserves special attention. Children appear to be able to understand more about concepts of health and illness than generally has been assumed (Lewis et al., 1984; Colland, 1990; Holtzheimer et al., 1998; Hosli, 1998). It has been demonstrated repeatedly that a more direct communication between physician and child contributes to an improved relationship in terms of satisfaction with care and adherence to treatment, and to better health outcomes (Pantell et al., 1982; Colland, 1990; Holtzheimer et al., 1998). Furthermore, the development of a patient-centred approach and increased demand for shared decision-making, disease prevention and health promotion have led to a shift in the

doctor-patient relationship from extremely asymmetrical towards more egalitarian (Davis & Fallowfield, 1991; Roter & Hall, 1992; Stewart et al., 1995; Borne, 1998). In addition, parenting has become less repressive and authoritarian (De Swaan, 1988). Moreover, recent developmental cognitive studies have shown that children play a far more active role in the interaction with adults than has been assumed until now (Elbers et al., 1992; Hoogsteder, 1995). Consequently, the child's role in the medical consultation should be as important as the parent's, and it is increasingly acknowledged that children themselves should be involved in decisions about their own health care (Alderson & Montgomery, 1996; Rylance, 1996; Hart & Chesson, 1998).

The objective of our study is to evaluate the state of the art of research into doctor-parent-child communication, and to explore the role of the child. Before turning to the specific research questions, we will define three aspects that we expect to play a key role in doctor- parent-child communication, namely:

*Relational aspects:* With regard to the medical inter- view, two types of patient needs are generally distinguished; being the cognitive need to be informed (the need to know and understand), and the emotional need to be taken seriously (the need to feel known and understood) (Engel, 1988). In response, the physician is assumed to possess two types of relational skills; instrumental, or task-related behaviour, and affective, or socio-emotional behaviour. Instrumental behaviour involves skills such as asking questions and providing information, while affective communication aims at reflecting feelings and showing empathy and concern (Roter, 1989; Bensing, 1991). Effective communication between doctor and patient is characterized by a balance between instrumental and affective behaviour, depending on the specific needs of the patient and the goal of the interview at the time.

*Structural aspects:* The issue of asymmetry is one of the key themes in studies on doctor-patient relations (Linell & Luckmann, 1991; Ong et al., 1995). In the case of a child patient, the issue of asymmetry is expected to play a crucial part, because of the child's position of double asymmetry, with the physician embodying both institutional and adult authority. The asymmetrical character is reflected in the way the communication is organized and structured in terms of sequences of initiatives and responses (Linell & Luckmann, 1991; Van Dijk, 1996; Drew & Sorjonen, 1997). Turn-taking in conversation is an important element in defining and establishing relationships, and presents the opportunity to explore the degree of asymmetry between participants (Linell & Luckmann, 1991).

*Content of the interaction:* Compared with the relational and structural aspects, little attention has been paid to the actual content of the participant's linguistic behaviour in medical encounters (Ong et al., 1995). During a consultation, the participants use medical and psychological terms appropriate in that context, but it appears that doctor and patient may assign different meanings to the same term. Health terminology is moving towards everyday language use, and the meanings that become ascribed might lead to a misunderstanding of which the parties involved are unaware (Ley, 1988; Hadlow & Pitts, 1991). We use the term 'interactive frame' to refer to the participant's sense of what activity is being engaged in (Tannen & Wallat, 1983, 1987; Tannen, 1993). Depending on the linguistic features of the speaker's contribution, the hearer can assign a particular interpretative frame to the speaker's contribution (e.g. an utterance is understood as a request or as a joke). Interactive frames are related to 'knowledge schemas'; structures of knowledge about situations, actions and actors, simply because such schemas provide expectations not only about what can happen, but about how to interpret what is said and done. In medical communication the participant's knowledge schemas may represent conflicting information about the ongoing activity. As a result of this mismatch of knowledge schemas, participants are oriented towards different frames of reference, which may result in miscommunication and conflicts (Tannen, 1993).

Our reasons for distinguishing the above-mentioned three aspects of communication are analytical. In practice, these aspects may be intertwined, and not always discernable as such.

Finally, we are interested in methodological issues regarding the way the studies reviewed dealt with the consequences of a third participant's presence. A pivotal question is whether a choice was made for a dyadic analysis of the interaction between doctor-parent and doctor-child, or for a triadic analysis of the contribution of all three participants.

To summarize, this review seeks to address the following questions.

1. Which aspects of the interaction between doctor, parent and child play a prominent part in research on doctor-parent-child communication?

2. Has any attention been paid to the specific role of the child in medical encounters, and what are its characteristics?
3. To what extent are the methodologies used suitable for analysing triadic medical conversation?

## DATA COLLECTION AND ANALYSIS

The procedures used for finding eligible studies included on-line database searches, e.g. PsycLit, Socio- file and Medline, and searching for references in scientific papers and books on doctor-patient communication. The following terms were used: physician/ doctor-parent-child communication, physician/doctor- patient communication, physician/doctor-child communication, adult-child communication, medical consultations, child discourse, medical discourse, medical interviews, language and medicine, pediatric encounters, triadic encounters. Publications were included if they met the following criteria.

1. The study was directed at the verbal and/or nonverbal communication between doctor, parent and child in a medical setting, with the child being the patient.
2. The study involved research from the last 30 years, published in English.
3. The study involved audio or video recordings of consultations.

These search procedures produced 12 articles published between 1968 and 1998, which formed the basis of the current review study. A further eight studies were restricted to the interaction between doctor and parent and were excluded from the analysis, although selected results from these studies, if relevant, will be mentioned in the discussion section.

The sample characteristics, the design of the study, and the questions and findings of the 12 studies were evaluated in turn. The description of the sample profile provided an overview of the background variables and included information about the research setting, physician-parent-child familiarity (first or repeat visit), characteristics of the physicians (number, gender, specialization, and experience), characteristics of the parents (number, gender, education), characteristics of the children (number, age, gender, and diagnosis) and the sample size. To answer the methodological question, the design study included defining the nature of the study (in terms of quantitative versus qualitative research), comparing the observational strategy (coding from video, audio tape, direct observation or transcript), the communication channel (analysis of verbal or nonverbal communication), the observational instrument, and whether the communication was analysed as two dyads (analysing the interaction between doctor-parent and doctor-child) or as a triad (analysing the interaction between all three participants). The question of which aspects of communication had been analysed was answered in the review of the questions and findings of the studies.

## RESULTS

### Sample characteristics

Table 1 presents a profile of the background variables of the studies reviewed, in terms of setting, familiarity, characteristics of the physician, parent and child, and the sample size.

#### [ TABLE 1 ]

Most studies on doctor-parent-child communication were carried out within the setting of a (children's) hospital, mostly within pediatrics. The extent of prior relationship was reported in nine studies. The studies were most frequently concerned with repeat visits or a mixture of first and repeat visits; three studies concerned just only visit consultations (Korsch et al., 1968; Freemon et al., 1971; Korsch & Negrete, 1972). The physician's specialization was stated in every study; most studies concerned pediatricians, whereas three studies involved a family physician or a general practitioner (Pantell et al., 1982; Meeuwesen & Kaptein, 1996; Meeuwesen et al., 1998). The physician's gender was reported in seven studies, the majority being male. Experience and age of the physician were hardly ever mentioned. Nine studies reported the parent's gender (mainly mothers), whereas only four studies gave the parent's educational background (parents with secondary or higher education were over-represented). The sample size (the unit of analysis being the medical interview) varied from n=1

(Tannen & Wallat, 1983, 1987) to  $n=800$  in the Korsch studies. The age of the child was reported in all studies; with most research involving children aged from 5 to 13 years. Three studies predominantly concerned infants and toddlers (Korsch studies: 75% under the age of 5 years). Half of the studies mentioned the gender of the child patient. All studies reported the primary diagnosis, which ranged from preventive health care through acute somatic symptoms, allergies and lung diseases to severe developmental disabilities.

### Design of the studies reviewed

Table 2 presents an overview of the design of the studies reviewed, in terms of qualitative versus quantitative research, observational strategy, communication channel, observational instrument, and whether the observation system was designed for analysing two dyads (doctor-parent and doctor-child) or a triad (interaction between all three participants).

#### [ TABLE 2 ]

Six studies were based on tapes and transcripts, the other half of the studies reviewed made use of video recordings (four video studies additionally made use of transcripts). Most research was restricted to the participants' verbal behaviour; only four studies also took nonverbal communication into account (Tannen & Wallat, 1983, 1987; Worobey et al., 1987; Van Dulmen, 1998).

Regarding the observational instrument, seven quantitative studies applied category systems in order to code the verbal behaviour of the participants. The most commonly used methods were Bales' Interaction Process Analysis (IPA) (Bales, 1950) (Korsch et al., 1968; Freemon et al., 1971; Korsch & Negrete, 1972; Pantell et al., 1982), and derived systems such as the Roter Interaction Analysis System (RIAS) (Roter, 1989) (Van Dulmen, 1998; Meeuwesen et al., 1998). The RIAS is a modification of the Bales system adapted for doctor-patient communication. This system distinguishes between instrumental and affective utterances by doctors and patients. Instrumental clusters refer to problem-solving (giving information, asking questions and counselling); affective clusters refer to aspects for establishing a good relationship (such as giving comfort, reassurance and showing empathy). A comparable classification method was used by Worobey et al. (1987), who focused on form and content of the pediatrician's utterances, by analysing intonation, sentence type, and the person addressed.

In three quantitative studies, investigators employed a turn-taking system designed for triadic medical communication; Aronsson and Rundström (1988) made use of the Child Allocated Turns System (CAT), while Meeuwesen and Kaptein (1996) and Meeuwesen et al. (1998) applied a modified version of the CAT, the Turn Allocation System (TAS). The CAT focused on the child-allocated turns of the doctor, whereas the TAS explicitly aimed at describing the turn-taking patterns of all three participants, by analysing all turns in terms of initiative, allocation and response.

Two qualitative studies made use of conversation-analytical micro-analyses (Tannen & Wallat, 1983, 1987). Another qualitative study applied Brown and Levinson's Politeness Theory (1987) (Aronsson & Rundström, 1989), which focuses on the field of tension between the need for clarity on the one hand, and the need for politeness on the other. Brown and Levinson discuss 'politeness' in terms of respect behaviour and solidarity behaviour. Positive politeness strategies, such as expressions of solidarity and familiarity, appeal to the other's need for solidarity, whereas negative politeness strategies, such as expressions of restraint and distancing, appeal to the other's need to be respected. Sociological variables such as 'social distance' and 'power' predict the way participants phrase their utterances in terms of politeness. Where there is a large power difference between speaker and the person addressed, the speaker will phrase his message in an indirect and respectful way, whereas smaller power differences are associated with directness and clarity. For a critical overview of the strengths and limitations of recent methods of analysis, see Charon et al. (1994), and Boon and Stewart (1998).

Although all 12 studies claimed to analyse the interaction between doctor, parent and child, only three studies (Aronsson & Rundström, 1988; Meeuwesen & Kaptein, 1996; Meeuwesen et al., 1998) explicitly focused on the communication between all three participants (doctor-parent, doctor-child and child-parent). The remaining 10 studies restricted their analysis to the doctor-parent and doctor-child dyads.

## Questions and findings of the studies reviewed

Table 3 presents an overview of the research questions and the findings of the 12 studies reviewed, as well as the aspects of communication focused on.

### [ TABLE 3 ]

Six of the seven studies focusing on the relational aspects of the communication between doctor, parent and child yielded information on the conversational contribution of the participants. The studies reviewed proved tolerably consistent in their findings on the conversational contribution of the physician (about 60%). However, they differed substantially in the reported contribution of the parent and the child (parent: 26-39%; child: 2-14%) (Freemon et al., 1971; Pantell et al., 1982; Aronsson & Rundström, 1988; Meeuwesen & Kaptein, 1996; Van Dulmen, 1998; Meeuwesen et al., 1998). Although there is some variation, the conversational contribution of the child is very small or even absent; Van Dulmen (1998) reported that in 36% of the pediatric consultations the child did not participate at all verbally. Two studies reported differences in the child's conversational contribution in terms of an increase with age (Pantell et al., 1982; Van Dulmen, 1998). Meeuwesen et al. (1998) described an increase of the conversational contribution of the child between the 1970s and the 1980s. When focusing on the doctor-child (including child-doctor) interaction, there was a considerable variance in the results reported; ranging from 12% (Freemon et al., 1971) to 45% (Pantell et al., 1982) and even 63% (Worobey et al., 1987).

With respect to the distinction between affective and instrumental behaviour, there seemed to be remarkable differences in the doctor's role depending on who was addressed. In interaction with the parent, the doctor showed the commonly described physician role profile, characterized by a good deal of instrumental behaviour: the doctor provided information and instruction and asked for information, while the parent gave information and asked a few questions (Freemon et al., 1971; Korsch & Negrete, 1972; Pantell et al., 1982). On the other hand, the doctor's role profile in interaction with the child was by and large restricted to affective behaviour, such as social behaviour and joking (Freemon et al., 1971; Pantell et al., 1982; Van Dulmen, 1998). Freemon et al. (1971) even found 50% of the doctor's behaviour to be affective, while another 25% consisted of instructions. Although doctors relied on the child for obtaining information (Worobey et al., 1987 even found that doctors questioned the child more than they questioned the parent), the greater part of medical information was directed at the parent (Pantell et al., 1982; Worobey et al., 1987; Van Dulmen, 1998).

Two relational studies reported the effects of communication on outcome variables such as satisfaction and adherence to treatment (compliance). Parents who had not been given the opportunity to express their concern about their child or who did not receive the information they expected, were less satisfied and showed less compliance (Korsch et al., 1968; Korsch & Negrete, 1972). The Korsch studies showed that only 24% of the parents indeed made their worries explicit and stressed the positive relationship between affective behaviour of the doctor towards the parent and parental satisfaction. Affective behaviour of the doctor towards the child only slightly influenced the satisfaction of the parents (Korsch & Negrete, 1972). None of the studies reviewed addressed the effects of relational aspects of the communication on outcome variables from the perspective of the child.

The three studies that paid attention to the structural aspects of doctor-parent-child communication revealed that in terms of turn-taking, it was mainly the parent who was responsible for excluding the child from medical conversation by interfering in 52% of the turns the doctor directed to the child. The extent of the doctor's control, however, was almost constant (Aronsson & Rundström, 1988). In the course of time there was an increase in the conversational contribution of the child, mainly attributable to an increase in the number of initiatives on the part of the child itself (Meeuwesen & Kaptein, 1996; Meeuwesen et al., 1998), and to the doctor addressing the child more directly (Meeuwesen & Kaptein, 1996).

The relational studies of Korsch et al. (1968) and Korsch and Negrete (1972) revealed that in more than 50% of the cases the physician made use of medical jargon towards the parent. Research into the content of the communication aimed at describing the potential discrepancies between this medical jargon and everyday language, and patterns of mutual influence in terms of accommodation of

conversational style. Accommodation of conversational style was studied in terms of frames of reference by Tannen and Wallat (1983, 1987). They reported how the doctor found a balance between such conflicting demands as consulting the mother, examining the child and reporting to the video audience, by switching frames, depending on the person addressed. In interaction with parents the doctor mainly used a consultation frame, in which task-related instrumental behaviour dominated the conversation. When talking to the child, the physician switched to a 'motherese' frame, which was characterized by an affective, teasing conversational style. This dichotomy is consistent with the findings of Worobey et al. (1987), where the doctor mainly used an affective conversational style towards the child, whereas the mother was addressed in a consultation frame. Aronsson and Rundström (1989) approached the same problem in another way, by focusing on the field of tension between the doctor's need for clarity on the one hand, and the need for politeness on the other. They analysed the physician's questioning in terms of directness/indirectness and the person addressed, and found that the parent was addressed indirectly or respectfully, whereas the child was addressed rather directly. Their findings also demonstrated how the doctor used the child as a third party in order to formulate his criticism towards the parent in a mitigated way. The doctor's direct approach was compensated for by an excess of affective behaviour towards the child (joking relationship). Pantell et al. (1982) showed that accommodation to the person addressed in terms of instrumental versus affective behaviour also included the topic of conversation.

## DISCUSSION

The aim of this review study was to evaluate the state of the art of research into doctor-parent-child communication, and to explore the role of the child in medical interaction. We are led to the conclusion that doctor-parent-child communication is a subject that has been insufficiently studied; most of the studies reviewed ignored the consequences of the child's presence in medical communication as well as the need for triadic analyses. The communication in the doctor-parent-child triad possesses distinguishing features that differ fundamentally from dyadic doctor-patient interactions, and therefore must be studied as a unique subset of the medical encounter. We will elaborate on these conclusions by returning to the research questions.

### Aspects of doctor-parent-child communication

The first question concerns the different aspects of doctor-parent-child communication which have been highlighted in the studies reviewed. Obviously, studies on the relational aspects of the interaction are dominant in this field of research. By drawing attention to the gap in doctor-patient communication (in terms of affective and instrumental behaviour), the Korsch studies have set the trend for a long-lasting tradition focusing on this aspect of medical interaction. In the first place, this type of quantitative research yields information on the conversational contribution of the participants. The studies reviewed reported the physician's contribution to the consultation at about 60%. This is consistent with general studies on doctor-patient communication, with patients contributing 40% to the conversation (Roter et al., 1988), and in accordance with Arntson and Philipsborn (1982) in their description of doctor-parent communication. The child's participation obviously seems to occur at the expense of the parental contribution to the conversation. The most important conclusion, however, is that the conversational contribution of the child is very slight. The variance in the restricted child participation (2-14%) can be explained by regarding the background variables. The studies of the Korsch group mainly examined infants and toddlers,<sup>1</sup> whereas the mean age in the other studies ranged from 5 to 10 years. The plausibility of this explanation is sustained by the findings of Pantell et al. (1982) and Van Dulmen (1998), who stress the positive correlation between the child's age and conversational contribution. A second possible explanation is that the Korsch research was carried out in the late 1960s, a period in which children did not have much of a say. The presupposition that the child's contribution has increased over the years is supported by Meeuwesen and Kaptein (1996) and Meeuwesen et al. (1998). A third factor might be a difference in doctor-parent-child familiarity; in the Korsch studies participants met for the first time, whereas other studies mainly involved repeat visits.

Secondly, relational research draws attention to differences in the physician's role profile, depending on the person addressed. Whereas, in interaction with the parent the doctor mainly shows instrumental

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<sup>1</sup>This puts the Korsch quotation in the introduction into perspective.

behaviour, the communication between doctor and child seems to be restricted to the affective domain. In this respect the interaction between physician and child can indeed be typified as a 'joking relationship' (Aronsson & Rundström, 1989). Although doctors rely on the child for obtaining information, diagnostic and treatment information are primarily directed to the parent. In terms of the various goals of the medical consultation, the physician largely restricts the medical interaction with the child to the creation of a good interpersonal relationship. However, restricting doctor-child interaction to the affective domain precludes two other important goals of medical communication, namely exchanging information and medical decision-making (Ong et al., 1995).

Finally, this field of research stresses the positive relationship between the affective behaviour of the doctor and parental satisfaction and compliance. This is in line with studies on doctor-parent communication that reveal a higher correlation between parental satisfaction and the physician's affective behaviour for worried parents, and a higher correlation between satisfaction and the physician's informativeness for repeat visits (Street, 1991, 1992). Surprisingly, the issue of the child's satisfaction and compliance in relation to the process of medical communication is not a topic of interest. One might expect, however, that the way the physician interacts with the child will influence the outcome of the consultation in terms of satisfaction, adherence, recall and understanding (and probably health outcomes).

By focusing on the structural aspects of doctor- parent-child interaction, linguistic-oriented research extends and specifies the findings of relational studies. Whereas the latter pictures the small conversational contribution of the child, structural research illustrates how the child by and large is excluded from medical communication by a controlling parent. On the other hand, the child itself can potentially exert influence on the organization of the communication. The increase of the child's contribution in the course of time seems to be the result of an increase in the number of initiatives by the child itself (Meeuwesen & Kaptein, 1996; Meeuwesen et al., 1998), as well as the doctor giving more room to the child (Meeuwesen & Kaptein, 1996). Information on the dynamics of communication can become manifest only by investigating the sequential patterns of turn- taking in this triad.

The four studies addressing the content of doctor- parent-child interaction strongly support the difference in the physician's behaviour in terms of affective versus instrumental behaviour depending on the person addressed. This dichotomy in the doctor's verbal behaviour applies both to the topic of discussion (Pantell et al., 1982), and to accommodation in terms of frames or politeness strategies applied (Tannen & Wallat, 1983, 1987; Worobey et al., 1987; Aronsson & Rundström, 1988, 1989). These studies easily demonstrate how the presence of a child influences the physician's verbal behaviour. In this context Stiles (1989) stresses the error of the presupposition that process variables on patients are constant. Stiles criticizes the fact that the patient's demands and the doctor's responsiveness are often ignored in studies on doctor-patient interactions. This is consistent with the comments of Tannen and Wallat (1981) and Street (1992), who point out the importance of research on interactional influences in medical consultations. Research on the content of medical conversation is vital for exposing such processes, and, in the case of a doctor-parent-child triad, this type of interactional research underlines the difference between a triadic and a dyadic conversation.

To summarize, we have to conclude that researchers have focused on diverse aspects of doctor-parent-child interaction, with the result that knowledge on the different aspects of communication is highly fragmented and poorly integrated. We would like to draw attention to the complementary nature of the various aspects of medical doctor-parent-child communication, and the need to study all these aspects of the interaction in relation with each other.

### **The child's role in medical communication**

This study supports the assumption that the role of the child in medical communication is a subject that has been insufficiently studied. Even when the patient is a child, the focus of research is usually doctor-parent interaction, rather than the communication between doctor and child, and little attention is given to the specific role of the child. In so far as the studies reviewed deal with the specific contribution of the child, they picture the stereotype of child participation being restricted to the provision of medical information and to the maintenance of a 'joking relationship' with the physician. In addition, the studies reveal that the child's control in medical conversation is rather limited. We have to conclude that, as far as the doctor is concerned, it is a matter of quantitative control (in terms

of conversational contribution), turn-taking control (in terms of allocation) and semantic control (in terms of topic control) (Linell & Luckman, 1991). The strategic control of the parent appears from the fact that the parent claims a lot of the child's turns in speaking. This is consistent with Pantell and Lewis (1993), who stress that although physicians direct a considerable amount of speech towards the child, they seldom discuss management issues with the children, not even with older children or adolescents.

This negation of the child as an active participant does not seem to be consistent with the development of the patient-centred approach and the increased demand for shared decision-making and informed consent (Stewart et al., 1995; Borne, 1998). As we stated in the introduction, it is increasingly being acknowledged that children too should be involved in decisions about their own health care. From the perspective of patient-centred care, the child's role in the consultation should be as important as the parent's.

On the other hand, the findings of this review study demonstrate that the child can potentially exert influence on both relational and structural characteristics of the communication, as well as on the content of the interaction. However, there is still a lack of extensive data on this subject. One possible explanation for this gap between the expectations concerning the child's role in medical communication and the results of this review study could lie in the methodologies used in the studies we reviewed.

### **Design of the studies reviewed**

The majority of research methodologies used are based on analysing dyads. Although all studies claim to examine the interaction between doctor, parent and child, most studies have not dealt with the implications of a third participant's presence. A consequence of this prevailing dyadic approach is that valuable information on the interactional dynamics of triadic communication, in terms of influences and role attributions, remains underexposed. By restricting the focus of research to the dyadic interaction doctor-parent and doctor-child, a phenomenon such as parental control (the parent taking over the turns the doctor directed to the child) would not have been revealed. It is not surprising that, especially in studies focusing on the structural aspects of communication, the necessity of adapting the coding schemas to include all participants in the analysis is rather strong. In these sequential analyses, one is forced to take into account the implications of a third participant's presence, e.g. by including a category such as allocation of turns, because of the impossibility of regarding the utterances of participant B as a direct consequence of the verbal behaviour of participant A.

As stated above, research into the content of interaction supports the need for triadic analyses by revealing the interactional influences of communication in the doctor-parent-child triad in terms of accommodation of conversation style. So far, however, this type of research has been restricted to doctor-parent and doctor-child communication, and therefore cannot be typified as triadic by nature. The prevailing doctor perspective in this type of research is probably responsible for the parent-child interaction being over-looked.

We have to conclude that because the interactional dynamics of a triad differ fundamentally from those of a dyad, triadic analyses are a prerequisite for a full account of the communication in the doctor-parent- child triad.

### **RECOMMENDATIONS**

As we have shown that triadic analyses are indispensable for exposing the dynamics of triadic medical communication, future research should focus on the implications of a third participant's presence on the methodology used, and should attempt to develop a conceptual framework for analysing triadic medical communication such as the doctor-parent-child triad.

In order to conduct triadic analyses, researchers should develop adaptive coding schemes to take into account a third participant's presence by including the allocation of utterances (who the speaker is addressing), and by analysing the communication between all three interlocutors. In addition, research methodologies should employ a developmental perspective, because children's communication skills and their understanding of diseases may change with age (Hart & Chesson, 1998), and with type of illness. As the samples of the studies reviewed reflect a dissimilarity of practice settings, different age limits, and a broad diversity of complaints, there should be more consistency in future research with respect to sample and method of analysis. Samples should be more balanced in terms of back- ground



variables such as setting, sample size, type of illness, the child's age and gender, socio-economic characteristics, and cultural background.

In view of the emphasis in this review study on the complementary nature of research focusing on various aspects of medical doctor-parent-child communication, future studies should further explore a number of underexposed characteristics. A deeper understanding of the relationship between interactional style and outcome variables, such as satisfaction and adherence, could have considerable potential for health education with respect to children developing a sense of responsibility for their own health care. Future research should explore the influences on the turn-taking patterns in this triad, e.g. the child's age, the type of complaint, and the segment of consultation. Triadic analyses on the content of interaction would reveal whether accommodation of conversational style also applies to the parent and the child. In addition, content analysis may yield valuable information in terms of topic initiations, topic shifts and topic avoidance in this triad.

We would like to stress that, for a full account of the communication, all aspects of the interaction should be studied in relation with each other. This case for a combined approach is equally applicable to the combination of quantitative and qualitative research. Although most research on doctor-patient communication is quantitative by nature, qualitative research is vital for exposing processes of responsiveness and accommodation of conversational style. The argument in favour of a combined approach is consistent with Wasserman and Inui (1983), Roter et al. (1988), Waitzkin (1990), Roter and Frankel (1992), and Charon et al. (1994), who stress the complementary nature of qualitative and quantitative research and the rich potential for cross-method collaboration. Finally, it is strongly recommended that future research focus on nonverbal behaviour during medical consultations involving a child patient. Although several researchers have acknowledged the importance of nonverbal behaviour (Roter et al., 1988; Ong et al., 1995; Boon & Stewart, 1998), this is still an underdeveloped area in research into doctor-parent-child communication.

The physician's perspective was dominant in the studies reviewed, and thereby most research implicitly aims at improving the physician's behaviour. From the perspective of patient education and counselling, of both child and parent, future research should not be restricted to the doctor's perspective. Only by using a plural perspective, i.e. by dealing with the perspective of all three participants, can the processes of mutual influence of the interactants be fully examined (Stiles, 1989; Street, 1992).

By using a plural perspective, future research should aim at gaining knowledge on the implicit and explicit role attributions of all three participants. The role of the child in medical communication is particularly deserving of more attention. The child itself has to be taken seriously and should be considered as an intelligent, capable and cooperative participant, with its own cognitive and emotional needs. The question of when a child can be considered a full participant in medical communication has to be answered in relation to the child's age, the type of complaint, and the parent-child relationship. Children may become more or less empowered by different discursive practices of both parent and doctor. Therefore, future research should also focus on the various roles of the parent in medical interaction, e.g. representative, mediator, or activator. This type of research could shed light on the back-grounds of parental control; e.g. in terms of parental responsibility and concern or the child's lack of familiarity with the medical setting. Finally, the role of the doctor deserves further attention; it is the physician who has to deal with two interlocutors with potentially different needs and goals. In the case of the doctor- parent-child triad the development towards patient- centred medicine may be more problematic than hitherto assumed. On the one hand, the doctor should teach the child to cope with questions on health and illness, while on the other hand the physician has to be sensitive to the account of events and questions of the parent. Physicians ultimately have to cope with this 'pas de trois':

Pediatric visits are particularly challenging in requiring that the physician engage in a dance with not one but at least two partners - parent and child - and that the physician be able to lead at times and follow at others. (Pantell & Lewis, 1993: p. 7).

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**TABLES**

Table 1  
 Sample characteristics: setting and characteristics of doctor, parent and child

Study	Setting and familiarity	Characteristics doctor	Characteristics parent	Characteristics child
Korsch et al. (1968)	Pediatric emergency clinic, first visits	Pediatrician: <i>n</i> = 64, 1-5 years' experience	<i>n</i> = 800 interview, <i>n</i> = 293, mainly mothers, different educational levels	<i>n</i> = 800, 0-10 years, 75% under 5 years, mainly acute somatic complaints
Freemon et al. (1971)	See Korsch et al. (1968)	See Korsch et al. (1968)	<i>n</i> = 285 from data of Korsch et al. (1968)	<i>n</i> = 285 from data of Korsch et al. (1968)
Korsch and Negrete (1972)	See Korsch et al. (1968)	See Korsch et al. (1968)	See Korsch et al. (1968)	See Korsch et al. (1968)
Pantell et al. (1982)	Family medical centre, 72% repeat visits	Family physician: <i>n</i> = 49, mean 2.3 consultation (range 1-9)	<i>n</i> = 115; educational level: 7% low; 50% medium; 43% high	<i>n</i> = 115, 60 girls, 55 boys, age 4-14 years, mean age 8.5 years, health maintenance+ acute illness
Tannen and Wallat (1983, 1987)	Interdisciplinary clinic/children's hospital	Pediatrician: <i>n</i> = 1, female	<i>n</i> = 1, mother	<i>n</i> = 1, 9 year-old girl, physical and mental retardation
Worobey et al. (1987)	Pediatric consultation	Pediatrician: <i>n</i> = 4	<i>n</i> = 11	<i>n</i> = 11, age 4-6 years, lung diseases
Aronsson and Rundström (1988, 1989)	Allergic outpatient clinic, 97% repeat visits	Pediatrician: <i>n</i> = 5, 1 female, 4 male	<i>n</i> = 32, 25 mothers, 3 fathers, 4 both parents	<i>n</i> = 32, age 5-15 years, allergy
Meeuwesen and Kaptein (1996)	General practitioner's surgery, repeat visits	General practitioner: <i>n</i> = 39, majority male	<i>n</i> = 59, mainly mothers	<i>n</i> = 95, 49 girls, 46 boys, mean age 7.8 years, comparable acute complaints
van Dulmen (1998)	Outpatient consultations general hospital, 87% repeat visits	Pediatrician: <i>n</i> = 21, 9 female, 12 male, mean 15.5 consultation	<i>n</i> = 302	<i>n</i> = 302, mean age 5.3 years, 60% boys, 40% girls, diverse diagnoses
Meeuwesen et al. (1998)	General practitioner's surgery, repeat visits	General practitioner, <i>n</i> = 17, majority male	<i>n</i> = 20, 18 mothers, 2 fathers	<i>n</i> = 20, age 6-13 years, mean age 9 years, 13 girls, 7 boys, comparable acute complaints

Table 2  
 Design of the studies reviewed

Study and nature	Observational strategy	Communication channel	Observational instrument	Two dyads/ dyads/ triad
Korsch et al. (1968), quantitative	Audio + transcripts + interview	Verbal	Interaction Process Analysis, Bales, satisfaction ratings	Two dyads
Freemon et al. (1971), quantitative	Audio + transcripts + interview	Verbal	Interaction Process Analysis, Bales, satisfaction ratings	Two dyads
Korsch and Negrete (1972), quantitative	Audio + transcripts + interview	Verbal	Interaction Process Analysis, Bales, satisfaction ratings	Two dyads
Pantell et al. (1982), quantitative	Video	Verbal	Interaction Process Analysis, Bales	Two dyads
Tannen and Wallat (1983, 1987), qualitative	Video + transcripts	Verbal + nonverbal	Micro-analysis	Two dyads
Worobey et al. (1987), quantitative	Audio + transcripts	Verbal + nonverbal	Schenkein	Two dyads
Aronsson and Rundström (1988), quantitative	Audio + transcripts	Verbal	Child Allocated Turns system	dyads
Aronsson and Rundström (1989), qualitative	Audio + transcripts	Verbal	Politeness Theory, Brown and Levinson (1987)	Triad
Meeuwesen and Kaptein (1996), quantitative	Video + transcripts	Verbal	Turn Allocation System	Two dyads
Van Dulmen (1998), quantitative	Video	Verbal + nonverbal	Roter Interaction Analysis System	Triad
Meeuwesen et al. (1998), quantitative	Video + transcripts	Verbal	Turn Allocation System, Roter Interaction Analysis System	Two dyads
				Triad

Table 3  
 Questions and findings of the studies reviewed

Study and aspect	Research question	Findings
Korsch et al. (1968), relation	Relationship nature communication doctor and parental satisfaction + compliance	<ul style="list-style-type: none"> <li>* Positive relationship affective behaviour doctor and parental satisfaction</li> <li>* 76% of parents were satisfied</li> <li>* 24% of main worries were mentioned</li> <li>* A fifth of parents did not receive clear information</li> <li>* Doctor should pay attention to parent's need for reassurance and explanation</li> <li>* Use of medical jargon does not always lead to miscommunication</li> </ul>
Freemon et al. (1971), relation	Relationship attributes to doctor-parent interaction and parental satisfaction + compliance	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 59%, parent 39%, child 2%</li> <li>* Communication: doctor-parent<sup>a</sup> 88%, doctor-child 12%</li> <li>* Role profile doctor-parent: doctor asks for information, gives instruction/mother gives information and expresses tension</li> <li>* Role profile doctor-child: doctor 50% affective behaviour, 25% instructions/child answers questions and follows instructions</li> </ul>
Korsch and Negrete (1972), relation	Relationship attributes to doctor-parent interaction and parental satisfaction + compliance	<ul style="list-style-type: none"> <li>* Content analysis supports findings Korsch et al. (1968): doctor's attention to worries correlates with high parental satisfaction</li> <li>* Affective behaviour doctor towards child only slightly influences parental satisfaction</li> <li>* In more than 50% of the cases the doctor uses medical jargon</li> </ul>
Pantell et al. (1982), relation	Relationship nature communication and characteristics children + parents	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 60%, parent 26%, child 14%</li> <li>* Communication: doctor-parent 50%, doctor-child 45%, parent-child 5%</li> <li>* Role profile doctor: relies on the child for obtaining information + shows affective behaviour, whereas the doctor provides the parent with medical information</li> </ul>
Tannen and Wallat (1983, 1987), content	How does a doctor cope with conflicting demands during consultation?	<ul style="list-style-type: none"> <li>* The doctor addresses each audience from a different frame: towards child, motherese frame; towards mother, consultative frame; towards video audience, reporting frame</li> <li>* Conflicting frames may lead to miscommunication</li> </ul>
Worobey et al. (1987), relation + content	How does a doctor accommodate form and content to addressee?	<ul style="list-style-type: none"> <li>* Conversational contribution: the doctor addresses the child more than he does the parent (63% versus 37%)</li> <li>* Doctor directs most questions towards child</li> <li>* Doctor uses three different styles of conversation: towards child, friendly talk (50%), gentle, authoritative talk (13%); towards the parent, consultative talk (37%)</li> </ul>
Aronsson and Rundström (1988), structure	Who controls the child's contribution in a pediatric consultation?	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 58%, parent 34%, child 8%</li> <li>* Parents are responsible for excluding the child from conversation: parental interference in 52% of the turns allocated to the child by the doctor</li> <li>* Parents differ in type and degree of control</li> </ul>

Table 3 (continued)

Study and aspect	Research question	Findings
Aronsson and Rundström (1989), content	In what way does the presence of a third party affect the doctor's facework?	<ul style="list-style-type: none"> <li>* Doctors operate within different politeness strategies: the parent is approached with indirectness and respect behaviour, whereas the child is approached with directness and solidarity behaviour</li> <li>* Doctors criticize the parent through the child (strategic exploitation of a third-party presence)</li> <li>* Doctors tend to soften the direct approach of the child by using a joking mode</li> </ul>
Meeuwesen and Kaptein (1996), structure	Description and comparison of doctor-parent-child communication over a period of 15 years	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 52%/50%, parent 41%/39%, child 7%/11%</li> <li>* Communication: doctor-parent 75.6%/65.8%; doctor-child 12.4%/19.9%; parent-child 7%/7.2%</li> <li>* The conversational contribution of the child has increased over the years as the result of the child taking more initiatives and the GP addressing the child more frequently</li> </ul>
Van Dulmen (1998), relation	What is the extent and nature of children's contributions to pediatric outpatient consultations?	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 59%, parent 37%, child 4%</li> <li>* One out of four doctor's statements was directed to the child</li> <li>* Role profile: although doctors ask the child a lot of questions (26%), only a small part of the medical information is directed to the child (13%)</li> <li>* The amount of doctor-child communication increased with the child's age (whereas the proportion of affective behaviour remained constant)</li> </ul>
Meeuwesen et al. (1998), relation + structure	Description and comparison of conversational patterns in doctor-parent-child communication over a period of 15 years	<ul style="list-style-type: none"> <li>* Conversational contribution: doctor 55%/50%, parent 40%/36%, child 5%/14%</li> <li>* Communication: doctor-parent 68.6%/54.2%, doctor-child 22.7%/27.8%, parent-child 4.7%/9.9%</li> <li>* The conversational contribution of the child has increased over the years as a result of the child taking more initiatives</li> <li>* The child gave more information, while the GP's instrumental behaviour and parental affective behaviour diminished</li> </ul>

<sup>a</sup>The notation 'communication doctor-parent' and 'communication doctor-child' implies reciprocity

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