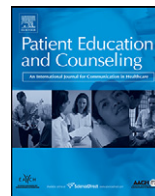




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Unraveling triadic communication in hospital consultations with adolescents with chronic conditions: The added value of mixed methods research

AnneLoes van Staa^{a,b,*}

On Your Own Feet Research Group^{a,c}

^aRotterdam University - Expertise Center Transitions of Care, Rotterdam, The Netherlands

^bErasmus University Rotterdam - Institute of Health Policy & Management, Rotterdam, The Netherlands

^cErasmus MC University Medical Center - Sophia Children's Hospital, Department of Pediatrics, Rotterdam, The Netherlands

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ABSTRACT

Objective: To integrate findings of a mixed methods research (MMR) into adolescents' preferences and competencies for communication during consultations, in order to demonstrate the added value of MMR for health communication research.

Methods: Sequential MMR with adolescents (12–19 years) with various chronic conditions in a university hospital. Methods comprised: (1) 31 face-to-face interviews; (2) Q-methodology; (3) 39 observations of outpatient consultations; (4) three focus groups with 27 healthcare providers; (5) web-based questionnaire in 960 adolescents.

Results: Adolescents had different preferences regarding health communication, but all wished to be involved as partners. Yet, their actual participation during consultations was low. They often acted as bystanders rather than main characters because their participation was neither requested nor encouraged. Parents filled the gap, to healthcare providers' frustration. The questionnaire confirmed the discrepancy between self-efficacy and self-reported independent behavior during consultations.

Conclusion: Triadic communication was all but multi-party-talk and adolescents did not act and were not considered as main partners. MMR was of pivotal importance for our understanding.

Practice implications: As chronically ill adolescents need to prepare themselves for transition to adult care, healthcare providers should encourage them to take the lead in communication by initiating independent visits and changing the parents' roles.

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1. Introduction

Medical interaction should be studied in the context of time, setting and participants [1,2]. This plea is particularly relevant in pediatric consultations, where at least one parent is likely to be present next to the child and the doctor. Triadic communication and opportunity for partnership is framed, first and foremost, by the 'ceremonial order of the clinic' [2,3]: the organizational and legal setting of pediatric clinics [4].

Research into triadic communication in the past decades has shown that the child's contribution is rather limited, seeing that doctors control the turn-taking and parents control their child's participation [4–11]. Doctors [5], nurses [12,13] or dieticians [5,9]

appear to address the parent more than the child; parents frequently take over when the doctor turns to the child [11,14], whereas children have very little say [5]. Parental speaking for the child is institutionally co-constructed: it is hardly ever questioned by children and ratified by doctors [15]. So, children's communication competence is not only dependent upon their own capacity, but also on parents' and healthcare professionals' attitudes [16,17].

Most studies on triadic communication were conducted in general practice [14,15,17–19]; some in outpatient settings [4,6,10,11] or in-patient wards [20,21]. Improving doctor–patient communication and establishing patient partnership is especially relevant in the context of chronic illness [22]. Youth with chronic conditions are rarely consulted, however, about their views on and preferences for involvement in communication [23,24]. Most research has focused on school-aged children (6–12 years) [5,6,11,14,15,17,19,25,26], while relatively few observational studies involved adolescents (e.g. children over 12 years of age) [10,11,20,23,27]. As children mature, they achieve greater

* Corresponding author at: Institute of Health Policy & Management, Erasmus University Rotterdam, P.O. Box 1738, Office W J8-31, 3000 DR Rotterdam, The Netherlands. Tel.: +31 104088697; fax: +31 104089094.

E-mail address: vanstaa@bmg.eur.nl.

competence for making independent decisions [16] and increasingly want to be involved in decision-making [28,29]. Also, the Dutch Medical Treatment Act (WGBO; 1995) grants adolescents aged 12–15 the right to co-decide with parents in treatment decisions and to decide for themselves when they are over 16. Adolescents with chronic conditions on the way to adult care should be trained and empowered to become effective partners in their own healthcare communication [30]. This does not only improve interaction, but is also enhances diagnostic and therapeutic processes [1].

In a project entitled “On Your Own Feet” we studied these adolescents’ preferences and competencies for healthcare communication. We chose a flexible, multi-method design to account for the complexity of a multi-party context. Mixed methods research (MMR) has the potential to access knowledge or insights unavailable to a qualitative study or a quantitative study undertaken independently. MMR is defined as a single study in which qualitative data collection and/or analysis is combined with quantitative data collection and/or analysis either in a concurrent or sequential design [31]. MMR has become popular [32], but the basic requirements for a good MMR study are much debated [33]. MMR has even been designated the third methodological paradigm: an intellectual and practical synthesis based on qualitative and quantitative research [34]. Integration of different strands of research is the biggest methodological challenge [35]. The key issue is whether the end product is really more than the sum of the individual quantitative and qualitative parts.

We chose MMR for several reasons. First, *comprehensiveness*: using different methods to address different aspects of the overall research question. Second, *improvement of validity and generalizability* of findings: by combining qualitative and quantitative methods, inherent weaknesses of each methodology could be compensated for [31,32]. Third, as our ultimate aim was to give adolescents a voice, *patient-centeredness* was another justification for MMR [32].

The objective of this paper is twofold: (1) to integrate findings of a MMR study into preferences and competencies for hospital consultations of adolescents with chronic conditions; (2) to demonstrate whether the mixed methods approach has added value in triadic health communication research in pediatric settings. We followed the guidelines for Good Reporting of A Mixed Methods Study [33] (Box 1).

2. Methods

2.1. General design and setting

The research project “On Your Own Feet” employed a sequential strategy of inquiry [31]. All studies were performed

in the Erasmus MC-Sophia Children’s Hospital, the largest tertiary referral center in the Netherlands. The project was originally designed as a participatory, multi-method qualitative study, but later extended with a follow-up questionnaire to strengthen the outcomes. Overall aim of “On Your Own Feet” was to map preferences for healthcare delivery and competencies required to enable adolescents with chronic conditions to independently direct their own treatment (self-management).

In the study sample we aimed to include all patients between 12 and 19 years of age with somatic chronic conditions who had visited this hospital at least once in the past six months and had been under continuous treatment for the past three years. However, those with intellectual disabilities, and those already transferred to adult care, were excluded. The study was conducted in five consecutive steps, presented in Fig. 1 and further described in Sections 2.2–2.6.

2.2. Interviews

We distinguished between two age groups: younger adolescents (12–15 years old, $n = 1191$) and older adolescents (16–19 years old, $n = 1011$). To facilitate purposive sampling, equal numbers of random cases were drawn from both groups and then we aimed at equal numbers of participants, and even distributions of sex, hospital experience, and nature of the condition (i.e. congenital or acquired in past five years, physically disabling or not) within both age groups.

Semi-structured interviews were conducted either by pairs of purpose-trained nursing and paramedical students or by a researcher. Adolescents were interviewed alone at their homes. They were asked to describe their most recent consultation in the hospital and to explain their preferences for their own and their parents’ roles in communication. Interviews were audiotape recorded and lasted between 45 and 90 min.

Interviews were transcribed verbatim and imported into the qualitative software package ATLAS.ti 5.0 (www.atlasti.com) using a method of constant comparison, which involved comparing and contrasting incidents in the data to develop themes. A first coding frame, developed on the basis of the interview guide, was continuously modified and expanded as new themes emerged during thematic analysis [36]. The coding frame was flexible—a combination of induction and deduction.

Thirty-one of the 66 invited adolescents (47%) consented to an interview. Data on responders and non-responders have been published elsewhere, revealing no significant differences between participants and non-participants [37]. Socio-demographic characteristics are summarized in Table 1. Five adolescents presented with surgical conditions, two were chronically disabled and the others had a variety of chronic illnesses.

2.3. Q-methodology

At the end of each interview (2.2), Q-methodology was employed. This is a small-sample, yet robust technique for the measurement of attitudes, combining qualitative and quantitative approaches to explore patterns in individual preferences [37–40]. Participants rank-ordered 37 statements about preferences for healthcare delivery and self-management on a score sheet using a quasi-normal distribution. Examples of statements related to the organization of consultations and health communication are given in Box 2. After having rank-ordered the statements into “most agree”, “neutral”, and “least agree”, participants were asked to explain their ranking. By-person factor analysis (centroid factor extraction with varimax rotation), using PQMethod 2.11, was conducted to uncover patterns in the rankings of statements, described as Q-Care profiles [37].

Box 1. Quality criteria for Good Reporting of A Mixed Methods Study (GRAMMS) (taken from Ref. [33]).

- (1) Describe the justification for using a mixed methods approach to the research question.
- (2) Describe the design in terms of the purpose, priority and sequence of methods.
- (3) Describe each method in terms of sampling, data collection and analysis.
- (4) Describe where integration has occurred, how it has occurred and who has participated in it.
- (5) Describe any limitation of one method associated with the presence of the other method.
- (6) Describe any insights gained from mixing or integrating methods.

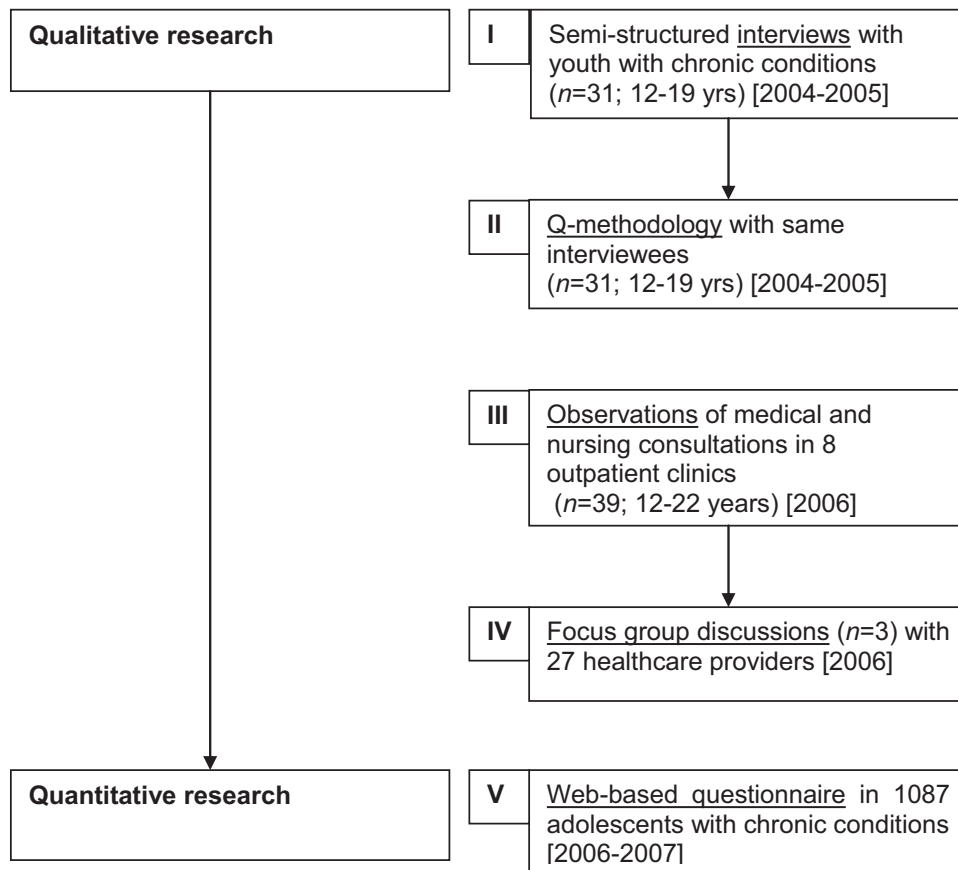


Fig. 1. Mixed methods research 'On Your Own Feet'.

2.4. Observations

Over 12-years-old who visited a selected outpatient clinic on specific days were invited if they met the inclusion criteria stated in Section 2.1. Non-participant observations were conducted by six trained nurse specialists and four researchers. The nurse specialists did not observe consultations in their own subspecialties, nor observed doctors or nurses they worked with on a regular basis. Immediately after each observation they were debriefed by a researcher. Afterwards, all observers filled out structured forms about the adolescents' level of involvement in communication and demonstrated competencies. Conversations were audiotape recorded, transcribed and thematically analyzed. Goffman's analysis of frames and interaction rituals, employing the theatre as a natural metaphor, was used [3,41].

Box 2. Examples of statements related to health communication and consultations used in Q-methodological study [37].

- (2) It would be nice if you could also talk to the doctor or nurse in private, without your parents being present
- (4) Healthcare professionals should not ask me personal questions in front of my parents
- (6) It's important for me to have my parents present during consultations
- (12) I would like healthcare professionals to treat me like an adult
- (16) During consultations, I find it convenient if my parents do the talking for me
- (22) Healthcare professionals should not be overprotective

Thirty adolescents were observed during 39 consultations in 8 outpatient clinics (diabetes, hemophilia, HIV, IBD, CF, neuromuscular diseases, nephrology and metabolic diseases). Socio-demographic characteristics are summarized in Table 1.

Twenty-seven consultations were with doctors; 8 with nurse specialists; 4 with a dietician.

2.5. Focus groups

Preliminary findings of the observations were discussed in focus groups with a self-selected sample of professional staff, recruited through e-mail messages and postings to bulletin boards. After the preliminary results of the observations and interviews were presented, three patient case histories related to self-management, communication and organization of consultations were discussed. The case histories were fictitious ones, composed on the basis of the observations. Conversations were audiotape recorded and analyzed (see Section 2.1).

Twenty-seven staff members participated in three 2-h group discussions; 16 nurses (including all nurse specialists working with youth); 5 medical doctors, 5 psychologists and one social worker. All major subspecialties of the hospital were represented.

2.6. Questionnaire

All adolescents who met the inclusion criteria stated in 2.1 on 1st July 2006 were invited to complete an online questionnaire that was accessible from October to December 2006 with a unique code on a secured Internet site. It measured socio-demographic characteristics, disease- and healthcare-related variables, and self-management with respect to consultations. The questionnaire was

Table 1
Adolescents' socio-demographic and disease-related characteristics in MMR 'On Your Own Feet'.^a

	Interviews/Q-study (n = 31)		Observations (n = 30)		Questionnaire (n = 960)	
	n	%	n	%	n	%
Gender						
Girls	15	48.4	9	30.0	539	56.1
Boys	16	51.6	21	70.0	421	43.9
Age						
12–15 years	17	54.8	17	56.7	588	61.3
16–19 years ^b	14	45.2	13	43.4	372	38.8
Mean (SD)		15.3 (2.1)		15.6 (2.1)		15.0 (1.9)
Ethnicity						
Dutch surname	26	83.9	21	70.0	832	86.7
Non-Dutch surname	5	16.1	9	30.0	128	13.3
No. of outpatient visits in past three years						
≤12	12	38.7	13	43.3	488	50.8
≥13	19	61.3	17	56.7	472	49.2
Hospital admissions in past three years						
Yes	11	35.5			233	24.3
No	20	64.5			727	75.7
Missing data			30	100.0		
Diagnosis after age of six ^c						
Yes	8	25.8	5	16.7	293	30.5
No	23	74.2	25	83.3	666	69.4
Missing data					1	.1
Therapeutic regimen (i.e. medication, diet or exercise)						
Yes	24	77.4	30	100.0	605	63.0
No	7	22.6	–		355	37.0
Presence of physical limitations						
Yes	7	22.6	5	16.7	273	28.4
No	24	77.4	25	83.3	687	71.6

^a All data of interview and observation participants were collected directly. For the questionnaire, gender, age, ethnicity, and hospital visits were retrieved from the electronic hospital database; the other data were self-reported.

^b One observation included a 22-year-old man with CF; all others were ≤19 years of age.

^c Diagnoses represented in the interview study: scoliosis/kyphosis, facial schisis, benign intracranial hypertension, congenital bladder disorder, congenital heart disorders, rheumatoid arthritis, hemophilia, diabetes mellitus (DM), epilepsy, inflammatory bowel disease (IBD), cystic fibrosis (CF), various metabolic disorders, HIV, nephrotic syndrome, immune and hormone deficiencies, lung insufficiency, progressive kidney failure, congenital skin diseases, asthma, and neuromuscular diseases. Observations included adolescents with DM, hemophilia, HIV, IBD, CF, neuromuscular diseases, nephrology and metabolic diseases. In the questionnaire, the five largest diagnostic categories (ICD-classification) were: congenital anomalies and conditions originating in the perinatal period (26.6%); neoplasm (12.9%); endocrine, nutritional, metabolic diseases, and immunity disorders (11.6%); diseases of the nervous system and sense organs (11.4%); and diseases of the musculoskeletal system and connective tissue (10.2%).

built on findings from a literature review, extensive data-analysis of the previously held interviews, and pilot tests of a draft questionnaire in face-to-face interviews with five adolescents and four parents. Information on the measures is published elsewhere [42].

Capability for self-management was measured through assessing self-efficacy and related independent behaviors. As no validated instruments measuring adolescents' self-efficacy were available, a new instrument was developed using Bandura's Guide for the framing of self-efficacy questions (*How confident are you that you could successfully perform this task?*) [43]. One scale measured self-efficacy in skills for independent hospital visits (11 items; Table 2) on a 4-point Likert scale (1 = no, certainly not; 4 = yes, certainly). Furthermore, adolescents rated their general independence during hospital consultations on a visual analogue scale (range 1–10) and they assessed independent behaviors during their most recent consultation on a dichotomous 7-item scale (Table 2).

Questionnaire data were analyzed using SPSS 17.0 (SPSS Inc., Chicago, IL). Descriptive statistics were applied. Univariate correlations were calculated by Spearman's rho. Chi-square tests served to compare the means of self-reported behavior and self-efficacy for consultations. All tests were two-tailed, and *p* values <.05 were considered statistically significant. A multivariate logistic regression analysis was performed to examine the variables associated with the adolescents' actual behavior during the most recent consultation. Predictors were included in the regression analysis on the basis of theoretical assumptions emerging from the qualitative studies. The percentage of explained

variance (Nagelkerke's R^2) was calculated to give an indication of the fit of the regression model.

The study population consisted of 3648 adolescents. Of the 1087 questionnaires received (29.8%), 127 were excluded as they were incomplete, leading to a total of 960 valid questionnaires. An analysis of response and non-response is published elsewhere [42]. Non-responders were more frequently males and had non-Dutch surnames; in addition, they were older and less frequently came to the hospital for consultations as compared with responders (*p* < .05). Table 1 presents participants' characteristics. All major chronic conditions were represented.

2.7. Validation and integration of findings

Validation for the qualitative findings was primarily realized by method triangulation and peer review. Preliminary analyses of interviews and observations were discussed within the research group and with the nurse co-researchers. Respondent validation was also employed: participants of the focus group sessions were invited to reflect upon the interpretations of the hospital observations. Interview findings were discussed with young patients who acted as co-researchers in a participative study conducted in 2006 [44].

Integration occurred at two stages. First, the research group thematically summarized all qualitative findings in a popularly published book [45]. These qualitative findings provided direct input for questionnaire development: by taking quotes from the interviews, by testing self-efficacy instruments, by presenting the Q-Care profile descriptions, and by determining which indepen-

Table 2
 Self-efficacy and self-reported independent behavior during last consultation (questionnaire; n = 960).

	Mean (SD)	% 'yes' ^a
I Self-efficacy in skills for independent hospital visits	Range 1–4 ^a	
<i>I am convinced that...</i>		
I could explain the doctor how I feel and what my needs are	3.48 (.66)	93.4
I would dare ask the doctor explain things until I understand it all	3.39 (.72)	88.8
I could answer all questions of the doctor myself	3.38 (.69)	90.4
I could explain to others what we discussed in the consultation room	3.30 (.77)	87.1
I could talk with the doctor on my own	3.27 (.81)	83.1
I would dare tell the doctor if I should disagree with her or him	3.23 (.76)	83.6
I would dare confess to the doctor that I did not stick to my regimen or hospital appointments	3.20 (.74)	83.8
I could deal with it if the doctor should criticize me	3.19 (.77)	85.6
I would dare ask the doctor anything, even about my private matters	3.06 (.86)	74.6
I could make hospital appointments on my own	2.99 (.95)	70.2
I could manage to travel to the hospital on my own	2.59 (1.14)	51.5
II Self-reported independent behavior during last consultation	Range 1–2 ^b	% 'yes' ^b
<i>During my last consultation...</i>		
I went into the consultation room on my own		12.8
I made the appointment myself		13.0
I asked the doctor a question about a private matter		23.2
I prepared the consultation		24.1
I asked most questions to the doctor myself		41.3
I participated in a decision about my treatment		55.4
I answered most questions of the doctor myself		81.3
	Chi-square-test χ^2 (degrees of freedom)	p-Value
<i>Paired differences between self-efficacy and behavior^c</i>		
<i>I asked most questions to the doctor myself vs. I would dare ask the doctor explain things until I understand it all</i>	30.2 (1)	<.001
<i>I answered most questions of the doctor myself vs. I could answer all questions of the doctor myself</i>	75.0 (1)	<.001
<i>I went into the consultation room on my own vs. I could talk with the doctor on my own</i>	10.7 (1)	.001
<i>I asked the doctor a question about a private matter vs. I would dare ask the doctor anything, even about my private matters</i>	34.4 (1)	<.001
<i>I made the appointment myself vs. I could make hospital appointments on my own</i>	48.3 (1)	<.001

^a 1 = 'no, certainly not'; 2 = 'no, probably not', 3 = 'yes, probably' and 4 = 'yes, definitely'. The last two scores were compiled into one category 'yes'.

^b Here, a score of 1 indicates "no"; while 2 indicates 'yes'.

^c In Chi-square tests, differences in the means between two dichotomous statements were compared. For example, the statement from the Self-reported Independent Behavior scale *I answered most questions of the doctor myself* (dependent variable; 'yes'/'no') was compared with a similar statement from the Self-Efficacy Scale *I could answer all questions of the doctor myself* (independent variable; 'yes'/'no').

dent variables should be included in the regression analyses. Then, while some results from sub-studies have been published separately [37,42,44], the drafting of this manuscript stimulated further integration by exploring and explaining adolescents' participation during consultations. For this, interpretations from the qualitative studies were compared with the quantitative dataset and discussed in the research group.

2.8. Ethical concerns

All study procedures were approved by the Institutional Review Board of the Erasmus Medical Center. The researchers had no access to participants' medical records. Participants were assured of confidentiality and data were processed anonymously. Eligible adolescents and their parents received written information about the study and gave informed consent, as well as healthcare providers involved.

3. Results

3.1. Interviews: adolescents' views of healthcare communication

Young people found routine hospital consultations little interesting and often boring ("always the same"). The pediatrician takes the lead and sets the agenda, the adolescent follows, answers questions if asked to do so and only rarely poses questions. The younger adolescents (under 16) reported that parents and doctors

do most of the talking. Yet, most interviewees maintained they are very well capable of playing a more active role. There are two reasons why they do not do this:

- it is not necessary: "my parents do this for me" and "the doctor doesn't tell me to do so";
- it is not interesting or profitable: "I don't really care", "it's easier this way".

Only few adolescents (mainly the younger ones) did not feel capable to represent themselves ("that is too difficult for me"). On the contrary, most of the older ones said they wished to be the main partner in communication and some, all over 17, claimed an active role during consultations. They did not accept being marginalized in communication. Daphne (19; CF) said: "I prefer to represent myself. If I forget something, it's OK for my mum to step in, but I used to get so irritated when doctors addressed my parents instead of me, with me just sitting there!". Adolescents' attitudes toward communication represented their transitional status: in-between typical child and adult roles.

Their parents' roles were described in ambivalent terms. On the one hand, parents' presence and interference was perceived as "helpful" (by the younger ones) or "supplementary" (by the older ones). Adolescents claimed to be "forgetful" and parents' support was needed to refresh their memory or answer difficult questions. Also, the parents' presence was judged indispensable in critical situations. Many youth appreciated the expert knowledge, active

involvement and support of their parents. They generally share the same goals when in consultation.

On the other hand, adolescents described their parents' interference as annoying ("overdone") and superfluous; it unnecessarily lengthened the consultation and embarrassed them in front of the doctor's. Parents' presence also inhibited them in discussing sensitive topics or asking questions themselves.

3.2. Q-Care profiles: adolescents' communication preferences

The Q-methodological analyses identified four distinct preference profiles for healthcare delivery and self-management: 'Conscious & Compliant'; 'Backseat Patient'; 'Self-confident & Autonomous'; and 'Worried & Insecure' [37]. The differences lie in various aspects: for example preferences for physician–patient interaction and view of parents' role during consultations.

With respect to communication, adolescents in profiles 'Conscious & Compliant' and especially 'Self-confident & Autonomous' feel more independent and display a higher degree of self-efficacy for hospital visits than those in the other two. 'Backseat Patient' adolescents feel less capable of self-management and strongly agree with the statement "It's important for me to have my parents present during consultations" whereas those in the 'Self-confident & Autonomous' profile disagree. 'Backseat patients' lean on their parents because they feel uninvolved and incompetent. 'Worried & Insecure' adolescents lack confidence because they worry about their health prospects. They need their parents to support them in coping with insecurities.

Adolescents also share preferences. They all want to have a say in important treatment-related decisions. They are not opposed to doctors asking personal questions in front of their parents. Nevertheless, when sensitive issues such as sexuality and heredity are raised, parental presence "may sometimes be inconvenient". All adolescents would like to talk to doctors and nurses alone, even 'Backseat Patients'.

3.3. Observations: role play

The observations confirmed the general picture of non-participation and marginalization, with exceptions in older adolescents. Adolescents' most displayed attitude was to watch and wait, providing short and general answers to non-specific questions. Parents were present in 70% of all consultations and played an important role. Only when adolescents came alone (in 9 consultations), they were more involved and talkative. Only in the HIV-department it was standard practice that the nurse specialist sees adolescents alone. Apart from this, no other differences between nursing and medical consultations or between the various subspecialties were detected with respect to adolescent involvement and parental roles.

Using Goffman's dramaturgical metaphor [41], we envisaged the hospital consultation as a theatre play with the pediatrician/nurse as stage director, with less fixed roles and sometimes interchangeable parts for the other parties. The youngest adolescents often acted as bystanders or played minor parts. Parents acted not only as stagehands or prompters, but often performed the main character role, sometimes presenting monologues and reducing their children to stage extras. At times, parents also acted as the advocate of the child's best interests by critically reviewing doctor's proposals. The parents' role is less prominent when children were older. However, even then there were many instances in which parents participated more actively.

Staff did not ask adolescents' permission for their parents' presence, nor asked to see adolescents alone for some time. The dominant presence of parents during hospital consultations was facilitated by their children's non-participation, and tacitly accepted

and endorsed by healthcare providers. Though doctors almost always tried to direct the communication toward the adolescent, in due course discussions were frequently 'taken over' by parents.

This silencing is sometimes protested against by adolescents through non-verbal communication of discontent: Jim (16; end-stage renal disease) turned away in protest to his mother's ventilated frustration about Jim's non-compliant behavior. Or by rebelling verbally like Richard (14; muscular disease) who protested when his mother started discussing his habits.

3.4. Focus groups: healthcare providers' impotence

The focus group sessions revealed that healthcare providers find communicating with adolescents often challenging and sometimes frustrating. Teenagers are not motivated to be involved; this is explained as an inevitable consequence of puberty; "it's just a phase". Several tactics were employed to involve them: making jokes, asking about hobbies, steering the conversation toward them or asking directly for their opinions—with varied success. At the same time, parents have been partners in communication for so long that this has become "a fixed pattern" that is hard to change: "parents are so used to playing the first fiddle". Although staff was very dedicated to adolescent patients and did not question their competence, they also sympathized with parents' frustration with adolescent non-adherence and noninvolvement. Still, some professionals found dealing with parents during consultations even more difficult than dealing with patients. Yet, interference in the relationship between parents and adolescents was seen as undesirable and "tricky". Adolescents were seldom seen independently, because staffs were afraid parents "would not accept this".

Hospital staff experienced managing triadic communication as balancing on a slack rope. Many felt incompetent to restrict parents' involvement and to activate adolescents. Though professionals set the stage in hospital consultations, they seemed unaware of their power to turn the tables.

3.5. First integration of qualitative findings

The most important roles and preferences of all parties involved in triadic consultations, as emerged from the qualitative studies were compiled in Box 3 [45]. Several possible factors related to

Box 3. Integration of interview and observational data: triadic communication during hospital consultations

Youth (12–15 years)

- act as bystander
- pose very few questions
- do not feel involved

Youth (16–19 years)

- want to be the main partner in communication
- seem more involved
- do not wish to discuss private matters in front of parents

Parents

- report/keep the overview
- pose questions
- provide answers/supplement child's contribution
- arrange all practical affairs

Health care providers

- think adolescents are passive and sometimes unapproachable
- see parents as main partners in communication
- wish to involve young people more

adolescents' involvement during consultations were identified: age (older adolescents participated more), gender (girls seemed more active), and ethnicity (those who came alone were often of non-Dutch background). Furthermore, physical disability and poor health appeared to enhance parents' dominance, while adolescents actively involved in daily self-management appeared more involved during consultations.

3.6. Questionnaire: gap between capability and behavior

These factors were further explored in the quantitative analysis. Questionnaire participants assigned a mean score of 7.1 (SD 2.0) on a scale from 1 to 10 to their general independence during consultations; only 21.9% saw their independence as insufficient (i.e. below 6); 29.1% scored 9 or 10. Their mean rating on the scale 'Self-efficacy in skills for independent hospital visits' ($\alpha = .88$; min.11–max.44) was 35.1 (SD 6.0). The majority of adolescents were convinced of their own capability of managing consultations (Table 2). For example, 90.4% answered "yes" ("probably" or "definitely") when asked whether they could answer all questions of the doctor themselves. Eighty-three percent was confident to talk with the doctor alone. Nevertheless, their self-reported behavior during the most recent consultation told a different story. Few (12.8%) reported to have gone into the consultation room alone and less than half (41.3%) said they had asked most questions to the healthcare provider themselves. Chi-square tests, comparing the means of the self-reported behavior and the stated self-efficacy for the alleged competency demonstrated a gap between capability and behavior in all pairs ($p < .001$).

In a multivariate logistic regression analysis, factors associated with two independent behaviors were explored (Table 3). Those who had consulted the doctor alone more often had a non-Dutch surname, were older, visited the outpatient department more frequently (indicating a more active disease process) and had a higher self-efficacy than those who came with their parent(s). Those who asked most questions themselves were older, more often female, and had a higher educational level and a higher self-efficacy than those who asked fewer questions.

3.7. Final integration: ambivalence toward independent communication

We conclude there is a good deal of ambivalence toward triadic relations in communications with chronically ill adolescents. Adolescents' lack of involvement is co-constructed by all parties. Most adolescents felt competent to manage their own affairs during consultation and wanted to be involved in their own care, yet failed to demonstrate independence and let their parents do most of the talking. Adolescents differed in their preferences for an executive role in communication, and in their demonstrated competencies. The older ones, the girls, the higher-educated, the more experienced in terms of hospital visits, and those who feel more self-efficacious, reported to be more active during consultations.

Most explained their marginalized position as a result of their own indifference or as a consequence of "not being asked to participate". A minority saw themselves as incompetent as they were "still a child", while others were not happy with being left out

Table 3
 Correlations with and multivariate logistic regression analysis with (a) going into consultation room independently and (b) asking most questions myself during most recent hospital visit ($n = 941$).

Variable	Bivariate correlations Spearman's rho	Multivariate logistic regression analysis		
		OR ^a	95% CI	R ²
<i>(a) Going into the consultation room independently</i>				
				.169
Gender (male)	.019	1.17	.76–1.79	
Age	.130***	1.64*	1.06–2.54	
Educational level (high)	-.039	.76	.50–1.17	
Type of education (special)	.022	1.90	.91–3.97	
Non-Dutch surname	.152***	3.12***	1.89–5.16	
Hospital admissions in past three years	-.023	.63	.38–1.02	
Outpatient visits in past three years	.097**	2.03**	1.31–3.15	
Prescribed medications, diet or exercise	-.029	.76	.49–1.20	
Diagnosis after age of six years	.019	.90	.57–1.40	
Presence of physical limitations	-.048	.69	.41–1.16	
General health score	.001	.85	.68–1.06	
General score of independence during consultations	.189***	1.20**	1.05–1.38	
Self-Efficacy Scale in skills for independent hospital visits	.211***	1.08**	1.03–1.13	
<i>(b) Asking most questions to the health care provider myself</i>				
				.279
Gender (male)	-.071*	.70*	.52–.95	
Age	.215***	1.60**	1.17–2.20	
Educational level (high)	.120***	1.48*	1.09–2.00	
Type of education (special)	-.097**	.92	.51–1.66	
Non-Dutch surname	.051	1.34	1.87–2.06	
Hospital admissions in past three years	-.024	.96	.67–1.37	
Outpatient visits in past three years	.039	1.23	.91–1.68	
Prescribed medications, diet or exercise	-.077*	.84	.61–1.15	
Diagnosis after age of six years	.066*	1.04	.76–1.44	
Presence of physical limitations	-.045	1.03	.72–1.47	
General health score	.021	.92	.78–1.09	
General score of independence during consultations	.342***	1.24***	1.13–1.36	
Self-Efficacy Scale in skills for independent hospital visits	.406***	1.13***	1.09–1.17	

OR: odds ratio; CI: confidence interval; R²: explained variance by Nagelkerke R-square test.

^a The multivariate analysis adjusted for all variables.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

of communication and “*treated in a childish way*”. Parents filled the gap. Although adolescents realized that one day they will have to manage communication themselves, many chose a comfortable position leaving the hard work to parents. At the same they were ambivalent about the parents’ role: while they needed their parents and often appreciated their support, they also felt not at ease when parents interfered.

Pediatric staff is equally ambivalent: they tried to involve adolescents, while not restricting parents’ presence or dominance of the communication. Although they expressed frustration with “*overbearing*” parents, they shared parental concern toward adolescents’ non-compliance or lack of involvement. In conclusion, triadic communication with adolescents was all but multi-party-talk and adolescents did not act and were not considered as main partners.

4. Discussion and conclusion

4.1. Discussion

This study confirmed that adolescents with chronic conditions desire to participate in their own care and have their viewpoints taken seriously [24,28]. A higher age was associated with a preference for communication directly to the adolescent [24]. Several qualitative studies found that preferences with regard to parents’ role differ between adolescents [20,23,27]. The four Q-Care Profiles we described show that such preferences are closely related to (perceived) healthcare competencies [37].

We established that a higher age was linked with more self-reported independent behaviors during consultation and with higher self-efficacy. Girls seemed more active asking questions. Williams also reported that mothers were more likely to act as mediator for their sons, as they saw their daughters as more responsible [46].

Our study confirms that adolescents often remain inactive during triadic consultations [6,11] despite good interactional competence. Multi-party-talk, as sometimes advocated [17,25], is difficult to accomplish. In any encounter involving three or more actors there is a tendency for two of them to enter a coalition in order to advance a personal agenda or achieve an agreed outcome [4]. In adolescent care, the healthcare provider and the parents tend to enter a bipartite coalition. Pyörälä found that adolescents with diabetes had an active patient role in two-party encounters with dieticians, whereas in triadic encounters they often turned into withdrawn bystanders [11]. Parents’ presence and executive roles seem to be the key issues here. By acting as an ‘alert assistant’ [46], parents could, unwillingly, delay the development of adolescent self-management skills.

Pediatric providers in the present study felt ambivalent about asking parents to step aside, even though the Dutch Medical Treatment Act gave them a legal basis to involve adolescent patients actively. This may be related to lack of awareness or of ways to handle this complex situation.

Promoting independence in young people with chronic illness can be difficult for parents as several aspects of the parenting role compete: maintaining a supervisory role while supporting the child’s emerging ability to independently manage their health [47]. Parents’ presence during consultations is regarded as inhibiting or as supportive [20,23,27]. It may be also experienced as a threat to confidentiality, a communication aspect known to be important for adolescents in general [18]. Adolescents with chronic conditions, however, are perhaps more comfortable involving parents than are healthy peers [48]. Still, parents’ presence also raises tension especially when personal or sensitive topics are discussed [23]. Nevertheless, risky behaviors and development of self-management are crucial for developmentally appropriate adolescent care

[49]. Effective communication has the potential to improve adherence with the treatment regimen and improve young people’s wellbeing and disease outcomes [50].

4.1.1. Limitations of the study

One important limitation of our approach was that parents’ voices were not studied and that only a limited number of pediatricians participated in the focus groups.

Also, wide ranges of practices, health conditions, and preferences were researched. We did so because chronic patients share many common tasks and challenges [49]. As a logical consequence, differences in adolescents’ and staffs’ experiences with health communication related to the chronic conditions themselves cannot be accounted for by the used study design.

This research was carried out in one university hospital in the Netherlands and results may thus not apply to other settings and countries. Although employing different interviewers and observers may be seen as threatening the quality of data collection, being a co-researcher stimulated healthcare providers to change their practices. We tried minimizing the potential threat by intensive training, debriefing, and use of semi-structured interview and observation guides.

The non-response rate was fairly high for both the interviews and questionnaire, implying that the results may not be applicable to all adolescents with chronic conditions. Also, more structured observations could be useful to test hypotheses about the importance of age, gender and ethnicity for adolescents’ competencies.

4.2. Relevance and application of MMR in health communication research

Most studies on health communication in the context of pediatric consultations have used a quantitative approach, measuring participation, turn-taking and rating the communication type from video tapes [5,14,15,17,19,25] or audio tapes [6]. Other studies have relied on qualitative methods, using participant observation [5,9], interviews and/or focus groups [20,23,27]. Both approaches seem valuable, as they shed light on different aspects and actors. *Preferences* for communication and attitudes toward participation during consultations are best studied through in-depth interviews outside the hospital. The observations revealed that often adolescents demonstrated fewer *competencies* than they said they possessed. The strength of qualitative observations was that actual behavior could be studied, for which the interviews and focus group sessions parties offered explanations and justifications. Although a qualitative approach has many advantages and allows for richness and contextual data, the small numbers of participants do not allow us to make inferences about the prevalence and importance of certain characteristics for communication skills. Studying communication in context would ideally require a mix of qualitative and quantitative approaches.

Our study can be classified as a sequential, exploratory design, in which both methods were given equal priority and weight and in which the second phase partly developed from the first [51]. Qualitative studies helped us to generate hypotheses to be tested in the questionnaire, but vice versa, findings from the questionnaire (for example the discrepancy between self-efficacy and self-reported independent behaviors), could be explained through insights obtained from interviews and observations. Full integration is difficult to achieve in MMR, however, and even more complicated to publish [35]. A review of 75 MMR studies in healthcare in the UK found that researchers often ignored their mixed methods design and described only the separate components [32]. Considerable experience and expertise – both in qualitative and quantitative research traditions – would seem to be

needed to achieve good integration and good study outcomes [52]. In our case, the project leader, originally purely schooled in qualitative methods, learned to handle quantitative methods as well. This seems a prerequisite to integration. As few researchers possess this 'double expertise', qualitative and quantitative studies tend to be split up in MMR, instead of being mixed. This conflicts with the purpose of MMR: to gain a more complete understanding of social phenomena [51]. In this study, MMR had an added value over a single method approach as it helped to unravel complex processes, allowed contextual data to be included and gave voice to multiple parties.

4.3. Conclusion

Adolescents desired to be involved, but their actual level of involvement in healthcare communication during hospital consultations was low. Many adolescents felt they were competent to become partner in communication, thus demonstrating another gap between capability and actual behavior. While the legal context grants adolescents every right to participate and (co-)decide and they are supposed taking over control from their parents as an essential step in transition to adult care, the current structure of consultations, the communication style employed and the presence of parents hindered adolescent involvement in communication.

The mixed methods approach was of pivotal importance for our understanding of triadic consultations.

4.4. Practice implications

As patient partnership improves health outcomes, a key issue in adolescent health communication is the true partnering between adolescents, parents and doctors. In the practice of pediatric chronic care, parents' rights to participation seem better protected than those of their children, even when these have reached adolescence. The legal context provides a firm basis for including adolescents as main partners in communication. The organizational setting, however, does not. Triadic encounters are likely to generate tensions and differences of opinion, and in the presence of two or more adults, adolescents' voices are likely to be muffled. Therefore, doctors and nurses should be trained in age-appropriate communication skills, such as asking direct questions, discussing psychosocial and treatment-related subjects relevant to adolescents, and maintaining confidentiality [45,48,50,53]. Healthcare providers should listen to parents and support their roles, but should see young people alone for part of the consultation.

Conflict of interest

The author has no actual or potential conflict of interests.

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