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Building a Child's Trust before a Medical Procedure: A Linguistic Case Study

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When a paediatrician establishes a trusting relationship with their patient, the chance of a positive outcome multiplies. A calm child, who participates fully in the communicative exchange is more receptive to the clinician's requests and reports weaker sensations of pain. This experience stays with the child, shaping how they approach their healthcare as adults. Our qualitative case study unpacks the linguistic aspects of a 32-minute videoed and transcribed exchange between a paediatrician (co-author) and a five-year-old boy she is preparing for a risky procedure. It asks: what linguistic strategies reduce his anxiety? Non-pharmacological methods are key here, as deep sedation is problematic. Our study explains the communicative techniques that the paediatrician exploits. We identify how they function, and how seemingly disconnected strategies group naturally under a few general principles. This is important for professional development because fewer overarching principles are easier to grasp and subsequently to deploy. Our interdisciplinary approach, which relies on real data, can be replicated and expanded with healthcare professionals to enable them to act concretely on their language productions.

Introduction

In this paper, we identify, and provide a linguistic analysis of, the range of tactics that a paediatrician uses with a young child (5 years) during a consultation to ease his emotional state and gain his trust prior to an invasive procedure. Qualitative studies based on observations of individual health care experiences are in short supply yet have been argued to be needed because within such a naturalistic setting, one can carefully tease apart the linguistic factors at play in this complex phenomenon (see [Leroy et al. 2016](#)). Our study contributes to this sparse literature by examining the key linguistic dimensions of one clinically based communicative exchange and illustrating how they work together to achieve their communicative functions—that of calming an anxious young child and increasing their participation in the procedure. Attention to this aspect of care is vital as it is well documented that a calm child patient co-operates more readily ([Bijttebier and Vertommen 1998](#); [Toledo del Castillo et al. 2019](#)), thereby facilitating a smoother procedure. But the relevance of the child's emotional state extends beyond the procedure at hand because heightened fear and anxiety increase perception of pain in children ([Ross and Ross 1984](#);

Ullán et al. 2014; Dionigi and Gremigni 2017), lead to less positive health outcomes, and remain in the child's memory for years (Stuber et al. 1996; Poot et al. 2023). The negative spiral continues because patients who recall painful childhood clinical encounters avoid seeking healthcare as adults, leading to delays in diagnoses and to avoidable treatments becoming necessary (Cohen 2008; Krauss et al. 2016). Thus, discussion on how best to communicate with child patients so as to promote their emotional well-being and reduce their fear and experience of pain is time well spent.

Over several decades, a number of studies has developed models that aim to maximise the comfort and increase the participation of children during invasive procedures using non-pharmacological methods (Fleitas 2003; Poot et al. 2023; Woerden et al. 2023). The idea is that tactics which rely on averting a child's attention or on communicating with a restricted pool of words that instil positive mental imagery can succeed at the psycho-emotional level of creating calm in the child (see Díaz-Rodríguez et al. 2021). These methods can be employed alongside medical ones, which target physical levels of comfort. An early study by Stephens et al. (1999), for example, put forward guidelines to be used with children under five, which were created to maximize the children's co-operation and engagement. At the forefront of their concerns was time – an acknowledgement that medical teams are constrained by a strict schedule – so they compiled a list of checks designed to take no more than five minutes to administer. A key component of this model was that negative terms, such as 'hurt' and 'pain' should be avoided so as not to introduce the concept into the child's imagery. Kuttner et al. (1988) also stressed the pivotal role of positive language in their hypnotherapy-based approach to managing the child's emotional state in settings they might find frightening. Parallel to this focus on words, came a conceptual shift in terms of what medics should strive for in terms of patient outcomes. Naturally, negative outcomes should be avoided but newer proposals stressed that positive outcomes over and above absence of distress should be targeted as a matter of course, too. Magyary (2002), for example, called for care plans to prioritise ways in which enhanced patient outcomes could be attained in the face of medical procedures. Comfort, hope and resilience were given as examples of enhanced outcomes, and subsequent work examined how these elevated aims might be met. Focusing on comfort, Kolcaba (2001, 2003) developed comfort theory, which also buttressed the importance of avoiding negative terms with children (Kolcaba and DiMarco 2005) – a recommendation that has been incorporated as a matter of course in subsequent directives aimed at medical caregivers (Lang and Laser 2011; Lang et al. 2017; Krauss and Krauss 2019).

The pivotal role played by communication in determining whether a paediatric patient becomes an active participant in the medical process is evident, but an exposition and explanation of the specific underlying linguistic processes at work can help healthcare professions to implement good linguistic practice deliberately and systematically. As we will see, there is a plethora of linguistic techniques with which to establish trust, ease anxiety and encourage a child's agency but knowing which ones to exploit and how best to combine them is a pragmatic skill that can transform the quality of a consultation for both medic and child. The current qualitative study examines the communicative exchanges during a pre-operative consultation in order to highlight the most effective facets. From a 32-minute exchange between a paediatrician, paediatric patient and his mother, we illustrate how linguistic strategies work to ease the child's anxiety and prepare him for his scheduled eye procedure. We illustrate the frequency, function and time course of the verbal and non-verbal features employed, demonstrating how he gradually relaxes and increases his participatory role during the consultation. Thus, our research question is as follows: what linguistic strategies are used to ease the child's anxiety and how do they achieve this aim?

Techniques to obtain maximal comfort in child patients encompass medical, behavioural and emotional aspects (Leroy et al. 2016). Our focus is limited to the linguistically relevant dimensions in the video recording. In the next section, we situate the medical context of the consultation and provide details about the recording on which our qualitative analysis is based. We then set out

our methodology. Our linguistic examination of the exchange starts in the subsequent section. We start with vocabulary, demonstrating that the paediatrician pays careful attention to her vocabulary choices and does indeed use the 'right words' as advised in previous literature, but we go into more depth as to the nature of these words. Next, we show that vocabulary is just a starting point: there are fundamental verbal and non-verbal linguistic strategies that can be observed, which are key to instilling confidence in the child. Drawing upon a model based on 'participation frameworks' (as presented in [Goffman 1981](#)), we track the child's increasing participation in the conversation, achieved by a careful balance between direct and indirect address. Key dimensions include careful body language, inclusive use of pronouns and certain terms of address, which gently yet consistently mark him out as the main addressee. Additionally, a series of carefully formulated questions, as evidenced in the next subsection, coax him further into a more participatory role. Careful selection of questions and their repeated use culminate in a more confident patient – the initially wary child moves from silence, to reluctantly responsive, to engaged. Finally, we apply a second model, based on 'facework strategies' ([Goffman 1967](#); [Brown and Levinson 1987](#); [Spencer-Oatey 2000](#)), with which we chronicle how the paediatrician aligns with the child, making him feel secure in their shared environment. Application of these models to the video and transcript illustrates how different strategies work incrementally to build and sustain the rapport between the medical caregiver and child. The discussion brings together the communicative tools that have been considered, demonstrating that a seemingly eclectic list of guidelines can be captured comprehensively with a few linguistic principles. We end by presenting the relevance of a corpus-based linguistic analysis for clinicians, and with a call for further interdisciplinary collaborations to improve the child's experience of hospital encounters, which can build on the initial work undertaken here.

The current study

The study is based on a 32-minute consultation between a paediatrician, a five-year-old boy (who we will call Jan) and his mother, which took place at University Hospital Ghent in 2021. Jan had been diagnosed with Coats' disease, a natural outcome of which is blindness. The younger a person is at the disease's onset, the worse their visual prognosis so early treatment via laser photocoagulation is essential ([Yang et al. 2019](#)). However, the risk of ophthalmology procedures increases significantly when deep sedation is used ([Kirwan et al. 2007](#)) so non-pharmacological methods were key to managing Jan's anxiety about the frightening and potentially painful procedure. The paediatrician (Dr Sara) in charge of the procedure met with Jan and his mother one week prior to the event. She aimed to familiarize him with herself, the surroundings and the medical equipment that he would encounter. These included a laser light, scented pens, a finger clip and a mask with laughing gas, all of which would be used when administering the sedating medication (fentanyl).

Method

Positionality statement

This study is the result of an international collaboration and has five authors, whose collective cultural backgrounds and specialisms informed the project's research agenda. The first and third authors are Belgian, the second is French, the fourth is Moroccan and the fifth is British. Our team comprises linguists and psycholinguists, with expertise in semantics and pragmatics, first and second language development, phonetics and multimodality, and a paediatrician working at University Hospital Ghent, specialising in pain prevention and palliative care, who is a member of the Faculty of the European Conference on Pediatric Procedural Sedation and Analgesia (PROSA), and the General Assembly of a non-profit association (Villa Rozenrood), a respite home for children in De Panne, Belgium.

Participants

The participants in the video recording were the five-year-old child (Jan), his mother (Mum) and the paediatrician (Dr Sara). Jan and his mother identify ethnically as Belgian without (recent) immigration background and their language background is Flemish Dutch. Jan's mother has a postgraduate qualification.

Materials and procedure

We transcribed the video using CLAN, which is a computerised language analysis programme (MacWhinney 2000), and translated it from Dutch into English. It was then transferred to the ELAN annotation tool for video and audio recordings (Wittenburg et al. 2006) and Excel to analyse the verbal and non-verbal exchanges between the three participants during the consultation. The transcript consists of 861 turns, and is available in Dutch and English on the Open Science Framework repository (<https://osf.io/ctuav/>). The consultation was recorded at University Hospital Ghent in the context of a television programme (*Radio Gaga*). *Radio Gaga* is a Belgian television series that is a human-interest programme produced by *De Chinezen*. The presenters travel around with a mobile studio, visiting diverse locations, such as hospitals, nursing homes and prisons, to share stories and listen to people who live or work in these environments. In its fourth edition in 2021, following the challenges posed by COVID-19, the programme focused on the healthcare sector. The interviewers were particularly interested in the paediatrician's approach to building trust with her patients and documented a 'preparation session'¹ involving Jan.

Ethics

Jan's mother gave informed consent for the taping of the consultation, for its broadcast on national television and for further study of the video recording and its transcript. The present study received ethical approval from the Central Research Ethics Advisory Board at the University of Kent (CREAG049-03-23).

Findings

Vocabulary

As explained above, the linguistic recommendations that have been made focus heavily on words that inspire positive feelings and imagery. These are clearly implemented in the consultation we analysed: the 'positive focus' and the emphasis on 'sensory information' that feature in, for example, Cohen's list of 'language to use' (Cohen 2008) translate as follows into the paediatrician's turns: 68% of the 114 adjectives that are used are positive in tone (*grappig/funny*, *goed/good*, *leuk/nice*); the use of intensifiers typical of youth language (*superleuk/super good*, *keigoed/fantastic*, *keigrappig/very funny*, *keicool/super cool*) also stand out and enable her to initiate a bond with Jan. There are only two negative adjectives (*bang/frightened*), used twice, but they feature in reassuring contexts, and are counterbalanced with Dr Sara empathizing. With respect to nouns, the abundant use of diminutives (21% of the nouns used) is striking. Diminutives are characteristic of child and parental talk (*oogje/little eye*, *broertje/little brother*) (Vandekerckhove 2007), but here they are used more creatively often in combination with nouns that have medical referents (*maskertje/mask*, *medicamentje/medication*, *sputtje/syringe*, *onderzoekje/ examination*). Similar strategies were documented in Rindstedt (2013), which observed paediatric nurses renaming medical equipment with their cancer patients. When preparing a tray with medical equipment, for example, the nurse portrayed this activity as 'laying the table', whereas a noisy infusion pump was imbued with animate characteristics by being nicknamed 'a loudmouth' who was trying to get attention. A negative noun is used only once by Dr Sara (*Amaai, doet 't geen pijn?/Wow, doesn't it cause pain?*) but this occurs in the context of praise, when she clips the flashing light onto his finger. It is also at the very end of the encounter, by which time his trust has been obtained. A notable feature is the way in which modal verbs are employed. They comprise 15% of the total number of verbs, with verbs of

volition (*willen/will*), possibility (*kunnen/can* and *mogen/may*) and necessity (*moeten/must-have to*) accounting for 35%, 50% and 15% of the modal verbs, respectively. Their use illustrates how the emphasis is on what Jan is willing to do, and what is possible or allowed, respecting the agency he has. Strikingly, when *moeten/must-have to* is used, it is never to impose upon Jan. With reference to the medical procedure, Dr Sara explicitly says that Jan is not obliged to do something (*Ik ga 't jou tonen zonder dat je 't moet uh pakken/I'm going to show it to you without you having to uh hold it*). Words then, are clearly key, and their contribution is not limited to the use of 'positive' words. But the next subsections demonstrate further linguistic means through which Dr Sara achieves her aim. We start with the balance of turn-taking practices, which involve verbal and non-verbal cues, and how these ensure that the child is central.

Participation frameworks: making the child central

Paediatric encounters usually involve at least three participants: the paediatrician, the child, and a parent. During the course of such an interaction, this type of multiparty setting can lead to the building and rebuilding of different 'participation frameworks' (Goffman 1981; Goodwin 1999), involving two or three participants. Participants' involvement is based on a finely tuned orchestration of what participants say, how they say it, what they do with their bodies. Through verbal and non-verbal means of communication, speakers distinguish between their addressees (directly or indirectly) and bystanders (Goodwin 1986), and hearers indicate the role they wish to play (Goodwin 2007). There is an abundance of linguistic resources that interlocutors might exploit, including terms of address, pronoun choices, specific vocabulary, syntax, gestures, body postures, facial expressions, and gaze. All of these are used in a particular manner or with a certain rhythm (i.e. prosody), which imbue the utterance or gesture with further meaning. We will also see how timing and sequence are two further key dimensions (see Aronsson and Rindstedt 2011).

From the perspective of participation frameworks, paediatric encounters may be challenging in several ways: physicians require maximum information in a constrained time frame; child patients may not be (or considered to be) sufficiently linguistically, cognitively or socially mature to provide the physician with key information within that time. Parents and physicians thus run the risk of leading the conversation, relegating the child to that of a bystander. Below, we can see how Dr Sara avoids this trap. Among the strategies that she develops to reach her goal of reassuring Jan, a foremost one is to make him her primary addressee. The effect of this feature on paediatric consultations is manifold. It improves the physician-child bond and the child's retention of medical recommendations (Lewis et al. 1991; Kodjebacheva et al. 2016); it enables them to gain a greater sense of control over their medical care (Sisk et al. 2021), and helps socialise them into the patient role (Tates et al. 2002; Stivers 2012). Dr Sara achieves this end in different ways. At the start of their encounter, Dr Sara greets Jan first, addressing Mum only six utterances later, and in reference to Jan (*And are you Jan's Mum?*). Although her verbal behaviour is important (terms of address, second person pronouns, typical child-directed speech features), it is her non-verbal behaviour (gaze, the orientation of her head, kneeling to be at Jan's level) which signals that most of her utterances (77%) are aimed at Jan (see Table 1).

Table 1: Number of utterances (including non-verbal productions such as pointing or nodding) addressed by the three participants to each other.

	To Jan	To doctor	To Mum	To both others	Total
Jan	13	100	21	1	135
Doctor	392	1	104	11	508
Mum	98	99	0	3	200

When Dr Sara's face is visible in the recording (21 minutes), and the direction of her gaze is clearly identifiable (18 minutes), it is notable that for 8 minutes she looks at Jan and for only 3.5 does she look at Mum. She also crouches down to Jan's height for 11 minutes. During her conversation with Jan, Dr Sara refers to Mum (8 times) but rarely turns to her when doing so. Thus, Mum is obviously involved in the conversation, but is relegated to the role of bystander as the following example demonstrates.

- (1) Context: Doctor, Mum and Jan are in the corridor, approaching the 'magic room'

DOC: Heeft jouw mama verteld dat ik een toverdokter ben?(Dutch)

Did your Mummy tell you that I'm a magician doctor?(English)

Action: Doctor looks at Jan.

When she verbally addresses Mum (96 times), Dr Sara relies mainly on second person pronouns, however, she also refers to her in the third person, as if she were talking about the mother to the child:

- (2) Context: Doctor, Mum and Jan are entering the 'magic room'

DOC: Ik ga mijn jas uitdoen.

I'm going to take off my coat.

Action: Doctor takes off her medical coat.

DOC: 'k heb het veel te warm.

I'm much too hot.

DOC: Mama mag ook haar jas uitdoen.

Mummy can take off her coat too.

Even when addressing Mum directly, she continues to orient her speech and body towards Jan, making him an indirect addressee. This is visible when she uses the term of address '*mama/Mummy*' (6 times, as in *Wil jij 'ns, mama?/Do you want to try, Mummy?*). In example (3) as Dr Sara looks at Mum, she uses the vocative '*mama*' (line 419 in the transcript). She places her hand in front of her mouth, raising her shoulders in surprise (line 421); her pitch is high (lines 423 and 424), just as it is when she addresses Jan (lines 418 and 425). The pitch contours that accompany lines 424 and 425 illustrate the similarity of her pitch modulations when addressing the same sentence first to Mum then to Jan (see [Figures 1 and 2](#)).

- (3) Context: Jan has sprayed 'magic gas' onto the doctor and Mum but has not been willing to spray himself.

[418] DOC: 't Is echt grappig.

It's really funny.

Action: Doctor looks at Jan.

[419] DOC: 't Is grappig hé, mama?

It's funny, isn't it, Mummy?

Action: Doctor looks at Mum.

[420] MUM: 't Is heel grappig.

It's very funny.

Action: Jan opens the magic gas.

[421] DOC: Oh!

Oh!

Action: Doctor laughs and holds her hand in front of her mouth, looking at Mum.

[422] MUM: *unintelligible*.

[423] DOC: 't is straks een beetje veel! [=! opgaande intonatie]

Soon this is going to be a little bit too much! [=! rising intonation]

Action: Doctor looks at Mum.

[424] DOC: Voel je't?

Do you feel it?

Action: Doctor looks and points at Mum.

Action: Doctor and Mum laugh.

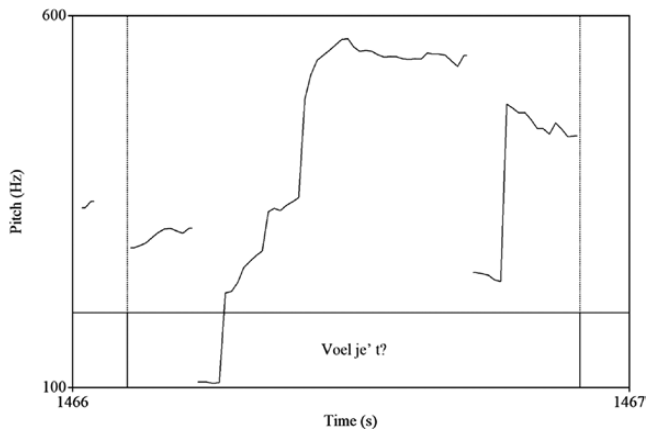


Figure 1: Pitch plot of line 424.

[425] DOC: Voel je 't?

Can you feel it?

Action: Doctor looks at Jan.

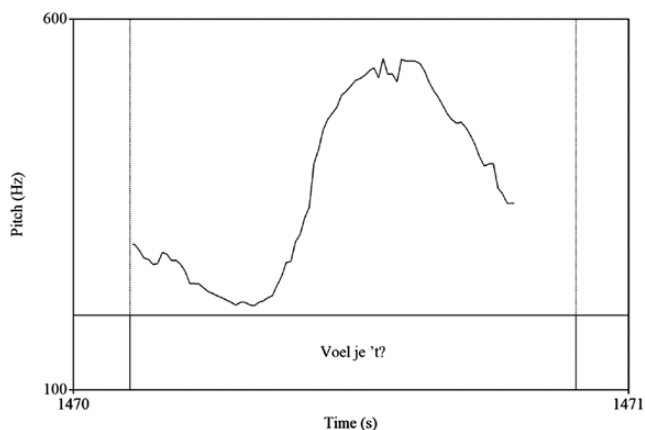


Figure 2: Pitch plot of line 425.

Collectively, the above shows how Dr Sara augments alignment between herself and her patient to reduce the social distance between them: addressing him directly, gazing at him, crouching to his level, talking about/to Mum in the third person, and using a child-directed register even when addressing Mum (Aronsson 2011). The removal of her medical coat on entering the 'magic' room and calling him 'lieve Jan/sweet Jan' also helps achieve this aim. Collectively, these strategies increase his sense of security.

Note that most of the utterances Dr Sara addresses to Mum ($N = 104$) are produced during the last quarter of the encounter. Figure 3 shows that progressively, the proportion of these increases from 3% during the first quarter ($N = 6$) to 43% during the last quarter ($N = 51$). But even at this point, 57% of her utterances are addressed to Jan, meaning he is still the primary addressee.

TIME sequences	0-8 min	8-16 min		16-24 min	24-32 min
% of doctor's utterances addressed to Mum	3%	21%		25%	43%
TRUST sequences	from beginning to smelling (0-12 min)	from smelling to mask on (12-17 min)	from mask on to fly question (17-21 min)	from fly question to end (21-32 min)	
% of doctor's utterances addressed to Mum	9%	12%	0%	52%	

Figure 3: Percentage of utterances addressed by the doctor to Mum across time/trust sequences out of total of doctor's utterances.

This progressive shift of interactional attention is still more salient when we use trust cues as identified by the paediatrician herself, a co-author (Jan first smelling the chocolate scent in the mask, allowing the mask to be put onto his face, and finally his asking Dr Sara if she can fly): after this latter question, 52% ($N = 75$) of Dr Sara's utterances are addressed to Mum. Only once she has obtained sufficient evidence that Jan is feeling confident enough, does Dr Sara attend to Mum directly. She asks if Mum has questions, explains the intervention in medical terms, and discusses the pending appointment.

The simple feat of making Jan her main addressee, enables Dr Sara to centre Jan in the conversation, increasing his opportunity to participate actively in the communicative exchange (the taking of turns) and in the medical procedure to come. As Table 1 suggests, Jan does not intervene much (he produces 16% of the total utterances). However, as his confidence increases, so does the proportion of his verbal productions: 36% (20 out of 56) of his utterances at the beginning of the encounter, rising to 63% (27 out of 43) at the end of it. Non-verbal productions encompass co-speech gestures, such as pointing, shoulder shrugging, as well as nods and shakes of the head. Figure 4 shows Jan's percentage of verbal or verbal+non-verbal utterances vs. his purely non-verbal productions.

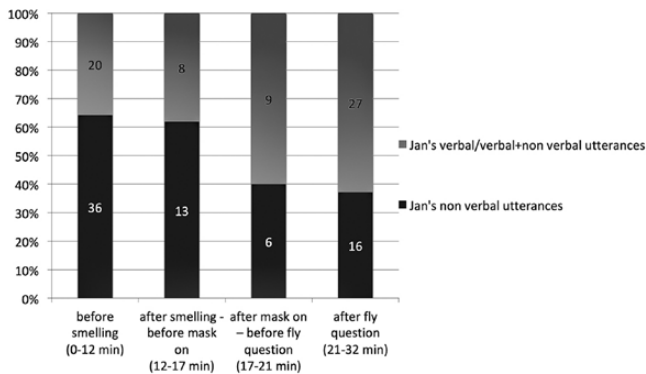


Figure 4: Jan's percentage of verbal or verbal+non-verbal utterances vs. his purely non-verbal productions.

In the next subsection, we show that this involvement is augmented by careful attention to the types of verbal utterances used – in particular, certain kinds of interrogatives.

Questions: enhancing involvement

Interrogatives are an obvious means of quickly engaging interlocutors in a conversation. Table 2 gives an overview of the four main sentence types that are produced by each interlocutor. It shows that of the 734 sentences in the consultation, 29% (212) are interrogatives. Simple examples of the kinds of utterances these terms cover appear immediately below.

Table 2: Sentence types per interlocutor

	Doctor	Mum	Jan	Total
Declaratives	278	122	49	449
Interrogatives	175	34	3	212
Imperatives	28	6	3	37
Exclamatives	17	12	7	36
Total	498	174	62	734

- (4) Declarative: *This is my magical practice room.*
 (5) Interrogative: *Can you do magic too?*
 (6) Imperative: *Come here.*
 (7) Exclamative: *Great!*

As we are primarily interested in the way in which interrogatives help Dr Sara achieve her aims, we will zoom in on these, illustrating how she uses them to good effect. As evidenced in Table 3, it is not only the number of interrogatives which is striking, but, as stressed earlier, that the majority of them (87.5%, 153 out of 175) are addressed to Jan.

Table 3: Types of interrogatives per interlocutor addressed to Jan, Doctor and Mum

Interrogative	Doc to Jan	Doc to Mum	Doc to herself	Doc to Jan and Mum	Mum to Jan	Mum to Doc	Jan to Mum	Jan to Doc	Total
Yes/no	114	17	1	1	12	2	—	3	150
Wh	17	1	—	—	4	1	—	—	23
Tag	15	2	—	—	9	—	—	—	26
Other	7	—	—	—	3	3	—	—	13
Total	153	20	1	1	28	6	0	3	212

Of course, we should bear in mind the context of this preparation session (see endnote 1). Dr Sara wants to gain Jan's confidence and familiarize him with the medical equipment so Jan is necessarily central. Still, the efficiency and simplicity of the 'interrogative strategy' should be underlined.

Let us look more closely at the different interrogatives used and why some are leant on more than others. Starting with Yes/No interrogatives, these invite the addressee to confirm whether or not (Yes/No) something is the case (*Ben je hier al geweest/Have you been here before?*). *Wh*-interrogatives are more open-ended in terms of the responses they generate (e.g. *who, what, where, how, which*, e.g. *Welke geur vind jij het 't lekkerst/Which smell do you like best?*). With respect to the *tag*-interrogatives, their chief aim is to seek confirmation and draw the addressee in (*Kirsner and Van Heuven 1996*) (*en we willen dat lekje wegdoen, hè?/and we want to get rid of that leak, don't we?*). Finally, the miscellaneous 'other' category includes leading interrogatives that have the form of a declarative (*So that is your little brother?*), and so-called idiomatic interrogatives (i.e. *Afgesproken?—Deal?/Agreed?* and *Weet je wat/you know what?*).

The abundant Yes/No interrogatives and tags are efficient stepping stones towards Jan's participation: they facilitate quick bonding because just a nod or shake of the head enables him to respond. We observe this technique from the outset. Dr Sara establishes a line of communication immediately with a quick series of these questions. The first set of questions (16th, 17th, and 19th) to which Jan responds verbally relate to his little brother. After another nine questions, to which Jan either responds with a nod or not at all, he verbalizes the eye problem (*een lekje/a little leak*). Seven further questions proceed without a verbal response from him before he says that the drops will be used in answer to a question about the procedural steps.

All the *wh*-interrogatives relate to precise, unthreatening facts: his little brother, the colour of the laser light, his smell of choice, who he is going to squirt with the water syringe, the toy he would like to receive as a present, the objects in the 'feel' box, what he's going to do during the weekend, the days of the week and the colours they are associated with. Only once Dr Sara feels she has discussed the various tools in sufficient detail, does she ask if there is anything else Jan would like to know. And this is where the real magic happens, as Jan asks if Dr Sara can fly as well. He remains captivated by the 'magical environment' indicated by his final question to her which is whether she can fly higher. Though rather shy, the environment that appeals to the senses (seeing, feeling, and hearing) and to Jan's imagination entices him to participate in the narrative.

From early in the consultation, Jan engages in the story and after 43 questions, at minute 14:49, he feels sufficiently bold to take the initiative: he tells Dr Sara, who shows him a red light, that Dr Eva's light is not red but yellow.

Up to this point, we have seen how Jan is made central in the exchange and have illustrated the techniques Dr Sara uses to make him actively participate (see e.g. [Rindstedt and Aronsson 2012](#) for analyses of additional ways in which children become engaged and active participants in the treatment procedures). We now turn to further means she deploys to make her patient 'feel good' and to boost his sense of security. By applying linguistic theory, in this instance, Brown and Levinson's 'politeness theory' ([Brown and Levinson 1987](#)), we demonstrate what an implementation of so-called 'positive politeness strategies' can achieve in terms of understanding the linguistic dimensions that work to ease the child's anxiety, and increase his agency.

Facework strategies: creating alignment

In their seminal book about 'linguistic politeness', Brown and Levinson built on [Goffman's \(1967\)](#) concept of face, defined in terms of 'the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact. Face is an image of self, delineated in terms of approved social attributes' (1967: 5). They reframe this in terms of 'positive and negative face' (1987: 61–63). The basic idea is that humans have positive face wants (the desire to be approved of by others) and negative face wants (the desire to be free and unimpeded in their actions). When interacting, speakers and addressees continually monitor the means by which they maintain their own (negative and positive) face as well as that of the other, in an attempt to safeguard and facilitate smooth interaction. The challenge involved is nicely captured in [Table 4](#).

Table 4: Face wants (Chapman, 2011)

	Face of speaker	Face of hearer
Positive face	1. Look good	2. Make hearer look good
Negative face	3. Don't give in easily	4. Don't push the hearer around

This two-faceted desire leads interlocutors to engage in 'face-saving strategies' in contexts which involve potentially 'face-threatening' acts. To take a simple example, if I ask whether I can borrow your car, I would be aware that my request potentially impacts upon your plans. I would therefore try to boost to your positive face (*I know I can always count on you*) and signal my awareness of your negative face wants by trying to minimise the imposition (*I will be back in less than half an hour*) or apologise (*I am sorry to be a bother*). Brown and Levinson highlight 15 'positive politeness strategies' and 10 'negative politeness strategies' that speakers can appeal to when redressing face-threatening acts. The degree of face-threat is measured according to three factors: the size of the imposition (borrowing a car vs. a pen), social distance (talking to a new neighbour vs. an old friend) and relative power (asking something of a friend vs. asking a boss).²

Let us apply this to a hospital encounter. We have a medical problem for which we need to see a doctor, who is more informed than us, and could be about to implement a painful procedure. This situation is extremely face-threatening, considering the aforementioned concepts of size, social distance and relative power. Our negative face is challenged in a variety of ways (the doctor is likely to request private information, or implement procedures that are invasive, with relatively little choice for us as the patient). Our positive face is also challenged (we don't necessarily 'look good'). Jan finds himself in just such a situation but the fact that he is a child increases the threat considerably. The task for Dr Sara is huge. She needs to make her five-year-old patient feel at ease with the administration of medication through the nose, the use of a laser and the use of the mask, and Mum needs to be reassured about the procedure and the medication. It is a complex process. Dr Sara is not entirely successful with respect to the mask—Jan refuses to put it on his face himself. It is actually Mum, at minute 26:40, who briefly puts the mask on his face, for which he is enthusiastically complimented by Dr Sara (*Super!*). Still, she makes sure not to impose her will and to live up to

her promise that 'Ik luister naar jou/I listen to you'. After persevering, however, Dr Sara strikingly, does win him round, drawing him into the universe of magic instead of lasers and pain.

One might expect a lot of 'negative politeness strategies' in such a situation, with Dr Sara showing that she is aware that Jan is feeling threatened, but this is not what happens. In fact, she mainly exploits positive strategies as we can now demonstrate, by applying [Brown and Levinson's \(1987\)](#) list of positive and negative strategies. We have already seen techniques that made Jan the central participant in the conversation and encouraged him to speak. However, looked at through a facework lens, we can uncover additional functions of these techniques. The overview will show how Dr Sara boosts Jan's positive face, or, in less technical terms, how she increases his self-assurance, whilst backgrounding the face-threatening situation by avoiding strategies that remind him of the threat to his negative face. Firstly, she 'attend[s] to the hearer' (1987: 103–104) in various ways: Jan is made central; she invites him to talk about his little brother, about what he likes (smells, toys) and dislikes (masks), about what he knows about the procedure. When Jan is forthcoming, she 'exaggerate[s] interest, approval, sympathy with the hearer' (1987: 104–106), through her prosody and the words she chooses (intensifiers *keigoed* (very) and *super*, typical of younger populations). Similarly, she empathizes when he makes it clear that he doesn't like masks and is scared (*Da's normaal/That's normal, ik begrijp wel echt dat jij een beetje bang ben/I really understand that you are a bit scared*). She constructs 'a good story' (1987: 106) about the magician doctor who uses all sorts of magical tools (it is 'zo leuk/such fun'), and the various types of interrogatives pull him into the narrative, thereby 'intensify[ing] interest to the hearer' (1987: 106–107). Her use of 'lieve Jan/sweet Jan' at the end of the consult demonstrates the 'use of in-group identity markers' (1987: 107–112), and by making extensive use of inclusive *we*, she is 'includ[ing] the speaker and the hearer in the activity' (1987: 127–128) (also see Aronsson 2011: 131–132 on use of 'collaborative *we*'). She 'seek[s] agreement' (1987: 112–113) and 'avoid[s] disagreement' (1987: 113–117). It is a remarkable feature that she never imposes or contradicts the little boy; whenever he indicates there is something that he doesn't want to do, for example, wearing the mask, she goes along with him (*Nee/No? (=You don't want that?)—'t Is OK/That's fine, Dan gaan we dat niet forceren/Then we won't force it, Ik luister naar jou/I listen to you*), thereby also '[a]ssert[ing] (...) the speaker's knowledge of and concern for the hearer's wants' (1987: 125). Another feature that stands out is repetition; while she cannot restrict herself to 'safe topics' (which is part of the 'seek agreement' strategy), she introduces them in a non-threatening and playful way, and the regular repetition underscores Jan's observations and choices (J: *Koen—Dr: Koen* (his little brother's name), *Een lekje/A little leak* (Jan pointing out what is wrong with his eye)—*Dr: Een lekje/A little leak, J: Chocola!—Dr: Chocolalala, J: Op mama/On Mummy—D: Op mama/On Mummy*). Jokes (1987: 124–125) are also present, such as squirting water on Mum, the discussion about what fun it will be to play the game with his brother and the playful repetition of 'chocolate': *chocolalala*. The doctor promises ('Offer, promise' (1987: 125)) Jan that he will get a toy because of the procedure he will undergo (children who blow into the mask get a present), allowing him to pre-select a toy which she puts in her 'magic chest'. She also promises to fly if he commits to blowing into the mask, thereby '[a]ssert[ing] reciprocity' (1987: 129). Dr Sara also '[g]ive[s] (or asks for) reasons' (1987: 128–129). She motivates why it is necessary to put the mask on (the laughing gas will make him feel super good); they will administer medication in his nose via the little tube so that he 'won't feel anything' and he will need to look into the yellow light. From this overview, we see plenty of examples of 'Giving gifts to the hearer (goods, sympathy, understanding, cooperation)' (1987: 129).

Turning to the use of 'negative politeness strategies', which is additional redressive action that speakers can implement in face-threatening contexts, the main moment these are used is when Dr Sara wants Jan to experience the laughing gas, the 'magical gas', which he clearly considers extremely threatening. She uses indirect requests (1987: 132–144), inquiring into his willingness (as in (8) and (9)), making suggestions (10), and likewise leaving options (11) (1987: 172 'Don't coerce the hearer')

(8) Wil je dat een zien, mijn tovergas?

Would you like to see my magic gas?

(9) Kom je 'ns kijken naar mijn tovergas?

Will you come and take a look at my magic gas?

(10) Zal ik het 'ns tonen?

Shall I show it to you?

(11) Nee, ik doe ik doe alleen als jij ook in het gasmaskertje blaast.

No, I'll only I'll only do it (i.e. fly) if you blow into the gas mask too.

(Jan shakes his head and looks away)

Nee, misschien volgende week dan?

No, maybe next week then?

Interestingly, 'apologising' features in Cohen's list of 'language to avoid' (Cohen 2008), and 'excessive reassurance' is likewise behaviour deemed unhelpful. In Brown and Levinson's model, these are two instantiations of 'negative politeness strategies', namely 'Apologize' (Brown and Levinson 1987: 87–190) and 'minimize the imposition' (1987: 176–178), such as 'it won't take very long', 'it will only be a bit painful'. In other words, the framework makes it possible to capture the techniques adopted by Dr Sara in terms of one principle that of not using negative facework strategies. They are best avoided as they direct the patient's attention to the perceived threat, and Dr Sara wants to distract him from discomfort and pain. Her explicit instruction to Jan's Mum to no longer use 'negative words' like '*prikken/sting*' is part of the same tactic of shifting attention away from the negative face threat and towards the enhancement of positive face. This section has shown that the use of 'positive words' advocated in the medical literature fits quite naturally into the framework we have applied here. However, the advantage of a face-based approach is that, as in the case of participation frameworks, it connects a large range of seemingly disparate tactics, which can be captured under the encompassing umbrella of 'positive facework' and which contribute collectively to the beneficial outcomes.

Discussion

With this study, we aimed to illustrate what a collaboration between linguists and medics can achieve in terms of elucidating the most successful aspects of communicative exchanges between healthcare professionals and their paediatric patients. Specifically, we asked what linguistic strategies were used by a paediatrician, whose aims were to calm an anxious child and increase their engagement during a preparatory session. Aside from noting the well-documented avoidance of specific vocabulary, our linguistic analysis focused on what was usefully implemented and to what effect, showing how exploitation of pronouns, tactical gaze and posture, careful balance of interrogatives, and application of specific facework strategies, worked in unison to build incrementally towards the child's rising level of trust, as indicated by his increasing engagement during the interaction. We concentrated on one consultation, responding to calls for more in-depth qualitative case studies that could better unpack the complex factors involved in a dialogue (Leroy et al. 2016). Identifying what works is an important endeavour as the degree to which a clinical encounter is a positive experience for a child not only impacts upon how that child perceives and complies with situational demands at hand but also on how they engage with medical treatment in the

future (Cohen et al. 2001). Constructive experiences early on create a sense of trust, which is a cornerstone of optimal healthcare. By teasing apart a 32-minute consultation between a doctor, a young child, and his mother, we have shown that individual components of this exchange can be grouped together into formative principles, which are easier to conceptualize than lists of individual and superficially independent instructions. Three main points can be drawn from our study.

First, with respect to the linguistic strategies used by the healthcare practitioner, we incorporated and built upon existing guidelines with respect to carefully chosen vocabulary that have been discussed in the medical literature. This literature provides valuable advice on what words to avoid as well as offering examples of alternatives that are less loaded with negative connotations (Cohen 2008; Lang and Laser 2011). A word in isolation can be independently imbued with positive or negative associations (*brave* vs. *nervous*) but the message conveyed with that word depends upon the type of sentence in which it occurs (Carston 2015; Levinson 2017). An imperative presents the child with a challenge they have to face, potentially raising their feeling of isolation still further, (*You be brave! Don't be nervous!*) whereas an exclamative can use that word constructively and praise the child's behaviour in a threatening context (*That was brave!*). It is to communicative aspects beyond the word that we wished to draw readers' attention, and we have indicated how a linguistic approach leads to a fuller understanding of their complex makeup. They are verbal and non-verbal. With respect to the former, we have highlighted pronoun choices and terms of address that reflect the child's perspective of the conversational participants, abundant use of different question types that involve, yet do not overburden, the child, and the strategies oriented towards the child's 'positive face' that raise his esteem. With respect to non-verbal features, the roles of gaze, body orientation, co-speech gestures, and pitch were included; these showed how they gained, maintained and increased the child's attention, made him a central participant, increasing his engagement in the communicative exchange. Dr Sara aroused curiosity, created trust and converted his role to that of agent through her implementation of these myriad tactics.

Second, in addition to identifying the successful verbal and non-verbal strategies, we demonstrated that adopting a linguistic perspective on these proceedings permits a deeper insight in what is being achieved and how: it is the underlying system and dynamics of the exchange that a linguistic approach reveals. Concepts from syntax enable us to highlight particular sentence types, such as distinguishing between types of interrogatives and their different functions. Application of lexical semantics makes possible a more fine-tuned examination of vocabulary choices and their effects. Multimodality—the combined use of verbal and non-verbal behaviours—exposes the dance between interlocutors and how speaker and hearer roles shift and can be managed. Finally, the contribution of pragmatics, where here we have utilized a facework approach, illustrates how context makes and shapes an utterance, determining how it will be interpreted. All these concepts enable us to describe the rich range of verbal and non-verbal techniques, but more importantly, they explain why these communicative means produce the beneficial ends we observe, enabling us to predict what will and will not succeed. Furthermore, rather than itemising seemingly disparate phenomena to avoid, it becomes possible to formulate successful communicative strategies in more general terms. For example, once we have registered the multifaceted nature of participation, it becomes clear that the posture of the medic that proves most beneficial to the child's engagement builds carefully upon all of these. Similarly, with an understanding of the more general concept of facework, seemingly diverse examples connect and group comprehensively under one encompassing rule. This is useful to a medic on the ground because attendance to one properly grasped principle is a more straightforward task.

With respect to the particular medical case we have focused on here, the treatment of Coats' disease is anyway extremely challenging and especially so in the context described in this paper. The trust-building process we bore witness to hinged on communicative methods

that contributed to an astonishing medical feat: the procedure went smoothly, and successfully employed all the elements, namely the laser, mask, and tube to administer medication, that had been introduced to the understandably hesitant child at the start of the consultation. The fact that this was achieved demonstrates how significant to the event the communicative aspect was. Subsequent case studies might implement and expand the methodology adopted here. Our study can be replicated in that we have singled out a specific set of linguistic features that it is useful to examine. It can be expanded by incorporating linguistic features other than those we have highlighted here, some of which could only receive a passing mention. Co-speech gesture, in particular, was not something that was captured sufficiently systematically by the camera to make possible a detailed analysis yet was also integral to securing the child's participation.

Third, our project has shown that further empirical interdisciplinary collaborations on this topic between medical professionals and linguists could lead to practical improvements being implemented into professional training. Participatory research in applied linguistics in the medical field is underrepresented in comparison to language teaching and learning issues, and our study gives an indication of what could be achieved. As has become clear during this exploratory study, paediatricians bring their medical expertise in paediatric patient management but also their own questions and interpretations of the challenges they are presented with. Linguists contribute their linguistic training, which includes the tools that sharpen descriptions of communicative exchanges and theoretical analyses that can explain why some strategies succeed where others fail. The identification of specific linguistic strategies enables professionals to make concrete changes to their language productions in their clinical practice. The methodological tools we utilised are also important, namely a video of the communicative exchange, a full transcription of that exchange, and analysis and discussion in which Dr Sara, with her clinical perspective, took part. The video enabled us to use effective data, rather than an interview, which must rely on a person's memories of what was said or how something progressed. It was key to elucidating all linguistic dimensions, including vocal and gestural linguistic productions, and to establishing their incremental effect. The linguistic transcription and linguistic analysis is not something that healthcare professionals have the specialisms to undertake. Our collaboration overcame this obstacle. Finally, the participation by Dr Sara in the overall analysis and discussion, in which she could relate her linguistic behaviour to what she was intending, helped her to identify what worked. The opportunity for self-analysis became possible and was richer in the context of our collaboration. Thus, our approach would contribute usefully to the training and professional development of healthcare professionals working with children.

Concluding remarks

To sum up, we have foregrounded three facets that were key to easing Jan's anxiety, building his trust, and raising his agency: he was made the main interlocutor; the exchange was built up to gradually secure his active participation in the conversation; the language chosen was designed to make him feel good. In more technical terms, this final facet boosted his positive face, and diverted him from the threat to his negative face. The avoidance of negative terms and the use of positive terms advocated in the medical literature is thus just one strategy that shows awareness of the patient's face amongst many. As revealed by a linguistic analysis of the consultation, the three main facets are a product of myriad verbal and non-verbal methods, some of which serve several purposes. In this initial study, we have aimed to elucidate some specific linguistic tactics used by the paediatrician with the aim of developing our understanding of what works, and, in further empirical analyses in which our method is replicated and expanded, determine what works best. In this way, applied linguists can make valuable contributions to the improvement of this aspect of clinical training.

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Notes

¹ The staff at the paediatric hospital recorded a preparation session to train the child for a medical procedure and familiarize him with the hospital surroundings and equipment. The preparation session eases anxiety by building trust, establishing a child-friendly atmosphere, simplifying procedure explanations, and gently introducing equipment.

² Brown and Levinson's model has been criticized for various reasons (see e.g. [Culpeper 2011](#): 404–421 and [O'Driscoll 2007](#) for a critical assessment of it). We agree that interpersonal relations, which are at the crux of later models (see e.g. [Spencer-Oatey's 2000](#), 'rapport management' framework), are key. However, Brown and Levinson's detailed attention to the linguistic realisation of facework strategies—despite using rather restrictive terminology, serves our purpose well, namely that of making explicit the various ways in which the paediatrician appeals to her patient's positive and negative face. (See [Aronsson and Rundström 1989](#) for an early critical application of Brown and Levinson's 'superstrategies' to interaction in paediatric allergy consultations, and [Locher and Schnurr 2017](#) for an overview of methodological approaches that have been applied to healthcare contexts.)

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