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WEB PAPER

Patient-centredness from education to practice: The 'lived' impact of communication skills training

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Abstract

Background: Although communication skills training (CST) enhances patient-centred skills and attitudes, the literature indicates a problematic transfer of these from education into practice.

Aim: We explored 'lived' experiences of medical students and doctors to gain a better understanding of the impact of CST on patient-centredness in the transition to real practice.

Methods: From a phenomenological perspective, we conducted 15 interviews and 11 focus groups with 4–9 participants/group (n=67) at two universities and carried out constant comparative analysis.

Results: The gap between education and practice is the central phenomenon. Although CST raises students' communication awareness and self-efficacy in an 'ideal' context, this paradoxically seems to jeopardize their ability to bridge the gulf. In addition, CST does not come to grips with students' attitudes. However, CST appears to be successful in equipping students with long-lasting 'handles'. Yet students need more support to mould the provided 'ideal' models into their own unique style of context-specific patient-centred behaviour. This implies: raising students' awareness of own attitudes and communication styles, offering a more realistic training ground, integrating CST with clinical experience and translating the primary-care-rooted concept of patient-centredness into various specialization contexts.

Conclusion: CST could raise its impact by supporting students' recycling processes towards a personal style of context-sensitive patient-centredness.

Introduction

Various professional organizations worldwide have highlighted the importance of students developing patient-centred attitudes and communicating effectively (AAMC 1999; General Medical Council 2009; Nederlandse Federatie van Universitair Medische Centra 2009). In contrast, for more than half a century, literature has shown a tendency for medical students to decline in patient-centred attitudes as they progress through medical school (Woloschuk et al. 2004; Tsimtsiou et al. 2007; Hojat et al. 2009). Medical schools have sought to address this by designing new curricula to enhance patient-centred attitudes and communication skills.

Many studies have evaluated the effectiveness of such communication skills training (CST) programmes via questionnaires and observational instruments. Although it has been demonstrated that medical students, physicians and nurses do learn communication skills through training (Aspegren 1999; Yedidia et al. 2003; Smith et al. 2007; Schofield et al. 2008), and even adopt more positive attitudes towards patient-centredness and communication in medicine (Jenkins & Fallowfield 2002; Noble et al. 2007; Fernandez-Olano et al. 2008), some studies have indicated a problematic transfer of patient-centred attitudes and skills from medical education to clinical practice

Practice points

CST could raise its impact by:

- leaving students more room to creatively develop their own communication style, within the framework of existing guidelines;
- making patient-centred communication more relevant to students through integration of skills training with real practice;
- offering a realistic training ground to train 'ideal' skills in the light of a 'context-sensitive' target;
- helping students to translate the primary-care-rooted model of patient-centredness into various specialization contexts.

(Woloschuk et al. 2004; Hook & Pfeiffer, 2007; Hojat et al. 2009). A recent cohort study by our research group revealed a small but significant decline in patient-centred attitude scores during the clinical clerkship year, paradoxically, only in those students who had followed an extensive preclinical communication curriculum. Indeed, the student cohort that had not received CST remained stable in all patient-centred attitude scores during clerkships (Bombeke et al. 2011b).

Heaven et al. (2006) showed in clinical nurse specialists that after an effective 3-days CST, little transfer occurred from workshop to workplace without clinical supervision. This emphasis on the importance of a supporting social environment confirms earlier work in which the most prominent factor determining 'blocking' communication behaviours in nurses was the ward on which the nurses worked (Wilkinson 1991).

Complementary to these quantitative studies that assess the effectiveness of CST ('does it work?'), qualitative research helps us to understand why and how CST does or does not affect the attitudes and behaviour of tomorrow's doctors. Students' opinions and experiences offer a rich source of information for communication skills trainers and curriculum developers. The focus group studies by Rees et al. (2002) have explored students' positive and negative attitudes to CST during medical education. Two implications of this study were, first, to integrate CST more with clinical experience in order to help students better understand the relevance of the training and second, to alert students to the risk of being socialized into negative attitudes. With the problematic transfer of skills and attitudes from education to practice in mind, it is of paramount importance to also explore the experiences of participants who have undergone the transition. How do junior doctors look back on CST once they are in practice? And more specifically, do they feel supported by CST in their development of patient-centred communication? Indeed, qualitative research has shed light on the difficulties students experience in this transition in general (Brennan et al. 2010), and more particularly, in trying to implement patient-centred care. The impact of barriers such as tiredness and shortage of time has been illustrated, as well as the lack of patient-centred role models and mentorship (Williams et al. 2001; Stewart et al. 2003; Bombeke et al. 2010). Insight was gained in elements that are actively denied ('disavowed') by the professional community, yet were often the predominant influence on medical students' reasoning in professional dilemma's, such as consideration of implications for themselves (e.g. concern for grades or reputation; Ginsburg et al. 2003). Recent studies have dissected the powerful influence of the 'hidden curriculum' that shapes the values, roles and identity of medical trainees (Monrouxe & Rees 2011; Lempp & Seale 2004; Gaufberg et al. 2010).

Up to now, little research has explored specifically the role of CST in the development of patient-centredness from education to practice. Insight into this process, however, is a prerequisite for making educational changes to enhance the transfer of patient-centred skills and attitudes from the classroom to the clinical arena. This qualitative study aims to explore the impact of CST on the development of patient-centred communication during the transition from education to real practice on the basis of 'lived experiences' of medical students and junior doctors.

Methods

Methodological approach

As we aimed to inquire into attitudes, feelings, viewpoints and experiences we applied a phenomenological perspective in

the design and conduct of this study (Creswell 2007). In the analysis, we used the technique of constant comparison, originating from grounded theory (Strauss & Corbin 1998). In addition, we utilized two conceptual frameworks. First, the five dimensions of patient-centredness according to the review by Mead and Bower (2000) helped us to disentangle the concept of patient-centredness into the following more specific sets of bio-psycho-social perspective, 'patient-as-person', sharing power and responsibility, therapeutic alliance and 'doctor-as-person'. Our aforementioned focus group study provided content to this last dimension (Bombeke et al. 2010). Second, the Attitude-Social influence-Self-efficacy (ASE) Model enabled us to translate the notion of 'patientcentredness' into specific determinants of behaviour. Indeed, the ASE model has proved to be a valuable framework to understand how patient-centred behaviour is formed (Bombeke et al. 2010). According to this socio-psychological model, three factors determine the intention to behave: Attitude, Social Influence and Self-efficacy. The intention in turn predicts behaviour. In the transformation from intention to behaviour, however, certain barriers and skills must be taken into account (De Vries et al. 1988; Damoiseaux et al. 1993; Bombeke et al. 2010). Looking through the glass of the ASE model, patient-centred attitudes can be distinguished from patient-centred actions (behaviour), patient-centred skills and social influences such as role models, etc.

Both frameworks provided the inductive analysis with 'sensitising concepts' (Bowen 2006). This means, these concepts suggested 'directions along which to look without prescribing what to see' (Bowen 2006).

Data collection technique

A total of 15 semi-structured interviews and 11 focus groups were convened with preclinical medical students, clerkship trainees, junior doctors and supervising doctors from two Flemish universities in Belgium.

Interviews

Sampling procedure. The interview sample was purposively chosen so that it included respondents with contrasting attitudes towards patient-centredness and towards CST. To achieve this, we invited 16 junior doctors graduated at the University of Antwerp, of which one male did not participate because of time restrictions. At the time of the interview study, the participants were second year postgraduates. In their undergraduate medical curriculum, this group had received a 5-year preclinical CST and was one of the two cohorts clerkship trainees of the study mentioned in 'Introduction' section (Bombeke et al. 2011b). Recruitment was based on attitude scale scores, gender and discipline choice. Eight women and seven men participated, of which four had chosen primary care as their postgraduate specialization, three an internal discipline, three a surgical discipline and five 'other' disciplines (Table 1).

CST programme of interview participants. At the University of Antwerp, CST is integrated across the continuum of

	FG 1-2	FG 3-4	FG 5-6	FG 7	FG 8	FG 9-11	Interviews
Study stage	Undergraduate year 4	Undergraduate year 7	Undergraduate years 6-7	Graduate years 1-2	Postgraduate	Postgraduate	Graduate year 2
Discipline	_	_	_	GP	Specialists	GP	Mixed
Before/after clerkships	Before	After	During	_	-	-	-
University	Antwerp	Antwerp	Ghent	Mixed	Antwerp	Mixed	Antwerp
n (range)	15 (6–9)	11 (4-7)	13 (6-7)	5	6	17 (5-7)	15
m/f	2/15	2/9	4/10	2/3	3/3	10/7	8/7
CST	+	_	+	Mixed	_	_	+
Q	6,8	4	3,9,14,24	1		27	2,5,7,10–13,15–2 25,26,28,29

Notes: CST, communication skills training; FG, focus group; GP, general practice; and Q, quotation number.

preclinical medical education, more precisely in years 1–5 of undergraduate medical school. A detailed programme overview has been published elsewhere (Bombeke et al. 2011b). The content of the training is based on the Calgary-Cambridge Guides (Kurtz & Silverman 1996, 2005), with a focus on patient-centred attitudes in all years of training. Furthermore, at the time of this study, all training sessions ended with a paper-and-pencil 'reflective practice' exercise that is founded on the ALACT-model (action – looking back on the action – awareness of essential aspects – creating alternative methods of action; Korthagen et al. 2001).

Interview procedure. The interviews were conducted at the Medical School of the University of Antwerp in the first half of 2010 by a trained interviewer (Linda Symons) and guided by a semi-structured discussion guide. Topics in chronological order were: current employment; what 'kind of student' they had been; experiences with patients during education and clerkships up to now; the participant's description of patientcentredness; personal evolution with regard to the five dimensions of patient-centredness over time; discussion of cohort study results (Bombeke et al. 2011b). The interviewer was especially interested in the participants' attitudes, intentions and behaviours concerning patient-centredness, in facsupporting/inhibiting participants' patient-centred communication, and explored in depth everything that came up about CST. Each time a new theme arose in an interview, it was added to the last part of the discussion guide for the next interview (sequential analysis; Pope et al. 2000). The interviews took 1.5-2h and with the informed consent of the participants, they were all audio-recorded. The medical ethical committee of the University of Antwerp approved the study before its initiation.

Focus groups. The interview data were triangulated with the data of 11 student and supervisor focus groups of a previous study, and more specifically, with those data that concern in particular the influence of CST on the development of patient-centredness. The purpose of the focus group study was to gain a clearer picture of the factors determining the development of e340

patient-centredness in medical students. In exploring stimulating and inhibiting determinants, CST was a topic raised spontaneously in all focus group discussions (Bombeke et al. 2010). The aim of the interview study is rooted in the same research question, but it is more specifically directed to a deeper understanding of the role of CST. Triangulation with the focus group data allowed us to broaden the in-depth information from the interviews in the analysis and to 'share and compare' this with information from students and doctors with varying levels of CST (no, limited, full programme) and from two universities (Universities of Antwerp and Ghent). Moreover, this enabled us to better explore the evolution over time, given that the focus groups included participants at different stages of their study: before clerkships (year 4, undergraduate), during clerkships (year 6, undergraduate), after clerkships (year 7, undergraduate) and postgraduate (general practice trainees, and supervising specialists and GPs; Table 1).

Full details of the focus group sampling and recruitment, participant demographics and focus group procedure are reported elsewhere (Bombeke et al. 2010).

Analysis

The analysis started after the first interview. All data were analyzed with the aid of the audio-coding facility of the NVivo 8: QSR International Pty Ltd, Doncaster, Vic, Australia programme. First, Katrien Bombeke and Linda Symons coded independently from one another, making sure to stay semantically close to the participants' wording. Then we discussed these open codes and defined axial codes (Strauss & Corbin 1998). New insights about the impact of CST were written down in memos. Although we originally planned 20 interviews, data saturation in the group of junior doctors was reached after 15 interviews. This means, the last three interviews did not brought up new elements and these respondents confirmed the new insights of the concurrent analysis. In a final phase, the interview data were triangulated with the focus group data. This means, the focus group data regarding the experienced impact of CST on students' patientcentredness were incorporated in the analysis and used to confirm, adapt and extend the 'code book' that was build during the analysis of the interview data. When adaptations

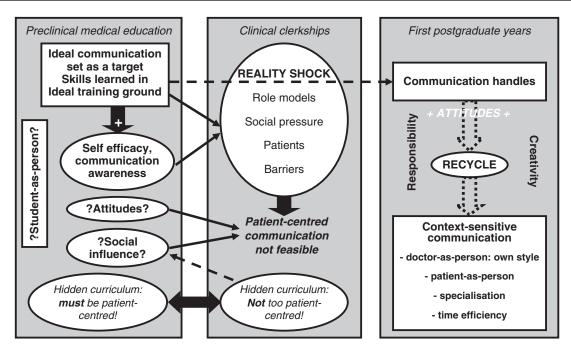


Figure 1. The recycling process of patient-centred communication in the transition from education to practice.

were made, we went back to the interview data to deepen our understanding. We constantly compared data provided by the focus group students before, during and after clerkships to the data obtained from the junior and more experienced doctors. In this iterative process, special attention was given to the participants' different training backgrounds and their choice of discipline, and to deviant cases. Through selective coding (Strauss & Corbin 1998), Katrien Bombeke and Linda Symons arrived at a possibly comprehensive insight into the impact of CST on the development of students' patient-centredness in the transition to real practice.

Results

Through constant comparison between the data from the different participant groups, we gained an understanding of the development of patient-centred communication over the three 'lived' periods under study: preclinical medical education, clinical clerkships and the first years after graduation. 'Results' section is structured according to these three periods. The 'central phenomenon' in the analysis was the huge gap between education and practice, and the insight that medical students need more support in developing a personal style of context-specific patient-centred communication. The process of selective coding enabled us to gain a clearer picture of the merits and pitfalls of CST. In the text below, the illustrative quotations are numbered as *Q1*, *Q2*, etc. and their origin is presented in Table 1. Figure 1 provides a schematic summary of the findings that are described below.

Preclinical medical education: 'ideal' communication set as a target

During the preclinical years, CST provided the students a safe training ground in which they could practice a complete model of 'ideal' communication skills, supported by the feedback of simulated patients, trained to give the model its due: eager to impart their ideas, concerns and expectations when asked to, grateful for every effort made to elicit their perspectives and critical when the 'ideal' skills were not practiced. This resulted in confident students with high self-efficacy towards 'ideal' patient-centred communication. Most participants said that thanks to CST they did feel prepared to encounter patients.

Q1. I really do feel that the communication training we got prepared me for working with patients.

During the analysis, we noticed that trained participants generally were more aware of what constitutes 'good' communication than untrained participants. For example, in describing observed doctor–patient encounters, the trained participants 'analysed' communication behaviours and its effects on the patient, and reflected on potential alternatives.

Q2. Due to lack of time a doctor-patient conversation is often one-way traffic. The doctor has an idea and fires a series of questions. Not the best of techniques as I've noticed myself that this way a patient only gives part of the useful information. Mind you, from these examples you learn too because you've seen the effect on the patient. As a trainee it's easier to also pay attention to non-verbal reactions, whereas as a doctor you've got heaps of paperwork to do as well.

Q3. In communication training you do learn to keep an eye out for it, during your clerkships, and see how the doctorpatient contact is really going.

Thus, our findings suggest that preclinical CST has a positive impact on 'feeling prepared', 'having the skills' and raising 'communication awareness' towards 'ideal' patient-centred communication. However, from our qualitative data, it

can be inferred that CST did not get a grip on students' attitudes during medical education. Participants demonstrated a wide range of attitudes towards CST, which were difficult to disentangle from attitudes to patient-centredness. Negative attitudes had developed as well and sometimes even a 'patient-perspective allergy' due to several reasons.

First, students without practical experience had difficulty seeing the relevance of training communication skills and of devoting attention to an often unfamiliar frame of reference (i.e. the patients'). CST was described as 'fuzzy' and 'intangible'. Nevertheless, sessions with a clear, practical content such as the practicing of specific skills (e.g. breaking bad news, motivational interviewing) with simulated patients, were much appreciated. From what participants told us, it can be inferred that students need to understand the explicit learning goals of each training session and their concrete relevance.

Q4. We got bombarded with this CST from year 1 onwards. 'Oh, CST now again... just why do we have to do that?' At the end of the day, it's only when you go into clinical practice that you realise it does have its merit and notice (...) that you get far more from it than you think.

Q5. It's a very easy aspect of your studies to run down of course. The soft sector, a lot of emotion (and) reflections, soft and floaty atmosphere, no hard facts,... If you go to a lecture on diabetes, you leave with a small packet: 'look, now this is diabetes, definitions, treatment'. If you leave a communication class, then that's more blurred.

Second, focusing attention on the 'student-as-person' proved to be important, i.e. not only addressing the student as a learner but also as a person. Indeed, students perceived communication as very close to their individual capacity, as if it formed part of their identities. During preclinical medical education, being a good patient-centred communicator appeared to be a vital norm amongst the students themselves. Not living up to the norm was almost taken as a personal insult. Students felt vulnerable when receiving feedback, when being observed or examined.

Q6. [angry, offended] 6 out of 10 in my exam because I hadn't reflected the patient's emotional cues, while in all my classes I do nothing but throwing around emotional reflections! (...) This I find really bad and very demotivating. Communication was my worst OSCE station, whereas when I started studying medicine, I thought: 'there's one subject I'm good at and it's communication,' I had always wanted to do that!

From some of their reactions, it can be deduced that CST nurtured this norm and might even have installed a new 'hidden curriculum': *you are a bad doctor unless you deliver patient-centred care.* Negative attitudes appeared to lead to 'simulating' patient-centred behaviour during CST without setting any positive intention for the future.

Q7. To be patient-centred according to CST must be done like this(...). I think it's wrong that one (CST) actually says 'it's bad if you don't do it this way'. (...) (excerpt of Q17)

Q8. In CST, they just put some standard phrases into your mouth. Then you try to use them but that comes across as very affected so in reality I'd never do it like that! But now you have to because if you don't, you have a 'bad consultation', 'you can't communicate' [sounds very affected] and you flunk...

Q9. How I communicate in CST is not representative of how I communicate outside of class.

In the same way, the obligatory reflective practice exercise at the end of each training session met with resistance from the Antwerp medical students. In contrast, teachers who gave special attention to the 'student-as-person' were appreciated as very stimulating in developing patient-centred communication.

Q10. In all honesty, it very much depended on the lecturer (...) Like a Messiah you can (...) think you own the truth and need to preach it. But the best teacher is someone who gives room to think about how you yourself would deal with a particular situation. Someone who is open to other ways.

Q11. My uncertainty about communicating didn't improve until the classes by X because he appreciated my way of dealing with people and how I stood in his classes.

A last finding related to the 'student-as-person' was that, according to our data, CST does not sufficiently address students' personal starting level. As opposed to most other clinical skills, every student does have a basic level of communication. Students who were communicators by nature described the training session more often as self-evident and too easy. Several students who were aware that they were less naturally gifted showed more positive attitudes towards CST.

Transition from education to practice: 'reality shock'

Feeling self-efficient in an educational context, being more conscious of what constitutes 'ideal' communication but meanwhile having mixed attitudes appeared to make students more vulnerable in the transition from education to practice.

Q12. In the clinical year you see it's not at all what you had expected. You want to be good at it (communication) and you think you're good at it but it isn't true... is frustrating: I had, however, done my utmost and I've been paying good attention! In CST, they'd better say: a thousand times you'll run into the lamp but the 1001st time you'll just see the lamp hanging and you'll bend under it...

During this intense period, many students concluded that the 'ideal' target set by CST was not feasible, not realistic or even 'exaggerated', which had a bad impact on their intentions for patient-centred communication. The previous quote illustrates the disappointment of the participant when discovering that the self-efficacy that she had gained during CST fainted in real practice. It was self-efficacy towards 'ideal' communication, and students did not get any help to rebuild self-efficacy towards communication 'in real practice'. The participants often showed to be shocked by the huge disparities between the training ground of CST and real practice (Figure 1).

First of all, the communication practices of the role models did not resemble the Calgary-Cambridge guides at all. Nevertheless, some of these role models were regarded as 'good' communicators and empathic doctors.

Q13. Educators form a very important social influence. You see so many role models (...) who don't push it so far, who don't do the ICE (ideas, concerns, expectations) with every patient but are empathic doctors all the same. And technically good doctors to boot. So you learn that a bit less is fine too, that it's made out to be more than it is.

Moreover, some participants felt that they had mostly been trained in a 'primary care' communication model which was not directly applicable to other disciplines.

Q14. We had the preparation but once you start your clinical training you learn more from the doctors you observe. You use them as a model for your own history taking. They each also have their own speciality. Often it's necessary to inquire about certain things differently. In my case, this always has a bearing on how I will also go about it myself.

Second, students tried to adapt to the new social system with its different rules and norms. Whilst in medical school, an unspoken yet clear norm stated that they were *bad doctors unless* they delivered patient-centred care; at the hospital they felt that they got *marked down if they lost time* practicing patient-centred communication. These 'conflicting hidden curricula' were confusing to them.

Q15. During the clinical clerkship year you want good grades. And it's not by being patient-centred that you get good results. A lot of students want to secure sufficient marks to get selected, that brings a lot of stress.

In addition, for the first time students were confronted with barriers such as time pressure, work load and service schedules. The following quotations demonstrate the tension between patient-centredness and the 'student-as-person', i.e. a conflict between self-care and care for the patient.

Q16. We are under time pressure the whole day. It's difficult to go and eat, sometimes even to use the toilet. So every minute with a patient is an important minute. Letting someone talk for 10 minutes has impact on the next patient and eventually on myself.

Q17. To be patient-centred according to CST must be done like this: half an hour...first open, then closed questions... not interrupting the patient for the first few minutes... in practice you see that it cannot be done like that at all because the pressure of work is too great and the supervisors have a different view. It's not realistic. I think it's wrong that one actually says 'it's bad if you don't do it this way'. If you can't stick to the ideal because it's just not feasible unless you take to complete self-sacrifice, then I think you're not to blame.

Furthermore, especially during the first months of clerkships, the students felt overwhelmed by the arduous task of combining and internalizing the whole body of medical knowledge and skills learned in order to become good doctors. The students tried to keep this manageable by reducing the 'whole person' sitting in front of them to a part that they could deal with. Some of them were afraid of being intrusive when asking patients about psychosocial issues.

Q18. Because you feel more relaxed and more confident, you leave more room for the patient. Initially you (...) 'must have' a diagnosis. Later on you do dare deviate from your standard list and other things come up. We now see the same happening to the trainees. In the past I didn't dare to ask about psychological matters. Now I do dare to keep asking questions — I used to have too much timidity because that's more the private sphere of the patient. You're young, a trainee... you think the patient will not be willing to say that...

Other participants used the term 'burnout' to describe how they had felt, and explained how this had affected their patient encounters badly.

Finally, contact with the 'real patient' was different than expected. These patients often had different expectations than the simulated patients from preclinical CST. Therefore, their ideas of what constitutes 'patient-centred communication' started to change.

Q19. Before the clinical year you have no image of the patient. When you get to know the patients, there are often difficult ones among them, people from all walks of life, other nationalities, other levels of education, relatively few people from your own circle, stubborn patients who don't do what you ask,... You do get a different view of that patient.

Q20. There you are with your patient-centred attitude and then people just come to see you with 'a sore toe, do something about it'... people don't always want you to empathize. Before the clinical year you had studied more the theoretical side of things, while in practice, that's different for every patient! To that patient with that toe it's very patient-centred to just treat the toe. To me, patient-centredness has become more: that individual aspect. (...) Looking beyond the complaint is not always good for everybody!

Postgraduate years: Recycling 'ideal' models into context-sensitive patient-centred communication

The struggle with discrepancies between education and real practice resulted in refusing, reducing or recycling the learned communication model. Most junior doctors said that, sooner or later, they did fall back on the 'handles' they have been taught during preclinical CST. They mentioned these 'handles' as basic skills employed in specific circumstances, such as breaking bad news, dealing with conflicts, handling depression, etc.

Q21. In practice I've come to fall back on it from time to time, even more now than at first. These 'handles' have stuck in my mind and I now employ things I used to think were daft. So eventually, there's sense to it all. Summarizing e.g. It came

across as artificial. But to a patient it doesn't come across as forced at all because it's just a part of your conversation then. Q22. Patients are very unpredictable, some react this way, others that way. Structure and technique then give you something to go by, something you can fall back on.

Apparently, neither CST nor clerkship education had provided them with the tools to rebuild comprehensive patient-centred communication in real practice. Some participants, however, recycled these 'basic materials' and used them to create their personal model of being patient-centred. Besides positive attitudes to patient-centredness, responsibility towards 'own' patients and creativity were found to be two important motors stimulating these recycling processes.

Q23. Before the clinical year the communication classes did provide motivation to go and work with patient-centredness. During the clinical year this motivation had become less. Now as an assistant doctor I'm trying to do it again because I myself get more satisfaction from the patients who are more 'my patients' so to speak than before. When the patients know me, I want to do more for them than when I was some kind of half-slave who came round to do some odd job or other. As a trainee you try to impress your supervisor more than your patient. Whereas now I almost couldn't care less what they think of me, now the patient comes before the supervisor.

Sometimes the recycling processes started already during clerkships, when supervisors allowed sufficient room for trainees to take responsibility towards patient care and to be creative in exploring their new role as a doctor.

Q24. The supervisor said: 'What would you do, you as a GP?' I'd just have a chat' 'Well, go and sit in that room over there'. (...) For a quarter of an hour I just listened to her, a chatterbox. That vaginal itch turned out to be a somatization of sexual desire because her husband had been having Parkinson's Disease for 5 years (...) they had never looked beyond the purely physical complaint and had even done a partial vulvectomy without ever listening really carefully (...) I reported that to the supervisor who referred her to a sexologist (...) I felt incredibly good afterwards, relieved and happy. This will stick in my mind forever.

Sooner or later, these recycling process yielded a unique, personal style of patient-centred communication, in which personal talents and preferences were acknowledged.

Q25. I find humour very important.

Q26. I never have the kind of contact general practitioners rave about. I don't feel the need to get to know all these people deeper, I like a brief chat and that's as far as it goes.

The recycled model was better tailored not only to the 'doctor-as-person' but to the individual 'patient-as-person' as well. Indeed, students' definition of what constitutes 'patient-centredness' appeared to be shifted from a list of attitudes and skills that are preferred by the 'ideal patient' to the wishes of the individual, real patients themselves within their unique context. (see *Q20*)

In addition, the recycled model was also more context-specific than the 'ideal' model since it differentiated patient-centred care on the basis of *specialization context*. Our data show that 'being patient-centred' may have a different content and meaning within the different disciplines without it losing strength or value. The differences between specialties in time frames of doctor–patient relations, in acute versus chronic nature of illnesses, and kinds of treatments all seemed to require differentiations within the primary care rooted concept of 'patient-centredness'. Interdisciplinary communication was regarded as a substantial part of patient-centred care.

Q27. Specialists can permit themselves to limit themselves to a good diagnosis and treatment. But we must go much broader, context-oriented. I think we are bad general practitioners if we only work somatically. I e.g. sent my own wife to a specialist. A very nice man who is not quick to operate. He explained to my wife what was wrong. Tm not going to operate on you and you are going back to your GP, who will discuss the conservative approach with you.' That's what I call brilliant, that's what I call patient-centred.

Q28. The most patient-centred surgeon is be who can also say, 'I think it's better not to operate on you' – and so acting counter to his own best interests. Weighing up individually per patient the meaningfulness of an intervention. Because there's continuous pressure to operate as much as you can – and if you want to, you can operate on anything

Finally, another frequently mentioned aspect of 'recycled' patient-centred communication was *time efficiency* without putting aside neither the patient's nor the doctor's agenda.

Q29. Before the clinical year, (...) to me the patient was all that mattered. After the clinical year I thought 'yeah, but we won't get anywhere this way. This way you're attending to one patient and not to the rest of them... whereas when I do it that way, I have made the patient feel I listened and succeed in winding up in a quarter of an hour.' The solution lies in communicating better, setting priorities.

Discussion

This study provides insight into the impact of CST on students' development of patient-centred communication. On the one hand, most participants - even those with negative attitudes to CST during medical education - experienced that CST is effective in enhancing self-efficacy and in teaching long-lasting 'handles'. We noticed a greater awareness of doctor-patient communication in the trained students. On the other hand, our data suggest that CST does not succeed in getting a grip on students' attitudes. Moreover, feeling self-efficient in an 'ideal' context, being part of a social network with mixed attitudes and having a larger awareness of the gap between theory and practice, paradoxically enough, seemed to bring students more difficulties to implement patient-centred communication during clerkships. Our findings indicate that neither CST nor clerkship education supports students in bridging the gap. Our data, however, suggest that this decline in patient-centred communication during clerkships can be temporary. Junior doctors reported that in practice they tend to fall back on the communication techniques learned in CST. Driven by positive attitudes and stimulated by responsibility and care for 'own' patients, some junior doctors indeed recycled the basic materials from the 'ideal' models presented and created their own unique style of context-specific patient-centred communication.

This study sheds new light on the merits and the pitfalls of CST, based on the 'lived experiences' of a sample of junior doctors, supervisors and medical students at different stages of study and from two Flemish universities. This allowed us to explore the development of patient-centredness in three 'lived' periods, and to understand the impact of CST through the intense experience of the transition to real practice, which has so far never been studied before. Our purposive sampling method provided the unique possibility to interview junior doctors with positive and negative attitudes, rather than only those who are motivated to talk about patient-centredness. The focus group data offered us the chance to explore the experiences of the (no longer existing type of) medical student without CST. These methodological strengths ensure the richness of our data.

A number of limitations must be taken into account. Although the 'lived' experiences originating from different curriculum stages provided us a clear picture of the development of patient-centred communication, we must keep in mind that this essentially is a cross-sectional study. To deal with this limitation, we constantly compared the 'posthoc' preclinical experiences from the memories of the junior doctors with the 'real time' experiences of the preclinical participants. Nevertheless, we acknowledge that a longitudinal interview study would enable a deeper understanding of the developmental processes during the transition - although the impact of repeated reflections on the development of patientcentredness should not be ignored, either. Second, the interview data were triangulated with data from a previous focus group study. This study explored stimulating and inhibiting determinants of the development of patient-centredness (Bombeke et al. 2010), as such the influence of CST which was a spontaneous, rich topic in all of the 11 focus groups. Both research questions and methods fit well. Although we have described the advantages of this triangulation, we acknowledge that a secondary analysis on previous data is not as solid as gathering new data. As this was not feasible, e.g. interviewing the no longer existing student without CST, the focus group study offered the second best source of data. Third, interviews with students who have more recently entered CST are lacking, which might restrict us in generalizing our findings to the most recent communication curriculum at both universities. Finally, since social influences appear to play such an important role in the development of patient-centredness, an ethnographic approach to the medical student group in transition, who is trying to adapt to the medical culture, could have complemented our hermeneutic analysis with valuable insights.

Our findings are supported by several other studies and discussions at international conferences, suggesting that they accurately reflect the experiences of medical students and

junior doctors and show transferability. Students' widely varying attitudes to CST during medical education were astonishingly similar to the positive and negative attitudes of students in a UK medical school (Rees et al. 2002). Our study elaborates upon this study by making the voice of the junior doctor heard as well, next to the preclinical and clerkship student - a view on CST that is nurtured by the real 'lived' practice, where learned skills are ment to make the difference in the end. Further, Swedish medical students have also found themselves to be in a moral dilemma over exploring patients' psychosocial situations (Lumma-Sellenthin 2009). In their qualitative study, Wahlqvist et al. (2005) have defined the temporary decline of communication as an 'instrumental strategy' that they see as a stage in the development of students' consultation skills. Students' confrontation with the hidden curriculum has been amply described before, and more specifically, students' experiences with role modelling and the tension between real medicine and prior idealized notions (Williams et al. 2001; Stewart et al. 2003; Lempp & Seale 2004; Stephenson et al. 2006; Bombeke et al. 2010; Gaufberg et al. 2010; Monrouxe & Rees 2011). Insight into the interaction of these social influences with the impact of CST in particular, is provided by our study. 'Mind the gap' is the title of a symposium paper presenting the learners' perspectives on how communication skills are taught and how they are implemented in 'real life' (Malhotra et al. 2009). This article underlines that the differences between (nonetheless extremely valuable) simulated patients and actual patients can compromise the transfer from trained skills into real practice. The students in this article described similar barriers to the implementation in the working environment (Malhotra et al. 2009).

In view of the findings that students have difficulty bridging the gulf between education and practice and only a part of them succeed in developing context-specific, patient-centred behaviour, we feel encouraged to discuss some implications for CST

Getting a grip on students' attitudes

Our data confirm that attitudes are important inner 'motors' to develop long-lasting patient-centred behaviour. Indeed, a positive attitude was a key condition for the 'recycling' processes and when the inner motivation of positive attitudes was lacking, training skills led to short-term 'faking' behaviour, as has been emphasized before (Rees & Knight 2007). Therefore, attitude development is a valuable aspect of CST, and our data suggest several possibilities to enhance students' attitudes during CST.

First, communication skills as well as personal attitudes must be addressed with the utmost respect for the 'student-asperson'. Student-centredness is of crucial importance in medical education, as has been previously acknowledged in the literature, and has already been implemented in several medical schools by means of mentorship and 'longitudinal' clerkship programmes which have shown to enhance patient-centred attitudes (Harden et al. 1984; Howe 2001; Stewart et al. 2003; Bell et al. 2008; Bombeke et al. 2010; Bombeke et al. 2012). In this study, another aspect of student-centred teaching

came forward. Indeed, negative attitudes were provoked when students felt 'forced'. This should make trainers reflect on the room they leave their students to develop their own style not only of communication but also of reflective practice, within the framework of existing guidelines. 'Raising students' awareness of their personal attitudes' might be a better learning goal than 'teaching positive attitudes'. Interestingly, the study by Smith et al. (1999) has demonstrated that training in awareness of interfering attitudes improves patient-centred communication skills. Recently, the CST team at the University of Antwerp has profoundly changed the way students are invited to exercise 'reflective practice' (Bombeke et al. 2011a).

Second, our participants showed that understanding learning goals and their relevance is important. Von Fragstein et al. (2008) have presented a very clear and comprehensive consensus statement on the content of communication curricula in undergraduate medical education. Their 'communication curriculum wheel' may very well serve this purpose during trainings.

Third, 'knowledge and evidence' is, besides 'respect for others', central to the 'wheel'. Furnishing students with sufficient evidence-based knowledge about communication in medicine might help them to view CST as a more 'academic', credible and relevant course.

Fourth, we would suggest to allocate attitude-development, as an evidence-based learning goal, a more central role in this 'communication curriculum wheel'. Parallel to Archer et al. (2008) who advocates to utilize the Theory of Planned Behaviour to create a more theory-driven approach in medical professionalism education, we suggest to explicitly use the ASE model in CST to raise students' awareness of attitudes, social influences and self-efficacy, and the learning processes CST aims to address. Excerpts of their peers' lived experiences could be used to make these influences vivid and relevant to students

Finally, when resources are available, more efforts should be made to better address students' personal starting level in CST, e.g. by selectively offering 'advanced skills' in small group sessions.

Preparing students to the plunge into real practice

Medical education should provide small islands of integrated skills rehearsal and reflective conversation during clinical clerkships. In addition, more water training during the preclinical years may help facilitate the 'plunge into the deep end'. This can be achieved in different ways.

First, communication trainers should pay conscious attention to the challenges of reality in communication training. As Haidet (2010) has put it, 'Patient-centredness entreats us to articulate our ideal for learners, to talk about our struggles in trying to realize it in real-world settings, to share our creative solutions, and to be open to the input and creativity of our learners'.

Second, the basic concepts of patient-centredness stem from chronic care family practice and community medicine (Zandbelt 2006; Bleakley & Bligh 2008). As Mead and Bower (2000) have outlined, 'the special context in which different health professionals work may influence the relevance of e346

particular dimensions of patient-centredness. The applicability of the current model to other disciplines therefore requires further exploration'. Our findings suggest that it might be valuable to distinguish between 'essentials' and 'context specific' skills. Parallel to the Belbin team roles (Broomfield & Bligh 1997), various 'patient-centred roles' could be described, based on in-depth qualitative research, e.g. observations and interviews of doctors representing different specialties. CST could then make students aware of their natural 'patient-centred communication' style, and support them in training some of the other 'roles', so that they are more flexible in applying different styles. Raising awareness about one's natural style might be a more significant task for medical education than forcing all students to achieve the same norm of patient-centred communication.

Third, CST could offer students a more realistic training ground. Integration of CST with practical skills training is one way of doing this. Next to this, Silverman (2009) advocates four other areas of integration in his landmark paper: integration with history taking skills, integration with specialty teaching, integration with the hidden curriculum through faculty training and assessment in integration. Students should also be trained in efficient communication (Mauksch et al. 2008; Malhotra et al. 2009). Acute settings should be simulated with purely somatic complaints next to simulated cases with emotional 'landmines' (Malhotra et al. 2009). Simulated patients could be trained to react to students in a variety of ways to reflect the diversity of true patient responses (Malhotra et al. 2009). Bleakley has pointed out that the main focus of the educational process currently is the interaction between the student and the doctor as educator. Paradoxically, patientcentredness is not learned from patients (Bleakley & Bligh 2008)

Finally, the study by Brennan has also suggested that there is no substitute for the accumulation of hands-on clinical experience. Medical schools should strive to provide sufficient exposure to real clinical environments during preclinical education (Rees et al. 2002; Brennan et al. 2010). Learning from prior clinical experiences makes the transition easier (Brennan et al. 2010). Awarding students 'safe' responsibility during these short attachments might stimulate their recycling processes towards a unique style of context-specific patient-centred communication.

Conclusion

Does this study suggest that CST should banish its 'ideal' communication models? We believe it does not. 'Best evidence skills' must be taught. However, looking through the glass of the ASE model offered us the insight that 'best' skills can be trained without setting an 'ideal communication' as the target behaviour. Indeed, the transition to practice is jeopardized if the target behaviour set by CST is too different from patient-centred communication in the real world. If the gap is too deep, students are at the risk of simply forgetting about all skills learned. Instead, CST should stimulate students from the start in developing context-sensitive communication. Our findings suggest that this can be achieved by addressing medical students' attitudes, by embedding 'ideal' skills

training in a more realistic context, and by supporting the 'students-as-person' in their creative recycling processes towards real patient-centred communication.

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References

- Archer R, Elder W, Hustedde C, Milam A, Joyce J. 2008. The theory of planned behaviour in medical education: A model for integrating professionalism training. Med Educ 42:771–777.
- Aspegren K. 1999. BEME guide no. 2: Teaching and learning communication skills in medicine a review with quality grading of articles. Med Teach 21:563–570.
- Association of American Medical Colleges 1999. Medical school objectives project. Report III: Contemporary issues in medicine: Communication in medicine. AAMC.
- Bell SK, Krupat E, Fazio SB, Roberts DH, Schwartzstein RM. 2008. Longitudinal pedagogy: A successful response to the fragmentation of the third-year medical student clerkship experience. Acad Med 83:467–475.
- Bleakley A, Bligh J. 2008. Students learning from patients: Let's get real in medical education. Adv Health Sci Educ Theory Pract 13:89–107.
- Bombeke K, Debaene L, Jespers I, Van Royen P, De Winter B. 2012. Tutorship in groep: Een glimp achter de schermen. Huisarts Nu 41:76–80.
- Bombeke K, Jespers I, Cuyt C, Debaene L, Van den Bogerd K, Baetens K, Baeyens L, De Winter B. 2011a. Aanleren of stimuleren? Zelfreflecteren binnen het communicatietraject in de opleiding tot arts. Workshop NVMO Conference, p 162. Abstract available from: www.congresboek.nl

- Bombeke K, Symons L, Debaene L, De Winter B, Schol S, Van Royen P. 2010. Help, I'm losing patient-centredness! Experiences of medical students and their teachers. Med Educ 44:662–673.
- Bombeke K, Van Roosbroeck S, De Winter B, Debaene L, Schol S, Van Hal G, Van Royen P. 2011b. Medical students trained in communication skills show a decline in patient-centred attitudes: An observational study comparing two cohorts during clinical clerkships. Patient Educ Couns 84:310–318.
- Bowen G. 2006. Grounded theory and sensitising concepts. Int J Qual Methods 5:12–23.
- Brennan N, Corrigan O, Allard J, Archer J, Barnes R, Bleakley A, Collett T, de Bere SR. 2010. The transition from medical student to junior doctor: Today's experiences of tomorrow's doctors. Med Educ 44:449–458.
- Broomfield D, Bligh J. 1997. Curriculum change: The importance of team role. Med Educ 31:109–114.
- Creswell J. 2007. Qualitative inquiry and research design: Choosing among five approaches. Thousand Oaks, CA: Sage Publications.
- Damoiseaux V, Van der Molen HT, Kok GJ. 1993. Gezondheidsvoorlichting en gedragsverandering. Assen: Uitgeverij Van Gorcum/Open Universiteit
- De Vries H, Dijkstra M, Kuhlman P. 1988. Self-efficacy: The third factor besides attitude and subjective norm as predictor of behavioral intentions. Health Educ Res 3:273–282.
- Fernandez-Olano C, Montoya-Fernandez J, Salinas-Sanchez AS. 2008. Impact of clinical interview training on the empathy level of medical students and medical residents. Med Teach 30:322–324.
- Gaufberg EH, Batalden M, Sands R, Bell SK. 2010. The hidden curriculum: What can we learn from third-year medical student narrative reflections? Acad Med 85:1709–1716.
- General Medical Council. 2009. Tomorrow's doctors: Outcomes and standards for undergraduate medical education. London: GMC. pp 19–29.
- Ginsburg S, Regehr G, Lingard L. 2003. The disavowed curriculum: Understanding student's reasoning in professionally challenging situations. J Gen Intern Med 18:1015–1022.
- Haidet P. 2010. Patient-centredness and its challenge of prevailing professional norms. Med Educ 44:643–644.
- Harden RM, Sowden S, Dunn WR. 1984. Educational strategies in curriculum development: The SPICES model. Med Educ 18:284–297.
- Heaven C, Clegg J, Maguire P. 2006. Transfer of communication skills training from workshop to workplace: The impact of clinical supervision. Patient Educ Couns 60:313–325.
- Hojat M, Vergare MJ, Maxwell K, Brainard G, Herrine SK, Isenberg GA, Veloski J. 2009. The devil is in the third year: A longitudinal study of erosion of empathy in medical school. Acad Med 84:1182–1191.
- Hook KM, Pfeiffer CA. 2007. Impact of a new curriculum on medical students' interpersonal and interviewing skills. Med Educ 41:154–159.
- Howe A. 2001. Patient-centred medicine through student-centred teaching: A student perspective on the key impacts of community-based learning in undergraduate medical education. Med Educ 35:666–672.
- Jenkins V, Fallowfield L. 2002. Can communication skills training alter physicians' beliefs and behavior in clinics? J Clin Oncol 20:765–769.
- Korthagen F, Kessels J, Koster B, Lagerwerf B, Wubbels T. 2001. Linking theory and practice: The pedagogy of realistic teacher education. Mahwah, NY: Lawrence Erlbaum Associates.
- Kurtz SM, Silverman JD. 1996. The Calgary-Cambridge referenced observation guides: An aid to defining the curriculum and organizing the teaching in communication training programmes. Med Educ 30:83–89.
- Kurtz S, Silverman J, Draper J. 2005. Teaching and learning communication skills in medicine. 2nd ed. Abingdon: Radcliffe Publishing.
- Lempp H, Seale C. 2004. The hidden curriculum in undergraduate medical education: Qualitative study of medical students' perceptions of teaching. BMJ 329:770–773.
- Lumma-Sellenthin A. 2009. Talking with patients and peers: Medical students' difficulties with learning communication skills. Med Teach 31:528–534.
- Malhotra A, Gregory I, Darvill E, Goble E, Pryce-Roberts A, Lundberg K, Konradsen S, Hafstad H. 2009. Mind the gap: Learners' perspectives on what they learn in communication compared to how they and others behave in the real world. Patient Educ Couns 76:385–390.

- Mauksch LB, Dugdale DC, Dodson S, Epstein R. 2008. Relationship, communication, and efficiency in the medical encounter: Creating a clinical model from a literature review. Arch Intern Med 168:1387–1395.
- Mead N, Bower P. 2000. Patient-centredness: A conceptual framework and review of the empirical literature. Soc Sci Med 51:1087–1110.
- Monrouxe L, Rees C. 2011. "It's just a clash of cultures": emotional talk within medical students' narratives of professionalism dilemmas. Adv Health Sci Educ Theory Pract. Epub ahead of print.
- Nederlandse Federatie van Universitair Medische Centra 2009. The 2009 framework for undergraduate medical education in the Netherlands. NFU.
- Noble LM, Kubacki A, Martin J, Lloyd M. 2007. The effect of professional skills training on patient-centredness and confidence in communicating with patients. Med Educ 41:432–440.
- Pope C, Ziebland S, Mays N. 2000. Qualitative research in health care. Analysing qualitative data. BMJ 320:114–116.
- Rees CE, Knight LV. 2007. The trouble with assessing students' professionalism: Theoretical insights from sociocognitive psychology. Acad Med 82:46–50.
- Rees CE, Sheard CE, McPherson AC. 2002. A qualitative study to explore undergraduate medical students' attitudes towards communication skills learning. Med Teach 24:289–293.
- Schofield NG, Green C, Creed F. 2008. Communication skills of health-care professionals working in oncology: Can they be improved? Eur J Oncol Nurs 12:4–13.
- Silverman J. 2009. Teaching clinical communication: A mainstream activity or just a minority sport? Patient Educ Couns 76:361–367.
- Smith RC, Dorsey AM, Lyles JS, Frankel RM. 1999. Teaching self-awareness enhances learning about patient-centered interviewing. Acad Med 74:1242–1248.
- Smith S, Hanson JL, Tewksbury LR, Christy C, Talib NJ, Harris MA, Beck GL, Wolf FM. 2007. Teaching patient communication skills to medical students: A review of randomized controlled trials. Eval Health Prof 30:3–21.

- Stephenson AE, Adshead LE, Higgs RH. 2006. The teaching of professional attitudes within UK medical schools: Reported difficulties and good practice. Med Educ 40:1072–1080.
- Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR. 2003. Patient-centered medicine: Transforming the clinical method. 2nd ed. Abingdon: Radcliffe Medical Press.
- Strauss A, Corbin J. 1998. Basics of qualitative research: Techniques and procedures for developing grounded theory. Thousand Oaks, CA: Sage Publications Ltd.
- Tsimtsiou Z, Kerasidou O, Efstathiou N, Papaharitou S, Hatzimouratidis K, Hatzichristou D. 2007. Medical students' attitudes toward patient-centred care: A longitudinal survey. Med Educ 41:146–153.
- Von Fragstein M, Silverman J, Cushing A, Quilligan S, Salisbury H, Wiskin C. 2008. UK consensus statement on the content of communication curricula in undergraduate medical education. Med Educ 42:1100–1107.
- Wahlqvist M, Mattsson B, Dahlgren G, Hartwig-Ericsson M, Henriques B, Hamark B, Hösterey-Ugander U. 2005. Instrumental strategy: A stage in students' consultation skills training? Observations and reflections on students' communication in general practice consultations. Scand J Prim Health Care 23:164–170.
- Wilkinson S. 1991. Factors which influence how nurses communicate with cancer patients. J Adv Nurs 16:677–688.
- Williams C, Cantillon P, Cochrane M. 2001. The doctor-patient relationship: From undergraduate assumptions to pre-registration reality. Med Educ 35:743–747.
- Woloschuk W, Harasym PH, Temple W. 2004. Attitude change during medical school: A cohort study. Med Educ 38:522–534.
- Yedidia MJ, Gillespie CC, Kachur E, Schwartz MD, Ockene J, Chepaitis AE, Snyder CW, Lazare A, Lipkin Jr M. 2003. Effect of communications training on medical student performance. J Am Med Assoc 290:1157–1165.
- Zandbelt LC. 2006. Patient-centred communication in the medical specialist consultation. Amsterdam: Department of Medical Psychology, Academic Medical Center. p 165.