

RESEARCH ARTICLE

Patient-centered communication in type 2 diabetes: The facilitating and constraining factors in clinical encounters

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Objective: To explore the perceptions of the constraining and facilitating factors to patient-centered communication in clinical encounters of patients with type 2 diabetes and the providers involved in their care.

Data Sources/Study Setting: Patients (n = 12) and providers (n = 33) involved in diabetes care in northern Portugal.

Study Design: Seven focus groups.

Data Collection/Extraction Methods: Grounded theory, using open, axial, and selective coding.

Principal Findings: Patients focused on the patient-provider relationship, while providers emphasized the constraining factors when exchanging information and the facilitating factors regarding disease and treatment-related behavior. Patients and providers both agreed on some constraints (power imbalance, avoidance of criticism, disease minimization, use of jargon, and insufficient competencies and consistency among providers) and facilitators (seeing patients as persons, providing tailored information in plain language, and recognizing the “wake-up call”). Patients perceived an aggressive attitude as a barrier to communication, but providers perceived it as a facilitator. Patients included issues related to trust, respect, and psychosocial support as important factors to them. Only providers mentioned the influence of macro-level interventions and patients’ socioeconomic position as essential factors.

Conclusions: Improvements in patient-centered communication depend on fostering the patient-provider relationship, patients’ participation and involvement, and training providers’ communication skills.

KEYWORDS

communication, diabetes mellitus, type 2, health personnel, physician-patient relations, patient-centered, patients

1 | INTRODUCTION

Approximately 422 million adults worldwide were estimated to have diabetes in 2014, and this number is expected to rise to 700 million people by 2025.¹ This projection is due primarily to the growing

prevalence of type 2 diabetes, which closely follows populations that are aging, overweight, obese and that engage in unhealthy lifestyles.¹ Over 1.5 million people die of diabetes each year, and diabetes globally ranks 6th as a cause of death.² Diabetes also represents one of the leading causes of disability, which results from associated complications, including acute myocardial infarction, stroke, blindness, renal failure, and lower limb amputations.³ In 2015, Portugal

Paiva and Abreu were equally contributing authors.

TABLE 1 Sample characteristics

Total (n = 45)	Focus group 1 (n = 7)	Focus group 2 (n = 7)	Focus group 3 (n = 5)	Focus group 4 (n = 7)	Focus group 5 (n = 7)	Focus group 6 (n = 6)	Focus group 7 (n = 6)
Type of participants							
Patients	Without complications	Diabetic retinopathy	Diabetic nephropathy	Diabetic foot	Ischemic heart disease or cerebrovascular disease		
Providers	12					Primary care physician, nurse, nutritionist, pharmacist, ophthalmologist, vascular surgeon	Endocrinologist, nurse, nutritionist, pharmacist, psychologist, nephrologist
Gender							
Female	4	4	0	1	2	4	2
Age in years							
<50	1	2	0	1	1	3	4
50-65	2	4	2	5	5	3	2
>65	4	1	3	1	1	0	0
Education (years)							
0-4	3	4	4	3	3	0	0
5-11	2	3	1	3	2	0	0
≥12	2	0	0	1	2	6	6
Length of professional experience/disease duration (years)							
<1	0	1	0	0	3	0	0
1-9	3	2	1	2	2	2	3
≥10	4	4	4	5	2	4	3

was estimated to have the highest age-adjusted prevalence of diabetes in adults aged 20-79 years in the European Union; its crude prevalence was estimated at 13.6 percent.⁴ To reduce the morbidity and mortality burden, both the Chronic Care Model and the World Health Organization's Innovative Care for Chronic Conditions emphasize the need for patient-centered care and self-management support for people with chronic illnesses.^{5,6}

Patient-centered communication is acknowledged as a core dimension of patient-centered care.^{7,8} Moreover, communication is considered to be a basic clinical competency, and communication skills have been regarded as a crucial component of the health literacy of providers.^{9,10} In the context of type 2 diabetes, patient-centered communication has been associated with improved disease knowledge,¹¹ self-care,¹² quality of life,¹³ and better measures of metabolic control.¹⁴⁻¹⁶ Consistent with this evidence, leading organizations, including the American Diabetic Association and the International Diabetes Federation, currently advocate for this type of communication in the management of diabetes.^{17,18} Furthermore, patients and patient advocacy organizations have expressed a desire for more personalized and humane medical care.^{8,19} Despite these recommendations, the results from the Diabetes Attitudes, Wishes and Needs (DAWN2) study suggest that patient-centered care is often unavailable and that the psychosocial needs of patients with diabetes worldwide are not being met,²⁰ at least partly due to communication failures between providers and patients with diabetes.²¹⁻²³ Communication failures are one of the most common patient complaints and contribute to patient harm.^{24,25} This is especially problematic for people with a lower health literacy with whom health professionals report feeling unprepared to communicate.²⁶ Consequently, several experts have proposed clear communication and health literacy curricula for health professionals in the United States^{27,28} and Europe.²⁹ Training in these competencies has shown the potential to improve communication skills in the short term,^{28,30-32} but it has been suggested that training would have to be ongoing, as improvements were not sustained.³³

Patient-centered communication between patients with diabetes and the providers who care for them is paramount to fill the gap between recommendations and clinical practice.^{19,34} The reconciliation of the perspectives of various stakeholders has been pinpointed as essential to improve clinical communication. Therefore, it is important to involve both patients and providers in the dialogue about effective patient-centered communication to develop new or to improve on existing people-centered health services.³⁵ The literature from communication theories provides recommendations for effective patient-centered communication in the following dimensions: fostering healing relationships, making decisions, exchanging/gathering and providing information, responding to emotions, and enabling patients' self-management of disease and treatment-related behavior.³⁶⁻³⁸ However, the few studies that have addressed the constraining and facilitating factors to patient-centered communication with patients with type 2 diabetes have mostly disregarded communication theories in framing these issues.³⁹⁻⁴¹

We aimed to explore the perceptions on the constraining and facilitating factors to patient-centered communication in the clinical encounters of patients with type 2 diabetes and the providers who are involved in their care by emphasizing the matches and mismatches to the potential areas of improvement for both sides.

2 | MATERIALS AND METHODS

A qualitative study involving focus groups was conducted that included patients with diabetes and providers who care for people with type 2 diabetes in northern Portugal. The participants were purposively sampled to include the standard range of areas of expertise involved in the care of type 2 diabetes patients in Portugal (family medicine, endocrinology, nursing, pharmacy, nutrition, ophthalmology, nephrology, vascular surgery, and psychology) and the typical range of diabetes' micro- and macrovascular complications (without any complications, diabetic retinopathy, diabetic nephropathy, diabetic foot, ischemic heart disease, and cerebrovascular disease). The number of focus groups was predetermined based on these characteristics to aim for the maximum variation of provider roles and patients' disease burden (assuming that the patients with more serious complications tend to have a higher disease burden). This number was not surpassed because data saturation was reached. Within the groups, heterogeneity was pursued regarding age and professional experience/disease duration. An individual direct approach was used to recruit providers who work in primary care and hospital care from several health institutions other than the institutions from where the patients were recruited. Individual physicians who work in one primary care health center and five different hospital departments (Ophthalmology, Nephrology, Diabetic Foot, Cardiology, and Neurology) from one university hospital were contacted and asked to directly invite patients without complications and with specific complications, respectively. We conducted two focus groups of providers in 2012 at a research institute and five focus groups of patients between 2015 and 2016 at a health center for the group without diabetes complications and a hospital for the remaining groups. The participant characteristics can be observed in Table 1.

All focus groups followed the same semistructured set of questions that were aimed at capturing the experiences in the communication between patients living with type 2 diabetes and their providers. These questions were developed by the authors based on the literature that links patient-centered communication with health literacy communication strategies. They covered the factors that constrain and facilitate communication, patients' information needs, and the methods used for gathering and providing information. All the focus groups included a trained moderator and a comoderator. The focus group discussions lasted from 56 to 93 minutes, with a median duration of 90 minutes. The audio of the focus groups was recorded, professionally transcribed verbatim, and checked for accuracy.

The data were analyzed independently by the first two authors according to grounded theory⁴² by using NVivo 10 (QSR International, USA, 2013) and were merged by consensus following continuous and iterative discussions to strengthen coding consistency. This triangulation was further supported by the researchers' different backgrounds (medicine and sociology). In addition, the classifications were always discussed and validated by the last author. Open coding, axial coding, and selective coding were used. The quotations with similar meanings were synthesized into categories (open coding), which were then grouped into themes (axial coding), and then into core themes (selective coding). During selective

coding, inductive themes were laden with interpersonal patient-centered communication theory in consultation with the existing literature.³⁶⁻³⁸ The most illustrative verbatim quotes were selected by the first and the second authors, and the translation was checked by a native English speaker.

The Ethics Committees of the Instituto de Saúde Pública da Universidade do Porto, the Centro Hospitalar de São João, and the Centro Hospitalar do Porto granted ethics approval for the study, and the National Centre for Data Protection approved the data collection. All participants formalized their collaboration through written informed consent.

	Constraining factors [C]		Facilitating factors [F]	
	Patients	Providers	Patients	Providers
<i>Patient-provider relationship</i>				
Power imbalance [C]/patients playing a more active role [F]/ increasing partnership in decision making [F]	✓	✓	✓	✓
Avoiding criticism	✓	✓		
Nonsupportive [C]/patient as person [F]	✓		✓	✓
Mistrusting [C]/trusting the provider [F]	✓		✓	
Lack of [C]/psychosocial support [F]	✓		✓	
Disrespecting the patient	✓			
Patients not being helped to give meaning to diabetes	✓			
<i>Disease and treatment-related behavior</i>				
Disease minimization [C]/increasing patients' responsibility [F]	✓	✓		✓
Aggressive attitude [C/F]/positive communication approach [F]	✓			✓
Dismissing providers' responsibilities [C]/investing in diabetes educators [F]		✓		✓
Family obstruction [C]/family support [F]		✓		✓
Patients' low health literacy/education/ income		✓		
Providing tailored practical information			✓	✓
Wake-up call			✓	✓
Macro-level interventions				✓
<i>Gathering and providing information</i>				
Use of jargon [C]/plain language [F]	✓	✓	✓	✓
Consistency between providers: lack of [C] / increased [F]	✓	✓		✓
Providers' skills: low competence [C]/ improving communication [F]	✓	✓		✓
Analogies: inappropriate [C]/appropriate [F]	✓		✓	
Time: lack of [C]/more time [F]		✓		✓
Low patients' literacy/education		✓		
Unawareness of patients' needs		✓		
Not checking understanding [C]/ repeating information [F]		✓		✓

TABLE 2 Outline of the factors that influence patient-centered communication as viewed by patients and providers

3 | RESULTS

Table 2 summarizes the constraining and facilitating factors that were experienced by the participants during their communication in clinical encounters, which were grouped by patients and providers in relation to the following three core themes that emerged from the data analysis: (a) the “patient-provider relationship,” which included the leading values, roles, and responsibilities of patients and providers when addressing psychosocial distress and emotions, and partnership in decision making; (b) “disease and treatment-related behavior,” when the quotations identified the issues that emerged from communication to enable self-management, behavior change, or maintenance; and (c) “gathering and providing information” where the factors included references to information exchange and the methods used to respond to information needs. The constraining and facilitating factors are illustrated by the anonymized quotes that were drawn from the focus group interviews presented in the text and are supplemented by Tables 3 and 4.

3.1 | Constraining factors

The patients and providers who were interviewed for this study agreed that power imbalance (C1a; C1b), the avoidance of criticism (C1c; C1d), disease minimization (C2a; C2b), the use of jargon (C3a; C3b), the inconsistency between providers (C3c; C3d), and the insufficient competencies of providers (C3e; C3f) were constraining factors to effective patient-centered communication in clinical encounters (Table 3). The misrecognition of power imbalance as natural, necessary, and legitimate refrained the patients from asking questions and supported their nondisclosure of medical information, particularly about high self-monitored glycemic values, because they did not want to be reprimanded. The providers acknowledged that patients lied to them, but they did not attempt to change it:

We think we are being lied to, but we also don't tell them [the patients], 'I don't understand what you are telling me', right? (FG7)

The inconsistency among different providers was especially challenging for the patients, who stated that they were sometimes harmed by conflicting or inaccurate recommendations:

I lost nine and a half kilos in a month and a half because here [at the hospital] someone incorrectly informed me of the type of diet I should be doing, right? And I almost died of starvation. (FG5)

Only the patients mentioned as constraining factors non-supportive (C1e) and/or distrustful (C1f) patient-provider relationships, an inadequate response to emotions (C1g), a disrespect for

basic courtesy behaviors (C1h), an aggressive attitude from providers to motivate adherence to their recommendations (C2c), and the use of inappropriate analogies, such as describing a banana as an expensive potato instead of providing nutritional recommendations for diabetes (C3g). The patients described episodes when doctors gathered around them and discussed them as cases while ignoring their presence. When doctors did not address the patients' concerns,

Sometimes they leave the offices ranting because the doctor didn't address their concerns. (FG2)

The patients also argued that they did not have help from providers to build meaning around why they had diabetes (C1i). They named situations of ineffective communication when providers were blunt, hurt their feelings and walked away, which left the patients without psychosocial support, and situations when they felt disrespected as patients and human beings.

This year in May, I had another appointment with her. (...) I got there and I waited for two and a half hours. I left, as I had to get to work. (...) Then, my doctor wrote another letter, and I went there again. And then, she said, 'Did you bring any tests?' 'No, I didn't. I haven't been here in two years, what tests would you like me to bring?' 'If you came for prescriptions, it's no use, you're not getting any.' And I said 'Look, I actually have someone I can ask for prescriptions,' and I walked out the door... and she didn't assist me, and I walked out the door and left. (FG3)

The providers seemed to partially dismiss their own responsibility in communication improvement regarding behavior change by suggesting that it was the role of other professionals (C2d). They added constraints that related to the patients' family obstruction (C2e) and their low health literacy (C2f), socioeconomic position—education (C2g) and income (C2h) that caused a lack of access to and understanding of health information to better manage the disease.

I have patients that see me and at first sight [say], 'Please read this to me because I don't know how to read. I don't know how to take these medicines.' (FG6)

The lack of time to communicate effectively (C3h) and patients' low literacy and education (C3i) were sometimes used as justifications for not routinely checking for patients' understanding (C3j) and for being unaware of patients' information needs (C3k).

3.2 | Facilitating factors

Seeing patients as persons (F1a; F1b), providing tailored health information in plain language (F3a; F3b), and recognizing the “wake-up call” (a critical moment that is typically caused by a scare such as a

TABLE 3 Participant quotes that illustrate the constraining factors to patient-centered communication in type 2 diabetes

	Patients	Providers
<i>C1 Patient-provider relationship</i>		
Power imbalance	[C1a] Any patient talking with the doctor knows which side of the barricade he is on. (...) There are patients that do not heal faster because they sometimes have doubts and are almost humiliated asking questions. (FG4)	[C1b] There is an unbalanced relationship between the patient and the health professional (...) If I believe I'm right, you [patient] will do as I tell you because I was buried in textbooks studying that for many years to help you. That is a huge barrier, right? The power imbalance in that relationship. (FG7)
Avoiding criticism	[C1c] [Asked if she had told the doctor that she had had very high blood glucose readings because she did not take her diabetes medication] Oh no! He would reprimand me [laughter]! (FG2)	[C1d] Then they even give themselves the luxury of... nowadays the devices [glucose meters], most of them have memory... but they don't take them to the doctor and [instead they] make all the values up to show the doctor because doctors nag them, because doctors chew their ears off. (FG6)
Nonsupportive	[C1e] In a group consultation, when they [providers] come to the hospital ward one day of the week, sometimes Tuesday, sometimes Thursday, when it suits them, three or four doctors come with the doctor in charge [...] and tell her [the doctor in charge] 'This is Mrs. Mary, she was admitted for this and that.' I mean... we don't hear an explanation. (FG4)	
Mistrusting the provider	[C1f] In health centers, it's complicated [to ask for shifting the doctors based on mistrust]. If the person doesn't trust the doctor... 'Look I don't want this doctor because I don't trust him.' And where is trust? I mean it is not something that comes in a box and you can show it doesn't fit. It's hard. (FG5)	
Lack of psychosocial support	[C1g] A nurse came to do my dressing, removed that skin that was the callus and the doctor says out of nowhere: 'Mrs. Mary, that finger is not going to make it!' Like that and I immediately started to cry. [...] And she [doctor] walks away, for God's sake! (FG4)	
Disrespecting the patient	[C1h] We had a few doctors that didn't even greet people. (FG5)	
Patients not being helped to give meaning to diabetes)	[C1i] [Questioned about having asked the doctor after saying that he did not know why he had diabetes] I have already asked but that she doesn't... uh... doesn't know how I picked this up too... (FG2)	
<i>C2 Disease and treatment-related behavior</i>		
Disease minimization	[C2a] Diabetes is the silent disease and that is very dangerous. (...) It doesn't hurt [laughter] and we mess up [laughter]. (FG1)	[C2b] People often don't accept they have diabetes and don't care much. (...) I mean, in type 2 diabetes people say: 'Everybody has it.' (FG6)
Aggressive attitude	[C2c] 'You have to do this!' With me it doesn't work, I was not used to it. (...) I get along better with the soldiers than I do with the officers. (FG5)	
Dismissing providers' responsibilities		[C2d] There has to be well-trained educators ... because otherwise we are wasting trained professionals [physicians' time and knowledge] that have to do other things, right? (FG7)
Family obstruction		[C2e] I ask who cooks (...) [and] it's his wife. Then, the next day, he [the patient] comes in with his wife and she is obese, weighs 200 kg. [Laughter] I mean, it's true that that woman will never (...) be the driver of change. (FG6)

(Continues)

TABLE 3 (Continued)

	Patients	Providers
	Patients' low health literacy/education/income	[C2f] If we don't have economic development, we obviously don't have social development, we don't have more health literacy... we will always have poorer choices... (FG7) [C2g] Oh... and I have the tendency to think that this has also to do with the educational level. [...] And sometimes the person can be highly literate and have no education in terms of that specific area. (FG6) [C2h] People don't always have money to eat the healthier things or to buy all the drugs. (FG6)
<i>C3 Gathering and providing information</i>		
	Use of jargon	[C3a] Because sometimes they [providers] use words that we don't understand. (FG2)
	Inconsistency among providers	[C3b] Then another obstacle has to do with language; sometimes there is an encrypted language, a medical language (...) that may not be easily understood by people [the patients]. (FG7) [C3c] I tell them [providers], but it's no good. Some [doctors] say: 'eat less', [others say] 'eat more during the day', [or] 'add a little more insulin', 'take less [insulin]'. (FG4) [C3d] We had a really nice leaflet to not offend anybody just saying what was going on, just facts! The doctor didn't care, he said 'It's my job to treat this!' (FG6)
	Insufficient communication competences of providers	[C3e] I divide doctors into three classes: assembly-line doctors, doctors-just-because, and doctors-doctors. And unfortunately, I get them all. (...) There's the doctor-just-because... he went through medical school and that was it. Then he forgot to study more, anyway. (FG4) [C3f] Our own training (...) on insulins, how they work, is very limited (...) It is not something that allows me to tell patients that they need to do this and that. (FG7)
	Inappropriate analogies	[C3g] So, she [doctor] prescribed me the pills, all right, [but] didn't give me additional explanations... [She] told me a story that a banana is like a potato but more expensive or something [and I didn't understand what she was talking about]. (FG5)
	Lack of time	[C3h] To communicate well, we need first to get to know the person and even ask what he/she knows about diabetes... not assume that he/she knows just because he/she has had diabetes for a while... it's just that we don't always have the time to do it. (FG6)
	Low patients' literacy/education	[C3i] Some people [the less educated] will never understand everything or... a great deal of things about the disease. (...) Some people objectively can't do it... [understand and manage medications]. (FG6)
	Not checking understanding	[C3j] We want them [patients] to repeat it [what we said] but then we realize that the person didn't really listen. And what now, will we say just one [piece of information] to check if he/she listens or are we going to repeat everything one more time? No, repeating everything won't work because I don't have the time. (FG7)
	Unawareness of patients' needs	[C3k] What do they [patients] need to know? I have some difficulty trying to understand exactly what they need to know to change the way they act. (FG7)

complication of the disease or the near death of someone close) as an opportunity to improve the communication between providers and patients (F2a; F2b) were regarded by both groups as facilitators to effective communication (Table 4). The patients focused on the need for practical management information, that is, knowing exactly how certain behaviors should be performed (F2c) and what to do in specific situations such as changing doctors (F2d), and expressed the desire to

participate in peer group meetings for this purpose (F2e). The providers emphasized the importance of adjusting the information to the patients' day-to-day context (F2f) and comorbidities (F2g). Some patients stated that playing a more active role in consultations by looking providers in the eye and asking direct questions helped them to facilitate communication (F1c), while the providers wanted more shared decision making (F1d) through increased collaborative goal setting.

TABLE 4 Participant quotes that illustrate the facilitating factors to patient-centered communication in type 2 diabetes

	Patients	Providers
<i>F1 Patient-provider relationship</i>		
Seeing patients as persons	[F1a] I agree with that doctor of a certain age that could be my grandfather, he listened to me like a priest in confessional and told me: 'You have to look after yourself and do more or less what you feel is right' [feeling heard]. (FG4)	[F1b] The approach to diabetes is not the approach to diabetes or the diabetic. It is the approach of a human being in front of us that will probably have information. (FG7)
Patients playing a more active role/ increasing partnership in decision making	[F1c] I had squabbles with doctors before, it is not that they showed me disrespect but: 'You don't know. Are you the doctor?' and I reply: 'In fact I am not a doctor, not even close, but I am my own man, and being my own man, I know my resolution to get better'... My suggestion is... to look the doctor in the eye and say: 'Doctor, what is wrong with me?' (FG4)	[F1d] Doctor and patient, side by side, both deciding, agreeing... (FG7)
Trustworthy relationships	[F1e] The trust between the 'patient-doctor' is fundamental because [...] a person that doesn't have trust... it's complicated. (FG5)	
Psychosocial support	[F1f] I immediately started to cry. [...] And the nurse says: 'Don't worry because your finger is not lost, when you came in it was much redder, it had an infection but now is looking better.' (FG4)	
<i>F2 Disease and treatment-related behavior</i>		
Wake-up call	[F2a] I was supposed to take drugs for hypertension, diabetes, triglycerides, and cholesterol. (...) And I did not take them, so I ended up here [at the hospital] with a heart attack. Now, of course... after the warning, I started to take the medications, the insulin... (FG5)	[F2b] [When dealing with patients harder to motivate towards behavior change] I really think that only the wake-up call or the fact of having, for example, a brother with type 2 diabetes that had a heart attack and was at death's door. Only a family wake-up call, an emotional wake-up call makes them change. (FG6)
Providing tailored practical information	[F2c] We needed to know exactly how we should and shouldn't do it [follow recommendations]. (FG3) [F2d] People [patients] should also be able to change doctors anytime they don't get along with them. Patient 2: But I don't know what the argument is and how to do it. (FG5) [F2e] Many meetings like this one [focus group]. (...) It may not look like it, but we learn a great deal with one another. (FG2)	[F2f] We have to be very practical, very practical in what we say, very practical in the education we provide and think: 'How is your day?' 'It is this, this and this.' Then, we will work through their day with that person. (FG7) [F2g] We sometimes tell people to walk, exercise, but you got to know the person well. If it's someone with foot pain, he or she will never walk. It's no good. (FG6)
Increasing patients' responsibility		[F2h] Actually he [the patient] doesn't need very precise knowledge early on and you have to hold people accountable and provide knowledge for that and all that. (FG6)
Aggressive attitude/ positive communication approach		[F2i] I am usually not gentle. Because I get them [patients] at a stage when either we can save their leg or we have to amputate. So I just say it all and they are very shocked. (FG6) [F2j] Maybe we should talk more about the benefits, talk more about the positive side of the therapeutic management. (FG6)
Investing in diabetes educators		[F2k] There has to be well-trained educators ... because otherwise, we are wasting trained professionals [physicians' time and knowledge] that have to do other things, right? (FG7)

(Continues)

TABLE 4 (Continued)

Patients		Providers
Family support		[F2l] 15 days ago, he [the patient] came by my office and weighed 80Kg. (...) 'I need to congratulate you!' (...) And I asked what happened? His daughter had entered the picture and removed the mother [his wife] from the kitchen, had started cooking and clearly squeezed the old man. (...) So, the family entered the picture. (FG6)
Macro-level interventions		[F2m] Maybe they [the fast-food and the candy] should be more expensive (...) and overtaxed. (FG6) [F2n] I think children have a... very important role. Maybe in schools if they talked about the disease and explained [healthy behaviors]... (FG6) [F2o] Some things [boardwalks] have contributed to that [patients having access to structures to support behavior change advice from providers]. (FG6)
<i>F3 Gathering and providing information</i>		
Plain language	[F3a] I wish they [the physicians] would speak small-town Portuguese: 'You are being treated for this, you need to do this and that!' And you learn. Now, speaking in medical terms you wonder. I do! (FG4)	[F3b] Both the family doctor and the nurse (...) know exactly what educational limitations they [their patients] have, the difficulties understanding... They [providers] adjust the language. (FG7)
Appropriate analogies	[F3c] [Describing how another doctor explained that previous doctors had prescribed medication that caused him to feel very sick from very low blood sugar] 'My colleagues did the job at 80%. Because they started giving you airplane fuel when your car should have regular fuel.' (FG4)	
Increased consistency among providers and improving their communication skills		[F3d] There is another important aspect, which is for the entire team to use the same language because if everybody uses the same language they reinforce each other and that gives the patient a lot of confidence. (FG7) [F3e] I think there needs to be training of the professionals in ways to communicate [with patients]. (FG7)
Having more time		[F3f] Because we categorize people by their attire, their gaze, the way they talk... and we believe the person is understanding everything but only if you take a little longer will you go the extra mile. (FG6)
Repeating information		[F3g] No, at that moment [the diagnosis] very little will be taken in. Moments need to be repeated. (FG7)

I always hope to be able to somehow negotiate with the individual what his plan is. Negotiate, that is to say, make this something two-sided that is not prescriptive. (FG6)

Only the patients mentioned the use of analogies as an important tool to facilitate communication (F3c) and suggested additional factors that mainly related to the patient-provider relationship, such as being actively listened to and building a trustworthy relationship (F1e) and

receiving psychosocial support from providers who recognized their distress and helped them to recover (F1f), sometimes by using humor:

We [patient and nurses] all played, talked, in a friendly, spontaneous way (...) laughed, told jokes... [as a way to relieve distress]. (FG5)

The providers, in contrast, focused on overcoming the barriers concerning the communication of recommendations to promote behavior

change, namely, increasing patients' responsibility by holding them accountable and providing knowledge (F2h), using an aggressive communication style (F2i) or a positive communication style by reinforcing the benefits of adherence to recommendations (F2j), investing in diabetes educators (F2k), receiving support from family to facilitate the engagement of healthier choices, in particular the choices that relate to eating habits (F2l), and macro-level interventions, such as overtaxing unhealthy foods (F2m), investing in children's health literacy in schools (F2n), or even building more trails for people to exercise more (F2o). The providers also defended the increasing consistency of information provided to patients (F3d) and improving their communication skills through training (F3e) as the facilitating factors that relate to gathering and providing information. Having more time to communicate with the patient also emerged as a facilitator to communication in clinical encounters (F3f), which created the opportunity to repeat information to improve understanding (F3g).

4 | DISCUSSION

This study identifies several aspects that can be useful in improving patient-centered communication in type 2 diabetes from the sides of both patients and providers. These aspects may help in fostering the patient-provider relationship, patients' participation and involvement, and providers' communication and relational skills in a context where the perceptions of the patients and the providers may apply to other chronic diseases. In this way, this study reinforces the communication theories in patient-centered communication regarding the essential elements of the communication skills that are relevant to clinical encounters, specifically the patient-provider relationship, followed by communication strategies that lead to improved disease and treatment-related behavior and information gathering and provision. Furthermore, this study adds to the literature by comparing the views of patients and providers who manage a complex chronic illness on the differential value and effect of each of these elements for effective patient-centered communication. This study also complements the idea that patients can push for patient-centered communication in clinical encounters and feel empowered to do this by peer group support.

Our data suggest a mismatch between what is more valued by patients and providers in clinical communication. The patients tended to be more focused on interactional factors (eg, trust, respect, use of analogies, and supportive patient-provider relationships), and providers tended to be more focused on system-level factors (eg, the availability of diabetes educators, patient and family socioeconomic position, macro-level interventions, and lack of time), whereas each of these factors almost did not come up for the providers and patients, respectively. These findings draw attention to the need to promote participatory care planning and delivery through active dialogue among the representatives of decision makers, providers, patients and caregivers where knowledge and experiences can be elicited and exchanged and transformative change, that is, change that leads to more equitable and dialogic relationships, can emerge. As part of what has been called relationship-centered care, treating

patients with consideration and respect and providing psychosocial support is essential in establishing and maintaining trust.⁴³ Although promoting trust is at the core of medical communication curricula^{44,45} and patient-centered communication,^{8,46} this study calls attention to the need for constant sensitivity in enacting such guidelines throughout daily clinical encounters. Narrative medicine, or "the clinical practice fortified by narrative competence—the capacity to recognize, absorb, metabolize, interpret, and be moved by stories of illness," might help to improve attentive, empathic, and person-centered care and communication.^{47,48} A lack of time is a common justification not to provide person-centered care,^{40,49} but in contrast with earlier findings, the patients did not mention short consultations as a barrier.⁵⁰ This omission may reflect their resigned acceptance of a social norm that is perceived as immutable or the fact that they place a higher value on overcoming health literacy-related barriers and on fostering the relationship dimension in communication.

Our data suggest that the patients regarded an aggressive attitude as a barrier, while some providers viewed it as a facilitator to persuade patients to change their behavior. The facilitator perception also conflicts with chronic disease management guidelines and communication curricula that encourage supportive communication styles to promote behavior change.^{17,18,44} These recommendations support the need for motivational interviewing by providers that uses an empathic nonconfrontational style to increase the motivation for behavior change, engage patients with treatment and build therapeutic relationships.^{51–55} Nonetheless, there is still no consensus on the outcomes of threatening interpersonal communication, with recent literature showing contradictory results.^{56–58} Future studies should explore the effect of communicator styles on patient-oriented outcomes.

The patients and providers interviewed for this study agreed on some constraining factors that relate to gathering and providing information (the use of jargon and insufficient competencies and consistency among providers), the patient-provider relationship (the power imbalance and avoidance of criticism) and disease and treatment-related behavior (disease minimization). The patients and providers also identified common strategies to facilitate effective patient-centered communication in clinical encounters such as using plain language, seeing patients as active persons, providing tailored practical information, and recognizing the "wake-up call" as a useful and "teachable moment,"⁵⁹ that is, a crucial moment to prompt an investment in communication toward lifestyle and treatment-related change. The use of technical language or medical jargon is a commonly acknowledged barrier to effective communication, particularly in chronic disease management,⁶⁰ that reinforces the power imbalance in the communication in clinical encounters.⁶¹ Disease minimization may partially be explained by a lack of clear-cut explanations concerning diagnosis and disease causation in a language or with analogies that patients can understand.⁵⁵ An inconsistency among different sources of health information, for example, providers, undoubtedly decreases the likelihood of patients taking action or changing their behavior based on this information.⁶² The avoidance of

criticism has also been reported in other studies⁴¹ and relates to the concept of being a “good patient” in which patients seek to present themselves to their doctors as compliant and grateful individuals.^{63,64} The avoidance of criticism is deeply rooted in the power imbalance that is typical of a paternalistic model of care and aims to avoid judgment and confrontation.⁶³

A lower health literacy and education, as well as an adverse socio-economic context, can make communication more challenging. Clear communication strategies are essential to address these difficulties and may help lessen the health literacy demands for patients.^{65–67} However, receiving clearer information does not necessarily equate with behavior change, such as leading healthier lifestyles, but patients become better equipped to make decisions regarding their health.⁶⁸

4.1 | Strengths and limitations

The findings of this study can be used as a baseline to subsequent quantitative or qualitative studies within different populations and other chronic illnesses to contribute to the relevant literature in the field of effective patient-centered communication. The inclusion of participants across the entire spectrum of type 2 diabetes complications and all the health professions involved in their care is also a strength of this study. Previous studies that included patients and providers have focused on only one type of provider.^{22,41,69}

The possibility of selection bias from physicians recruiting patients and from the research team in recruiting providers cannot be excluded. The clinical setting where the patients’ group discussions occurred may have hampered the full disclosure of the barriers to effective communication. In addition, the group interviews may have limited the discussion of the factors concerning the Social Determinants of Health, in particular among patients who may have felt uncomfortable acknowledging these issues in a group. The education of the patients who participated in our study is left-skewed, which reflects the low education levels of the Portuguese population in the same age range.⁷⁰

We did not aim to assess the differences in the perceptions among the providers or among the patients, and future studies should explore them by assessing the constraining and facilitating factors in patient-centered communication according to clinical and social characteristics. In other countries and health settings where more diverse staffing roles are available, mapping out health literacy mediators and including them in the dialogue about effective patient-centered communication could help bridge the gaps between patients and providers.⁷¹ Although there is a time gap between the two sets of focus groups (2012 for providers vs 2015–2016 for patients), the recommendations for type 2 diabetes care did not meaningfully change in this period.

4.2 | Implications for practice

Providers in general and physicians in particular, as well as patients, need to be aware of the core dimensions of patient-centered

communication. Providers need more training in motivating patients to change unhealthy or unfavorable behaviors to promote and improve their health. Overcoming patients’ health literacy barriers to communication is insufficient for effective communication to occur. Providers should make a greater effort to foster a therapeutic relationship with their patients by actively listening, building rapport and connection, showing empathy, and respecting patients’ values and decisions. Furthermore, patients can claim a more active role in communication, and health institutions should help patients to better navigate their services and promote and steer them toward patient discussion groups to support peer distributed health literacy to enable disease and treatment-related behavior.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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