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The co-construction of empathic communication in interpreter-mediated medical consultations: A qualitative analysis of interaction

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Abstract: Current interpreter training programs pay increasingly more attention to the intricacies of the clinical context, such as doctors and patients' communicative goals. However, to date, the conduit model remains influential when it comes to interpreters dealing with other participants' emotions and their own emotions in interpreter-mediated consultations (IMCs). Consequently, establishing a good doctor-patient relationship by means of empathic communication (EC) might be jeopardized in IMCs. During EC, patients express their emotional or illness experiences to which doctors convey their empathic understanding. This study aimed to assess how doctors, patients, and interpreters verbally co-construct EC and the interpreter's effect on this process. We analyzed 7 authentic IMCs using the Empathic Communication Coding System, as previously adapted for IMCs. We identified empathic opportunities (EOs) and empathic responses (ERs) as expressed by patients/doctors, and as rendered by interpreters. Our results showed that EC is the result of an interactive and collaborative process among all participants in IMCs. That is, the interplay between participants' communicative actions determines how patients' expressed lived experiences are addressed in IMCs. Our findings suggest that interpreters hold a central position in this process as they initiated EC about the patient's illness experience and exerted control over the ways in which statements were rendered (e.g., interpreters omitted and altered original statements). In addition, our results indicated that EC in IMCs might be compromised by doctors and interpreters' communicative actions.

1. Introduction

During medial consultations, interpreters carry the responsibility for facilitating communication and mutual understanding between doctors and patients (Beltran Avery, 2001; Hsieh, 2016). For a long time, interpreter training programs promoted the conduit model as a means to achieving these goals (Dysart-Gale, 2005; Hsieh, 2008). The conduit model defines interpreting as an accurate and neutral transfer of linguistic information (Hsieh, 2016). In this view, interpreters function as invisible, non-thinking, and passive participants (Hsieh, 2016). Although more recent training programs have promoted a more flexible role for the interpreter (Crezee & Marianacci, 2022; Krystallidou, Van De Walle, et al., 2018), the conceptualization of interpreters as verbal conduits remains prevalent in interpreter training interventions and interpreters' codes of ethics worldwide (Bancroft, 2005; Hsieh, 2016).

By focusing on linguistic transfer alone, interpreter training programs do not recognize the complexity and reality of interpreting in a medical context (Mahdavi, 2020). After all, the medical consultation is a communicative event where doctors and patients have their own specific goals (Silverman et al., 2013; Stewart et al., 2013). These communicative goals (i.e., objectives that doctors and patients want to achieve by means of communication) help shape the meaning of doctors and patients' communicative actions. As such, the layer of information on doctors and patients' communicative goals should be relayed by the interpreter, besides the accurate transfer of the propositional content, to allow doctors and patients to achieve mutual understanding (Hsieh, 2016).

Doctors and patients share the communicative goal of establishing a good doctor-patient relationship (Hojat, 2016). They can work towards this goal by means of empathic communication (henceforth EC) (Silverman et al., 2013; Stewart et al., 2013). EC has been defined as the collaborative and interactive process where patients express their emotional and/or illness experience to which the doctor responds with empathic understanding (Bylund & Makoul, 2002; Main et al., 2017; Mercer & Reynolds, 2002). Doctors and patients mutually co-construct EC using a variety of semiotic verbal (i.e., speech) and nonverbal resources (e.g., intonation, gaze, body orientation) (Haase & Tepper, 1972; Halim et al., 2020; Lan, 2019).

Recent literature reviews showed that there is a dearth of research on emotion-related research, including EC, in interpreter-mediated consultations (henceforth IMCs) (Theys et al., 2020; Valero-Garcés & Peñalver, 2021). Most studies focused on the amount or intensity of EC in IMCs and did not investigate the interactional processes during which doctors and patients co-construct EC with the help of the interpreter (Theys et al., 2020; Valero-Garcés & Peñalver, 2021). To date, to the best of our knowledge, only six studies adopted such an interactional approach (Gutierrez et al., 2019; Hofer, 2020; Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018; Lan, 2019; Thompson et al., 2021). They showed that interpreters struggle to render doctors and patients' messages accurately during EC (Gutierrez et al., 2019; Hofer, 2020; Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018; Lan, 2019), while doctors might fail to recognize patients' experiences during the empathic interaction in IMCs (Hofer, 2020; Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018). Despite the valuable findings of these studies, their research designs might have provided a limited view on EC in IMCs, i.e., they studied simulated events (Krystallidou, Remael, et al., 2018; Lan, 2019), did not analyze the interpreter's impact on the co-construction of EC (Thompson et al., 2021), or excluded patients' initial expressions (Gutierrez et al., 2019) of positive emotional or illness experiences from their analysis (Hofer, 2020). Only Krystallidou et al. (2020) analyzed authentic IMCs while paying attention to patients' expressions

of positive and negative emotions/experiences and the interpreter's actions during EC.

The study presented here aimed to continue the line of investigation presented in Krystallidou et al. (2020) which entails the study of the interactional processes that lead up to the co-construction of EC and the interpreter's effect on this process. To this end, we used a new dataset of real-life consultations that is indicative of interpreters and doctors' current practice (our corpus was collected 10 years after Krystallidou et al. (2020)). In doing so, we were able to highlight and confirm which observed patterns in participants' past behavior remains relevant in today's medical context. We set out to answer the following research questions:

1. How do patients, doctors, and professional interpreters verbally co-construct EC in IMCs?
2. What is the professional interpreter's effect on the verbal co-construction of EC in IMCs?

The scope of this study was limited to the analysis of verbal EC. A multimodal interaction analysis of both verbal and nonverbal aspects of EC in IMCs is presented elsewhere (Theys, 2021).

2. Methods

1.1 Data

We initially video-recorded 13 real-life IMCs between June 2018 and October 2019 in an urban hospital in Flanders, Belgium. The data are part of the EmpathicCare4All-corpus (Krystallidou, Salaets, et al., 2018). We used purposeful sampling (Palinkas et al., 2015): participants and sample size were determined by the number of consultations for which interpreter services were required and booked and the patients' native languages for which interpretation was mostly required at the hospital at the time of data collection (i.e., Russian, Turkish, Standard Arabic, and Polish). Our sample size was subject to the time constraints of the research project and participants' availability and willingness to participate in the study. All participants (i.e., doctors, patients, and interpreters) received informed consent in their native languages. Patients' consent forms were translated into their native language by professional translators. All participants were blinded to the research questions. Participants' written informed consent was obtained prior to their inclusion in the study. One high-definition SONY video camera was placed behind the patient and the interpreter, who usually were seated next to each other, and another one behind the doctor. None of the researchers was present in the consultation room. The study was approved by the hospital ethics committee (Belgian registration number: B322201835332).

LT and DK screened the 13 video recordings for image and sound quality and for content regarding patients' emotional and/or illness experiences. This initial screening led to the exclusion of 6 video recordings whose quality was suboptimal due to technical issues (n=4) (e.g., cameras were moved by the doctor which compromised the quality of the recording) or a lack of discussion about the patient's emotional and/or illness experience (n=2). The 7 remaining video recordings were transcribed and translated into Dutch by professional translators who had not participated in the study (native speakers of Russian, Turkish, Polish, or Standard Arabic). One transcript was produced for each consultation. All the translators were trained in transcribing and were instructed by LT and DK to flag culture-specific issues (e.g., proverb in the patient's native

language signaling emotionality). Lecturers in (applied) linguistics at KU Leuven, Antwerp Campus reviewed the quality of translation and suggested edits which were incorporated into the final transcripts.

The 7 video recordings showed consultations that were held at various outpatient departments: gynecology, endocrinology, cardiology, rheumatology, and ear, nose and throat. All participants had previous experience with IMCs (except for one Polish patient). The interpreters were trained and certified by an independent translation and interpreting agency that is funded by the Flemish government. The hospital had hired the interpreters on a freelance basis. The interpreters in this study abided by the Flemish code of conduct which promotes the interpreter's conduit role (Agentschap Integratie & Inburgering, 2017). The patient's language proficiency in Dutch ranged from very limited to average. None of the doctors were able to communicate in the patient's native language.

2.2 Coding

There are various tools that allow for the analysis of EC in medical consultations, such as CARE (Mercer et al., 2004), Interpersonal Reactivity Index (IRI) (Davis, 1983), the Empathy Scale (Hogan, 1969), the Jefferson Scale of Physician Empathy (JSPE) (Hojat et al., 2001), and others. However, these tools do not allow for the study of interactional processes leading to the co-construction of empathy among patients and doctors in IMCs. At the time of this study, the only tool that allowed for this type of analysis capturing moment by moment the co-construction of EC and that had been adapted for IMCs (Krystallidou, Remael, et al., 2018) was the Empathic Communication Coding System (Bylund & Makoul, 2002, 2005). Since we wanted to investigate the interactional aspect of EC, we used the Empathic Communication Coding System (Bylund & Makoul, 2002, 2005) as previously adapted for IMCs (Krystallidou, Remael, et al., 2018).

Within the framework of the Empathic Communication Coding System, EC is defined as a transactional (Bylund & Makoul, 2005) and sequential process where the patient utters an empathic opportunity that is rendered by the interpreter and empathically responded to by the doctor (Krystallidou et al., 2020). The Empathic Communication Coding System measures EC by identifying patient-expressed empathic opportunities (henceforth EOs) and doctors' empathic responses (henceforth ERs) to them.

The tool distinguishes among three different types of EOs (emotion, challenge, and progress) that must be verbally expressed in a clear and explicit manner. Emotion is defined as "an affective state of consciousness in which joy, sorrow, fear, hate, or the like, is experienced" (Bylund & Makoul, 2002, p. 209). Challenge is a "negative effect a physical or psychosocial problem is having on the patient's quality of life, or a recent, devastating, life-changing event" (Bylund & Makoul, 2002, p. 209). Progress is a "positive development in physical condition that has improved quality of life, a positive development in the psychosocial aspect of the patient's life, or a recent, very positive, life-changing event" (Bylund & Makoul, 2002, p. 209). The tool also distinguishes among different levels of doctors' ERs, ranging from Level 0 (doctor's denial of the patient's perspective) to Level 6 (doctor and patient share a feeling or experience) (Bylund & Makoul, 2002, 2005). Appendix A provides an overview of the Empathic Communication Coding System designed by Bylund & Makoul (2002, 2005).

For the purpose of IMCs, Krystallidou, Remael, et al. (2018) defined a unit of analysis as an instance of EC consisting of an EO, ER, and (if applicable) their renditions by the interpreter (see Figure 1, column entitled 'typical turn-taking during EC in IMCs'). They coded units of analysis as follows (see Figure 1, columns entitled 'coding procedure'). First, the interpreter's rendition of the

patient's EO in Dutch was coded (1), then the doctor's ER in Dutch (2), followed by the coding of the patient's original EO in his/her native language (3) and concluding with the interpreter's rendition of the doctor's ER in the patient's native language (4). This allowed us to code the meaning of the EO in the way it reached the doctor and not as was intended by the patient.

<table>
<tr><th>Typical turn-taking during EC in IMCs</th><th colspan="2">Coding procedure (the numbers between brackets indicate the order of the steps in the coding procedure)</th></tr>
<tr><td>Patient expresses EO in his/her native language</td><td>(3) Coding patient's original EO</td><td rowspan="2">(5) Coding & categorizing shifts in intensity and/or meaning between versions of EOs (1) & (2)</td></tr>
<tr><td>Interpreter renders patient's EO into Dutch</td><td>(1) Coding interpreter's rendition of patient's EO</td></tr>
<tr><td>Doctor expresses level 0-6 empathic response in Dutch</td><td>(2) Coding doctor's ER to patient's EO</td><td rowspan="2">(6) Coding & categorizing changes in the level of empathy between versions of ERs (3) & (4)</td></tr>
<tr><td>Interpreter renders doctor's level 0-6 empathic response into the patient's native language</td><td>(4) Coding interpreter's rendition of doctor's ER</td></tr>
</table>

Figure 1: Typical turn-taking during EC in IMCs and the coding procedure

We were able to study the interpreter's effect on the co-construction of EC by comparing the EOs and ERs as expressed by the patient/doctor and as rendered by the interpreter. Patient-expressed EOs and their renditions (Figure 1, Step 5) could be marked by shifts in intensity (e.g., "I am worried" vs. "I am *very* worried") or meaning (e.g., "I am worried" vs. "I am fine"). The shifts were previously categorized as follows (Krystallidou, Remael, et al., 2018): omitted, twisted, transformed, reduced, increased, matched. Appendix B provides the definitions and an example for each of these categories. Doctors' ERs and their renditions (Figure 1, Step 6) could be marked by a change in the level of empathy (Level 0-6). Previous studies using the adapted version of the Empathic Communication Coding System did not report on a categorization of changes in the level of empathy in ERs (Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018). Therefore, we categorized the identified changes in the level of empathy in ERs as follows: matched (level of empathy as defined in the Empathic Communication Coding System did not change), omitted (ER was not passed on), reduced (level of empathy as defined in the Empathic Communication Coding System was reduced), increased (level of empathy as defined in the Empathic Communication Coding System was increased). We annotated the reasons for shifts in EOs/changes in ERs (e.g., omission, addition, paraphrasing, interruption, erroneous translation).

LT and at least one other coder (CW, HS, DK) annotated the data using the Empathic Communication Coding System. DK had previous experience with

the Empathic Communication Coding System in IMCs and trained the other three coders (LT, CW, HS). The coders used the translated transcript and the translators and proofreaders' comments for coding. Video recordings were used in case of doubt. The coders discussed their individual coding until consensus was reached. PP checked the final coding for clinical relevance.

3. Results

We identified 65 units of analysis: 50 where the patient initially expressed an EO (henceforth patient-expressed EOs) and 15 where the interpreter introduced an EO without the patient having expressed one previously (henceforth interpreter-introduced EOs).

3.1 EC with patient-expressed EOs

Table 1 displays how EC in IMCs unfolded when patients expressed EOs to which doctors responded by means of ERs while interpreters mediated this interaction. Each row in the table shows our coding for each step in this interactional process: i.e., Row 1: patient expressed EO, Row 2: interpreter rendered patient-expressed EO, Row 3: doctor responded to patient-expressed EO, Row 4: interpreter rendered doctor's ER. The table should be read from left to right so one can see how each speaker (patient/interpreter/doctor) expressed, rendered or responded to different types of EOs. We indicate the speaker (Column 1), the coding categories as defined in the Empathic Communication Coding System for IMCs (Column 2), the total number of results across all units of analysis (Column 3), and the results for each unit of analysis that was initiated by an emotion, challenge, or progress EO (Columns 4-6). For each category of shifts in EOs, we indicate the interpreter's action that caused a shift in intensity/meaning in an EO (rows marked by 'due to'). For each change in the level of an ER, we indicate the original level of the doctor's ER that was changed by the interpreter (rows marked by 'level of doctor's ER') and the interpreter's action that caused a change in the level of empathy in an ER (rows marked by 'due to'). Appendix C provides additional examples of our coding in our dataset and can be consulted alongside the presentation of the results below.

Table 1: EC with patient-expressed EOs

Speaker	**Coding Categories**		**TOTAL**	**Emotion**	**Challenge**	**Progress**
Patient expressed EO			**n=50**	n=3	n=34	n=13
Interpreter rendered patient-expressed EO	Matched		**n=7**	n=0	n=4	n=3
	Omitted		**n=6**	n=0	n=6	n=0
	Due to		***Omission: n=6***	*Not applicable*	*Omission: n=6*	*Not applicable*
	Shifts in intensity	Increased	**n=8**	n=0	n=3	n=5
		Due to	***Paraphrasing: n=7 Omission: n=1***	*Not applicable*	*Paraphrasing: n=2 Omission: n=1*	*Paraphrasing: n=5*
		Reduced	**n=23**	n=1	n=19	n=3
		Due to	***Paraphrasing: n=9 Omission & paraphrasing: n= 7 Omission:***	*Omission: n=1*	*Omission & paraphrasing: n=7 Paraphrasing: n=6*	*Paraphrasing: n=3*

			n=5 ***Addition: n=2***		*Omission: n=4* *Addition: n=2*	
	Shifts in meaning	Twisted	**n=4**	n=2	n=1	n=1
		Due to	***Paraphrasing: n=3*** ***Erroneous translation of key term: n=1***	*Paraphrasing: n=2*	*Erroneous translation of key term: n=1*	*Paraphrasing: n=1*
		Transformed	**n=2**	n=0	n=1	n=1
		Due to	***Paraphrasing: n=1*** ***Addition: n=1***	*Not applicable*	*Paraphrasing: n=1*	*Addition: n=1*
Doctor responded to patient-expressed EO	Total		**n=44**	n=3	n=28	n=13
	Level 0		***n=7***	*n=1*	*n=4*	*n=2*
	Level 1		***n=13***	*n=1*	*n=8*	*n=4*
	Level 2		***n=11***	*n=0*	*n=5*	*n=6*
	Level 3		***n=0***	*n=0*	*n=0*	*n=0*
	Level 4		***n=13***	*n=1*	*n=11*	*n=1*
	Level 5		***n=0***	*n=0*	*n=0*	*n=0*
	Level 6		***n=0***	*n=0*	*n=0*	*n=0*
Interpreter rendered doctor's ER	Matched		**n=28**	n=1	n=20	n=7
	Level of doctor's ER		***Level 0: n=6*** ***Level 2: n=11*** ***Level 4: n=11***	*Level 0: n=1*	*Level 0: n=4* *Level 2: n=5* *Level 4: n=11*	*Level 0: n=1* *Level 2: n=6*
	Omitted		**n=9**	n=1	n=4	n=4
	Level of doctor's ER		***Level 0: n=1*** ***Level 1: n=7*** ***Level 4: n=1***	*Level 1: n=1*	*Level 1: n=4*	*Level 0: n=1* *Level 1: n=2* *Level 4: n=1*
	Due to		***Omission: n=4*** ***Interruption by patient: n=5***	*Omission: n=1*	*Omission: n=2* *Interruption by patient: n=2*	*Omission: n=1* *Interruption by patient: n=3*
	Changes in the level of empathy	Increased	**n=0**	n=0	n=0	n=0
		Level of doctor's ER	***Not applicable***	*Not applicable*	*Not applicable*	*Not applicable*
		Due to	***Not applicable***	*Not applicable*	*Not applicable*	*Not applicable*
		Reduced	**n=7**	n=1	n=4	n=2
		Level of doctor's ER	***Level 4 → Level 2: n=1*** ***Level 1 → Level 0: n=6***	*Level 4 → Level 2: n=1*	*Level 1 → Level 0: n=4*	*Level 1 → Level 0: n=2*
		Due to	***Omission: n=7***	*Omission: n=1*	*Omission: n=4*	*Omission: n=2*

3.1.1 Patients' expressions of EOs

The patients in our study expressed mostly challenge (n=34) or progress EOs (n=13) and only a small number of emotion EOs (n=3).

3.1.2 Interpreters' renditions of patient-expressed EOs

Matched – In total, the interpreters in our study passed on 7 EOs without shifts in meaning or intensity (4/34 challenge, 3/13 progress EOs). Only challenge and progress EOs were passed on as a close match. None of the emotion EOs were passed on as a match (see Appendix C – Box 1: the patient's challenge EO "I had (…) problems with my bladder" was passed on as a close match by the interpreter "(…) I had problems with my bladder").

Omitted – In total, the interpreters in our study did not pass on 6 EOs (6/34 challenge EOs) by omitting information (n=6) (see Appendix C – Box 2: the patient's challenge EO "I have a real bad deterioration" was not translated by the interpreter).

Shift in intensity – In total, the interpreters intensified 8 EOs (3/34 challenge, 5/13 progress EOs) by paraphrasing (n=7) or omitting information (n=1). The interpreters intensified most progress EOs (5/13 EOs) (see Appendix C – Box 3: the patient's progress EO "now I'm good" was increased in intensity by the interpreter "I'm a lot better").

In total, the interpreters downplayed 23 EOs (1/3 emotion, 19/34 challenge, 3/13 progress EOs) by paraphrasing (n=9), omitting information (n=5), adding information (n=2), or by both paraphrasing and omitting information (n=7). The interpreters downplayed most challenge EOs (19/35 EOs) (see Appendix C – Box 4: the patient's challenge EO "I simply don't enjoy or want to have sex" was downplayed by the interpreter "in general I don't want to have sex").

Shift in meaning – In total, the interpreters twisted 4 EOs (2/3 emotion, 1/34 challenge, 1/13 progress EOs) by erroneously paraphrasing information (n=3) or erroneously translating a key term (n=1) (see Appendix C – Box 5: the patient's challenge EO "I can never eat anything" was erroneously paraphrased by the interpreter "I can't swallow very well").

In total, the interpreters transformed 2 EOs (1/34 challenge, 1/13 progress EOs) by paraphrasing (n=1) or adding information (n=1) (see Appendix C – Box 6: the patient's progress EO "(…) now I get up more to pee rather than from the pain" was transformed into a challenge EO by the interpreter by adding information "(…) that is actually my only eh complaint").

3.1.3 Doctors' responses to patient-expressed EOs

The doctors in our study responded to all 44 passed on EOs with varying levels of recognition for the patient's expressed experiences (3/3 emotion, 28/28 challenge, 13/13 progress EOs). Their ERs mostly focused on other aspects of the patient's narrative, giving no or minimal recognition to the expressed EO (31/44 ERs – 7 level 0; 13 level 1; 11 level 2). Only in 13 level 4 ERs, the doctors explored the patient-expressed EO. The doctors ignored or minimally recognized most emotion (2/3 EOs), challenge (18/28 EOs), and progress EOs (12/13 EOs).

3.1.4 Interpreters' renditions of the doctor's ER to patient-expressed EO

Matched – In total, the interpreters in our study passed on most of the doctors' ERs without changing the level of empathy (28/44 ERs). The matched ERs had previously been expressed by the doctor in response to challenge (20/28 EOs), progress (7/13 EOs), and emotion EOs (1/3 EOs). The interpreters matched all level 2 ERs (11/11 ERs), most level 0 (6/7 ERs), and most level 4 ERs (11/13 ERs) (see Appendix C – Box 7: the doctor's level 4 ER "With emptying your bladder or" is passed on as a level 4 ER by the interpreter "with emptying or").

Omitted – In total, the interpreters omitted 9 out of 44 ERs (1/7 level 0; 7/13 level 1; 1/13 level 4 ERs) by not translating them (n=4) or due to an interruption by the patient (n=5). The omitted ERs had previously been expressed by the doctor in response to emotion (1/3 EOs), challenge (4/28 EOs),

and progress EOs (4/13 EOs) (see Appendix C – Box 8: the doctor's level 1 ER "yes" was not translated by the interpreter).

Changes in the level of empathy – In total, the interpreters in our study reduced the level of empathy in doctors' ERs to emotion (1/3 EOs), challenge (4/28 EOs), and progress EOs (2/13 EOs) by omitting information (n=7). They also reduced doctors' ERs that were coded as level 4 (1/13 ERs) or level 1 (6/13 ERs) (see Appendix C – Box 9: the doctor's level 1 ER "yes yes (…)" was reduced to level 0 as the interpreter did not translate these words and only translated the rest of the doctor's statement which no longer addressed the expressed EO).

3.1.5 Link between renditions of patient-expressed EOs and renditions of ERs

Table 2 shows the link between interpreters' renditions of EOs (horizontally) and renditions of ERs (vertically) and should be read from left to right.

Table 2: Link between renditions of patient-expressed EOs and renditions of ERs.

			Renditions of doctors' ERs				
			Matched	Omitted	Increased level of empathy	Reduced level of empathy	**Total**
Renditions of patients' EOs	Matched		n=5	n=1	n=0	n=1	**n=7**
	Shifts in intensity	Increased	n=7	n=2	n=0	n=1	**n=10**
		Reduced	n=14	n=4	n=0	n=5	**n=23**
	Shifts in meaning	Transformed	n=1	n=1	n=0	n=0	**n=2**
		Twisted	n=1	n=1	n=0	n=0	**n=2**
	Total		**n=28**	**n=9**	**n=0**	**n=7**	**n=44**

Most of the patients' EOs that were matched (5/7 EOs), increased (7/10 EOs), reduced (14/23 EOs), or twisted (2/3 EOs) by the interpreter, were accompanied by ERs that were passed on as a match by the interpreter. Half of the patients' EOs that were transformed by the interpreter (1/2 EOs) were accompanied by doctors' ERs that were omitted or matched by the interpreter.

3.2 EC with interpreter-introduced EOs

Table 3 displays how EC in IMCs unfolded when interpreters introduced EOs that had not been expressed by the patient previously but were still responded to by the doctor. Each row in the table shows our coding for each step in this interactional process: i.e., Row 1: interpreter introduced EO, Row 2: doctor responded to interpreter-introduced EO, Row 3: interpreter rendered doctor's ER. The table should be read similarly to Table 1.

3.2.1 Interpreters' introductions of EOs

The interpreters in our study introduced mostly challenge EOs (n=11) and a small number of emotion (n=2) and progress EOs (n=2). They did so by paraphrasing the patients' statement (n=6), adding a previously absent EO to their rendition (n=6), or by translating an EO that was expressed by the patient's companion instead of the patient (n=3). All of these were coded as interpreter-introduced EOs as the EO in the interpreter's rendition had not been explicitly expressed by the patient in the previous turn, but was presented to the doctor through or by the interpreter (see Appendix C – Box 10: the challenge EO that was expressed by the patient's companion, "in Syria there is war in Syria now Turkey has invaded Syria", was introduced by the interpreter in their rendition).

Table 3: EC with interpreter-introduced EOs

Speaker	Coding Categories		TOTAL	Emotion	Challenge	Progress
Interpreter introduced EO	Introduced		**n=15**	n=2	n=11	n=2
	Due to		***Paraphrasing: n=6 Addition: n=6 Translation of statement by the patient's companion: n=3***	*Addition: n=2*	*Paraphrasing: n=6 Translation of statement by the patient's companion: n=3 Addition: n=2*	*Addition: n=2*
Doctor responded to interpreter-introduced EO	Total		n=15	n=2	n=11	n=2
	Level 0		n=1	n=0	n=1	n=0
	Level 1		n=6	n=1	n=3	n=2
	Level 2		n=3	n=1	n=2	n=0
	Level 3		n=2	n=0	n=2	n=0
	Level 4		n=3	n=0	n=3	n=0
	Level 5		n=0	n=0	n=0	n=0
	Level 6		n=0	n=0	n=0	n=0
Interpreter rendered doctor's ER	Matched		**n=5**	n=1	n=4	n=0
	Level of doctor's ER		***Level 2: n=2 Level 4: n=3***	*Level 2: n=1*	*Level 2: n=1 Level 4: n=3*	*Not applicable*
	Omitted		**n=6**	n=1	n=4	n=1
	Level of doctor's ER		***Level 0: n=1 Level 1: n=4 Level 3: n=1***	*Level 1: n=1*	*Level 0: n=1 Level 1: n=2 Level 3: n=1*	*Level 1: n=1*
	Due to		***Omission: n=4 Interruption by the patient: n=2***	*Interruption by patient: n=1*	*Omission: n=3 Interruption by the patient: n=1*	*Omission: n=1*
	Changes in the level of empathy	Increased	**n=1**	n=0	n=1	n=0
		Level of doctor's ER	***Level 2 → Level 4: n=1***	*Not applicable*	*Level 2 → Level 4: n=1*	*Not applicable*
		Due to	***Addition: n=1***	*Not applicable*	*Addition: n=1*	*Not applicable*
		Reduced	**n=3**	n=0	n=2	n=1
		Level of doctor's ER	***Level 1 → Level 0: n=2 Level 3 → Level 0: n=1***	*Not applicable*	*Level 1 → level 0: n=1 Level 3 → Level 0: n=1*	*Level 1 → Level 0: n=1*
		Due to	***Omission: n=3***	*Not applicable*	*Omission: n=2*	*Omission: n=1*

3.2.2 Doctors' responses to interpreter-introduced EOs

Similar to instances of patient-expressed EOs (3.1.3), the doctors in our study responded to all 15 interpreter-introduced EOs (2/2 emotion, 11/11 challenge, 2/2 progress EOs). Their ERs mostly focused on other aspects of the narrative, giving no or minimal recognition to the interpreter-introduced EO (10/15 ERs – 1 level 0; 6 level 1; 3 level 2). Only a few of the doctors' ERs explicitly addressed the interpreter-introduced EO (5/15 ERs – 2 level 3; 3 level 4).

3.2.3 Interpreters' renditions of the doctor's ER to interpreter-introduced EO

Matched – In total, the interpreters passed on half of the doctors' ERs to emotion (1/2 EOs) and some ERs to challenge EOs without changes in the level of empathy (4/11 EOs). They matched most level 2 (2/3 ERs) and all level 4 ERs (3/3 ERs) (see Appendix C – Box 11: the doctor's level 2 ER "that's a problem (.) hmhm" to the introduced emotion EO had the same level of empathy as defined by the Empathic Communication Coding System in the interpreter's rendition, "Yes that's a problem of course").

Omitted – In total, the interpreters in our study omitted 6 out of 15 ERs (1/1 level 0; 4/6 level 1; 1/2 level 3 ERs) by not translating them (n=4) or due to an interruption by the patient (n=2). These omitted ERs had previously been expressed by the doctor in response to emotion (1/2 EOs), challenge (4/11 EOs), and progress EOs (1/2 EOs) (see Appendix C – Box 12: the doctor's level 1 ER "yes okay" to the introduced challenge EO was omitted as the patient immediately took the next turn before the interpreter started translating).

Changes in the level of empathy – In total, the interpreters increased the level of empathy of one doctor's ER. This ER had previously been expressed by the doctor in response to an interpreter-introduced challenge EO (1/11 EOs) and was increased from level 2 to level 4 by adding information (n=1) (see Appendix C – Box 13: the doctor's level 2 ER addressed peripheral aspects of the introduced EO (i.e., the patient's symptoms), while the interpreter's rendition of that ER addressed the core of the patient's EO and was coded as level 4 (i.e., not finding work due to his medical condition)).

In total, the interpreters reduced the level of empathy in ERs to challenge (2/11 EOs) and progress EOs (1/2 EOs) by omitting information (n=3). The interpreters reduced ERs that were coded as level 1 (2/6 ERs) and level 3 (1/2 ERs) (see Appendix C – Box 14: the doctor's level 1 ER "hmhm okay good" to the introduced challenge EO was reduced to level 0 as the interpreter did not translate these words).

4. Discussion and conclusion

4.1 Discussion

We set out to investigate how participants in IMCs verbally co-constructed EC and the influence interpreters had on this process. In line with other studies (Gutierrez et al., 2019; Hofer, 2020; Krystallidou et al., 2020; Lan, 2019; Theys et al., 2020), our results showed that doctors, patients, and interpreters can collaboratively co-construct EC so that patients' manifestations of their experiences receive an empathic response from the doctor with the help of an interpreter (see Table 1, 44/50 passed on patient-expressed EOs were responded to by the doctor). Interpreters acted as active co-participants during this process as they mediated the empathic doctor-patient interaction, in line with other studies' findings (Angelelli, 2004; Hsieh, 2016; Mahdavi, 2020). More importantly, our results provided the first evidence that interpreters actively participated in the empathic interaction by introducing EOs that were not expressed by the patient but still prompted an ER from the doctor (see Table 3, all interpreter-introduced EOs were responded to by the doctor). This was not the case in previous studies on EC in IMCs that used the adapted version of the Empathic Communication Coding System (Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018). We identified two types of situations where interpreters introduced an EO, leading to the co-construction of EC where these EOs were empathically responded to by the doctor.

4.1.1 Interpreters can initiate EC in IMCs

First, interpreters rendered EOs that were originally expressed by the patient's companion instead of the patient (e.g., see Appendix C – Box 10). Interpreters might have done so to respect their professional code of conduct which expects them to translate everything that was said in the interaction (Bancroft, 2005; Hsieh, 2016). However, as interpreters were rendering these EOs, they did not make clear to the doctor that they were interpreting on the companion's behalf. As such, doctors might have misunderstood the introduced EO as an expression from the patient. This in turn could lead to confusion and miscommunication between doctors and patients on the level of EC.

Second, interpreters introduced EOs on their own account (e.g., see Appendix C – Box 10-14). This might be an interpreting strategy where interpreters rendered an implicit or nonverbal EO in the patient's behavior as an explicit, verbal EO. Previous research has shown that interpreters might make implicit statements more explicit to avoid doctors mistaking an implicit formulation as an interpreting error (Wadensjö, 2019). Other studies reported that doctors can misinterpret interpreters' renditions of nonverbal cues as an expression of the interpreter's own personal emotions (e.g., aggressive gestures) (Hsieh & Nicodemus, 2015). In addition, interpreters may have used this strategy to signal cues that doctors might have failed to notice, in line with doctors' expectations (Hsieh, 2016). A common thread in these explanations is that doctors have a limited familiarity with the interpreters' practice on the level of EC. After all, interpreters strive for accuracy and objectivity in their rendition, which means that implicit and nonverbal aspects of their performance reflect the primary participant's original behavior. In addition, interpreters uphold the standard of neutrality which entails that they may not advocate for one participant or another during their performance (Agentschap Integratie & Inburgering, 2017; Bancroft, 2005; Hsieh, 2016). In sum, these findings suggest that interpreters adapted their interpreting strategies to the doctor's lack of familiarity with their practices to avoid causing misunderstandings about the interpreter's level of professionalism during EC in IMCs. Future research should explore this hypothesis by analyzing the interpreters' accounts of the observed events (Theys et al., 2022).

In both types of interpreter-introduced EOs, doctors responded to all the introduced EOs, which the interpreters then relayed back to the patient (see Table 3). Our results point to an interesting difference in the interpreters' behavior when they relayed ERs to patient-expressed versus interpreter-introduced EOs: i.e., interpreters omitted/reduced most of the doctors' ERs to interpreter-introduced EOs (9/15 ERs, Table 3) but rendered most ERs to patient-expressed EOs as a close match (28/44 ERs, Table 1). The contrast between these two findings suggests that interpreters are to some extent aware of (the impact of) their own actions and use different interpreting strategies to limit this impact on the co-construction of EC. After all, when interpreters introduced an EO that was not originally expressed by the patient, they conveyed to the doctor an emotional or illness experience that might not have corresponded to the patient's actual lived experience. As a result, the doctor might have misunderstood the patient's communicative goals and/or lived experience, resulting in a doctor's response that did not meet the patient's needs or expectations at that point in the interaction. Consequently, the interpreter's action of introducing an EO might have compromised the doctor and patient's mutual understanding and therefore the co-construction of EC. In other words, by introducing EOs, interpreters would have been in conflict with the principle of accuracy in their code of ethics (Agentschap Integratie & Inburgering, 2017) and would have failed at their responsibility of creating mutual understanding between doctors and patients (Hsieh, 2016). This could explain why interpreters

omitted/reduced most ERs to an interpreter-introduced EOs, as such omissions/reductions avoided causing misunderstanding between doctors and patients and allowed the interpreters to cover up their previous actions (i.e., the introduction of information that was not expressed by the patient). Rendering ERs to patient-expressed EOs would not carry the risks of causing misunderstanding or uncovering an interpreting error, hence why interpreters might have rendered most ERs to patient-expressed EOs accurately. As such, these findings seem to reinforce the notion that interpreters can act as "agents of empathy" (Gutierrez et al., 2019) who can influence doctors and patients' mutual understanding on the level of EC by exerting control over how patients and doctors' statements are rendered to the other primary participant (Davidson, 2000).

4.1.2 Patient-initiated EC in IMCs might be compromised

Our results on EC with patient-expressed EOs also confirmed the findings of previous studies that the co-construction of EC with patient-expressed EOs might be compromised by interpreters and doctors' actions (Gutierrez et al., 2019; Hofer, 2020; Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018). Interpreters might jeopardize doctors' understanding of the patient's lived experiences as they seemed to struggle to render patients' EOs accurately (see Table 1, 43/50 patient-expressed EOs were omitted or marked by a shift in meaning/intensity). Doctors, on the other hand, might have failed to make patients feel understood and heard in their lived experiences as their ERs mostly focused on other aspects of the narrative, giving no or minimal recognition to the EO (see Table 1&3, doctors ignored or minimally recognized 31/44 patient-expressed and 10/15 interpreter-introduced EOs). It is possible that doctors expressed lower levels of empathy because their understanding of the patient's emotional or illness experience was compromised by the interpreter's alterations. However, doctors also tended to minimally recognize patients' EOs in monolingual consultations, suggesting that doctors overall are less oriented towards addressing the patient's lifeworld in any type of medical consultation (Blanch-Hartigan, 2013; Zimmermann et al., 2007). Our results also support previous findings that interpreters might be more oriented towards rendering the doctor's account in IMCs (see Table 1, 28/44 ERs vs. 7/50 EOs were rendered as a close match) (Davidson, 2000; Krystallidou et al., 2020; Leanza et al., 2013). Interpreters might favor the doctor's expressions because doctors are often seen as the most powerful participant in the consultation (Hsieh, 2016). Future research should try to identify which factors influence interpreters' ways of rendering doctors' ERs and patients' EOs (Theys et al., 2022).

Similar to previous studies (Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018), we did not identify a relationship between renditions of patient-expressed EOs and renditions of ERs to patient-expressed EOs (see Table 3, most of reduced/increased EOs were accompanied by matched ERs). We did, however, identify a relationship between EOs/ERs as expressed by patients/doctors and as rendered by the interpreter: all level 1 ERs were omitted or reduced, all level 2 ERs to patient-expressed EOs were rendered as a match by the interpreters. Only challenge EOs were omitted and all emotion EOs were marked by a shift. The majority of the challenge EOs were downplayed/omitted (25/34 EOs), while the majority of the progress EOs were matched/intensified (8/13EOs) (Table 1 & 3). Previous studies on EC in IMCs using the Empathic Communication Coding System did not report on such a relationship (Krystallidou et al., 2020; Krystallidou, Remael, et al., 2018). The previously mentioned results suggest that interpreters adjusted their way of interpreting according to the type of expressed EO/ER. More specifically, interpreters

seemed to mute more statements that conveyed emotions, negative experiences (i.e., challenge EOs) or automatic, scripted ERs (i.e., level 1 ERs). On the other hand, they seemed more oriented towards rendering expressions of positive illness experiences (i.e., progress EOs) or ERs that directed the conversation away from the expressed EO (e.g., level 2 ERs). As a result, the doctor-patient interaction might have been more centered around medical or positive talk and patients' negative emotional or illness experience might have been insufficiently addressed.

These results align with our finding that interpreter use interpreting strategies (e.g., introducing EOs to make EC more explicit, see 4.1.1) to avoid that expressions of emotion or empathy are mistaken for expressions of their own experiences. After all, research has shown that interpreters might favor rendering medical talk because they feel less comfortable rendering empathic or emotional statements that could be mistaken for expressions of their own experiences (Hsieh & Nicodemus, 2015) or because they feel doctors would like to focus more on medical talk (Hofer, 2020). At the same time, interpreters might be more oriented towards rendering positive talk because expressions of negative experiences are more likely to cause conflict or make participants lose face (i.e., behavior that could be taken for disrespectful) (Hsieh & Nicodemus, 2015). Meanwhile, interpreters might have omitted/reduced level 1 ERs because they seemed accessible with a limited language proficiency. This became apparent when some patients in this study interrupted the interpreter before the translation of the doctor's ER (e.g., see Appendix C – Box 12). Future research should explore why interpreters altered certain types of EOs and ERs more than others (Theys et al., 2022).

4.2 Limitations

The Empathic Communication Coding System did not allow for the analysis of nonverbal/implicit communication or the role of culture in the co-construction process of EC in IMCs. Future research should consider looking into these aspects of EC by means of sophisticated tools that attend to the intricacies of IMCs (Theys, 2021). The Empathic Communication Coding System only allows for the analysis of doctors and patients' experiences as manifested in their observed verbal behavior, which is subject to the analyst's interpretation. Future research should explore participants' actual lived experiences during EC by means of video-stimulated recall interviews with the participants (Paskins et al., 2014; Theys et al., 2022).

The sample used in this study was limited due to the time constraints of the research project and due to several events out of the researchers' control (i.e., delayed/cancelled consultations, participants' unavailability/unwillingness to participate in the study, incorrect interpreter bookings (i.e., mismatch between the patient's and interpreter's languages)). Other comparable and more diverse datasets should be analyzed to test the representativeness of our findings. The presence of a camera might have affected participants' behavior. Statistical analysis was not reliable due to disproportionate distributions between the categories in the coding process.

4.3 Conclusion

Our study showed that patients, doctors, and interpreters collaboratively co-construct EC. Interpreters' actions played a crucial role in this process as interpreters acted as "agents of empathy" (Gutierrez et al., 2019) who exerted control over the content and course of EC in IMCs. More specifically, they initiated EC by introducing EOs that were not expressed by the patient. This challenges previous insights that EC in IMCs is always initiated by patients expressing their emotional or illness experience. In addition, interpreters

compromised doctors and patients' mutual understanding of each other's perspectives by muting certain types of doctors' ERs and patients' expressions of negative emotional or illness experiences. At the same time, doctors' expressions of low levels of empathy might have failed to meet the patient's need to feel heard and understood in their emotional or illness experience.

4.4 Implications

Our results showed that interpreters hold a certain power during the empathic interaction which, in our study, sometimes might have led to potential misunderstandings between doctors and patients. Therefore, interpreters would benefit from training where they learn how to identify and manage the impact of their actions on EC in IMCs. In practice, interpreters should try to be more attentive towards the ways in which doctors and patients manifest their communicative goals and try to relay this information as closely as possible to the other primary participants. This will create favorable conditions for doctors and patients to achieve mutual understanding on the level of EC.

Doctors should try to be more aware of the ways in which an interpreter can affect EC in IMCs. They could monitor patients' nonverbal behavior more closely to assess the validity of the expressions about the patient's emotional or illness experience in the interpreter's rendition. Overall, doctors should try to be more aware of patient's expressions of their emotional and illness experiences. Intercultural awareness courses might help doctors to improve these skills. In doing so, doctors can make sure patients feel understood and heard as part of a patient-centered delivery of care.

Both doctors and interpreters would benefit from interprofessional education where they learn about, from, and with each other about the intricacies of their communicative practices to enable effective collaboration on the level of EC (Crezee & Marianacci, 2022; Krystallidou, Van De Walle, et al., 2018; Zhang et al., 2021). This in turn could enable doctors and interpreters to deliver more adequate patient-centered care in IMCs where patients feel sufficiently understood and acknowledged in their lived experiences.

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The authors declare that there is no conflict of interest.

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Appendix A: The Empathic Communication Coding System (adapted from Bylund & Makoul (2002, p. 209) and Bylund & Makoul (2005, p. 129))

Identifying empathic opportunities
The empathic opportunity begins with a clear and direct statement of emotion, progress or challenge by the patient: *Statement of emotion*: The patient describes him or herself currently feeling an emotion. Emotion is defined as "an affective state of consciousness in which joy, sorrow, fear, hate, or the like, is experienced". *"My biggest fear is – I don't think I'm going to get ovarian cancer or breast cancer – but I do think that I'm going to get colon cancer"* *"I'm just scared because I never went through nothing – I've never had nothing wrong with me"* *Statement of progress*: the patient states or describes a positive development in physical condition that has improved quality of life, a positive development in the psychosocial aspect of the patient's life, or a recent, very positive, life-changing event. *"I've been exercising more than last time when I had seen you."* *"We just got married."* *Statement of challenge*: The patient states or describes a negative effect a physical or psychosocial problem is having on the patient's quality of life, or a recent, devastating, life-changing event. *"But sometimes it's hard just eating three ounces of meat, you know what I mean?"* *"I just haven't had the energy to do my job as much anymore."*

Empathic Communication Coding System Levels

Level	Name	Description
6	Shared feeling or experience	Physician self-discloses, making an explicit statement that he or she either shares the patient's emotion or has had a similar experience, challenge, or progress.
5	Confirmation	Physician conveys to the patient that the expressed emotion, progress, or challenge is legitimate.
4	Pursuit	Physician explicitly acknowledges the central issue in the empathic opportunity and pursues the topic with the patient by asking the patient a question, offering advice or support, or elaborating on a point the patient has raised.
3	Acknowledgment	Physician explicitly acknowledges the central issue in the empathic opportunity but does not pursue the topic.
2	Implicit recognition	Physician does not explicitly recognize the central issue in the empathic opportunity but focuses on a peripheral aspect of the statement and changes the topic.
1	Perfunctory recognition	Physician gives an automatic, scripted-type response, giving the empathic opportunity minimal recognition.
0	Denial/ disconfirmation	Physician either ignores the patient's empathic opportunity or makes a disconfirming statement.

Appendix B: Identifying Shifts in Empathic Opportunities. (adapted from Krystallidou et al. (2018, p. 36))

Patient-initiated empathic opportunity	**Description**	**Example**
Omitted	The patient's empathic opportunity is omitted by the interpreter and is not passed on to the doctor (non-rendition). The non-rendition of the patient's empathic opportunity might be replaced by a dyadic interaction between the interpreter and the patient or doctor.	P: *Not entirely yet. Since I've stopped working it is not entirely alright.* I: *It is important. If he requests examination that is very expensive for you.* P: *Then we have to wait a little* D: *So she cannot tell whether her medical insurance now is alright?* I: *So you cannot tell whether your medical insurance now is alright?*
Twisted	The interpreter provides an erroneous translation of a key term in the patient's empathic opportunity. The doctor does not pay attention to the patient's emotion but addresses other aspects of the patient's empathic opportunity.	P: *neck? I suffer blood loss at the womb* I: *a smear? I suffer blood loss at the womb.*
Transformed	The interpreter renders the patient's empathic opportunity but presents it to the doctor as a different category, e.g. the patient's statement of emotion is rendered as a statement of challenge.	P: *yes yes, we wanted it so badly, this child… i don't really manage to believe it, it's very difficult. It's very bad news. I don't manage to realize it at the moment.* I: *Euh yes we wanted this baby so badly, so it's really bad news that we hear this. I don't really realize it yet.*
Reduced	The interpreter omits core elements of the patient's empathic opportunity (example 1) or downplays the intensity of it (example 2). The interpreter places emphasis on peripheral aspects of the patient's empathic opportunity.	Example 1 P: (…) *In short, they rolled down the staircase. Then his first problem with the leg appeared.* I: (…) *yes she was carrying him actually. And then they fell off the staircase ehm they actually rolled down the staircase.* Example 2 P: *No, I'm not shaking when I'm angry, but my heart does beat faster.* I: *I am shaking but when I am nervous my heart will probably beat faster.*
Increased	The interpreter renders the patient's empathic opportunity and adds new pieces of information that affect meaning (content) and/or intensity.	P: *What I also wanted to say is that now I started feeling a stabbing pain in my chest, it is as if needles are being inserted.* I: *In me heartache has appeared and sometimes I have the feeling that once in a while my heart stops at this moment*
Matched	The interpreter's rendition of the patient's empathic opportunity matches the patient's empathic opportunity as expressed by the patient both in terms of meaning (content) and intensity.	P: *If I always take it (medication), then I cannot sleep well.* I: *He says that if he takes it (medication) he feels that he does not sleep well.*

Appendix C: Coding examples in our dataset

EC WITH PATIENT-EXPRESSED Eos		
Box 1 Matched EO	Challenge EO expressed by the patient (P) in line 242 "I had (…) problems with my bladder" was passed on as a close match by the interpreter (I) in line 245	242 P ja po operacji miałam z ehhhh jakieś ehhh z pęcherzem problem **I had after the operation** with e:h some kind of e:h **problems with my bladder** 243 I Na na de operatie heb ik problemen gehad met de blaas After after the operation I had problems with the bladder 244 D Wablieft? Pardon? 245 I Na de operatie had ik problemen met mijn blaas **After the operation I had problems with my bladder**
Box 2 Omitted EO	Challenge EO expressed by the patient (P) in line 98 "I have a real bad deterioration" is omitted by the interpreter (I) in line 99	98 P Ну, и весной у меня каждый год у меня очень сильное обострение быв[ает] Well, in spring I have it each year **I have a real bad deterioration** 99 I [Ja] (.) en elke lente komen ze opnieuw (.) terug [Yes] (.) and each spring they come again (.) back
Box 3 Increased EO	Progress EO expressed by the patient (P) in line 23 "now I'm good" is increased in intensity by the interpreter (I) in line 24 "I'm a lot better"	23 P İyiyim (.) yani daha iyiyim ilaç vermişlerdi en son (.) iyiyim şu anda I'm good (.) actually I'm better they gave me medication the last time (.) **now I'm good** 24 I Ja (.) eu:h ik voel me goed euh (.) het gaat beter (.) euh (.) na de medicatie (.) ging het veel beter Yes (.) eu:h I feel good eh (.) I'm better (.) eh (.) after the medication (.) **I'm a lot better**

Box 4 Reduced EO	Challenge EO expressed by the patient (P) in line 603 “I simply don’t enjoy or want to have sex” is downplayed by the interpreter (I) in line 604 “in general I don’t want to have sex”	603 P a jeszcze chciałam się zapytać czy e:h ja teraz mam takie ogólnie problemy e:h nie mam (.) nie mam ochoty ((laughs)) tak tak zwanej na seks tak (.) czy to też jest coś z tym powiązane (.) po prostu nie mam żadnej przyjemności ani ani ochoty [na seks] And I wanted to ask one more thing or e:h I have at the moment problems e:h I don’t want (.) I don’t want to have ((laughs)) so to speak sex (.) does that have anything to do with it (.) **I simply don’t enjoy or want to have [sex]** 604 I [ik wilde] ook nog vragen euhm in het algemeen heb ik geen zin meer in seks heeft dat daar ook (.) ja mee te maken? [I also] wanted to ask eh **in general I don’t want to have sex** does that have anything (.) yeah to do with it?
Box 5 Twisted EO	Challenge EO expressed by the patient (P) in line 315 “I can never eat anything” is erroneously translated by the interpreter (I) in line 316 “I can’t swallow very well”	315 P Evet yani o (1.0) çoğunlukla ben (.) yemek yerken mesela illa bi sıvı almak zorundayım yoksa hiçbir zaman yemek yiyemiyorum hep Yeah so that (1.0) is usually (.) for example when I eat something I have to drink a liquid otherwise **I can never eat anything** 316 I Meestal bij het eten moet ik altijd euh iets drinken anders kan ik nie euh goed doorslikken Usually during diner I always eh have to drink something otherwise **I can’t swallow very well**

Box 6 Transformed EO	Progress EO expressed by the patient (P) in line 177 "(…) now I get up more to pee rather than from the pain" is transformed into a challenge EO by the interpreter (I) by adding information in line 178 "(…) that is actually my only eh complaint"	177 P işte o da değişiyor (.) yine değişiyor yani bazen çok iyiyim hiçbir şey hissetmiyorum (.) normalde ben geceleri (.) pek pek uyuyamazdım ağrılardan uyanırdım (.) yani şu an geceleyin daha çok idrara kalkar oldum (.) ağrıdan ziyade (.) ama işte bazen dizlerim yine şey (.) böyle bir kurt yiyor gibi iki dizim de (.) ee: öyle çok ağrı oluyor you see it changes it varies actually sometimes I'm very good I barely feel anything (.) **normally I couldn't sleep at night I would wake up from the pain (.) now I get up more to pee (.) rather than from the pain** (.) but you know sometimes (.) my knees again feel like (.) a tiny worm is eating both of my knees (.) e:h that's how much pain it's causing 178 I Hm (.) euhm ja die gewrichten valt wel mee (.) euhm (1.1) ik heb soms euh heel goeie dagen en soms minder goeie euhm (.) ma (.) ja (.) vroeger kon ik nie slapen van de pijn ma nu moet ik regelmatig opstaan om te gaan plassen (.) das mijn eigenlijk enige (.) euh (1.0) klacht momenteel en af en toe heb ik ook pijn in de knieën (.) allez het is alsof (.) der iets in knaagt (.) in mijn knieën dat gevoel heb ik Hm (.) eh yeah these joints are okay (.) eh (1.1) sometimes I have eh very good days and sometimes less good eh (.) but (.) yeah (.) **in the past I couldn't sleep from the pain but now I regularly have to get up to go pee (.) that is actually my only (.) eh (1.0) complaint** at the moment and sometimes my knees hurt (.) or it's like (.) something is nibbling (.) at my knees that's is the feeling I have
Box 7 Matched ER	Level 4 ER expressed by the doctor (D) in line 246 "With emptying your bladder or" is passed on as a level 4 ER by the interpreter (I) in line 247	242 P ja po operacji miałam z ehhhh jakieś ehhh z pęcherzem problem I had after the operation with e:h some kind of e:h problems with my bladder 243 I Na na de operatie heb ik problemen gehad met de blaas After after the operation I had problems with the bladder 244 D Wablieft? Pardon? 245 I Na de operatie had ik problemen met mijn blaas After the operation I had problems with my bladder 246 D Met leegplassen of? **With emptying your bladder or?** 247 I z opróżnieniem czy ? **With emptying or?**

Box 8 Omitted ER	Level 1 ER expressed by the doctor (D) in line 44 “yes” was not translated by the interpreter	41 P Хм… может быть, я очень очень боюсь это отделение поэтому я немножко ех ((giggles)) стресс Hmm… maybe, I'm very very scared for this department so that's way I have eh ((giggles)) stress 42 I Misschien ik heb [heel] veel [schrik] voor deze afdeling dus misschien door [stress] Maybe I'm very very scared for this department so perhaps because of stress 43 P [stressy] [ja] [stressy] [yes] 44 D [Ja ja] [ja] [yes yes] [yes] ja **yes** (2.3) 45 P ээ Почему? […] Eh why? […]
Box 9 Reduced ER	Level 1 ER expressed by the doctor (D) in line 462 “yes yes” is reduced to level 0 as the interpreter (I) did not translate these words in line 463	460 P Özellikle şey (.) düzenli şey kullanıyorum (.) ee: tiroid ilacı onu almadığım zaman direk alıyorum (.) çok hızlı alıyorum Especially (.) I regularly use (.) eh medication for my thyroid gland when I don’t take it I immediately gain weight (.) I quickly gain weight 461 I Ik gebruik ook medicatie euh [voor mijn schildklier] (.) en dan wordt da zo’n beetje stabiel ma als ik daar mee stop dan kom ik onmiddellijk bij I also use medication eh for my thyroid gland (.) and then it kind of stabilizes but when I stop taking it I immediately gain weight 462 D [voor de schildklier] for the thyroid gland Ja ja (1.9) pijn op de borstkas bij het ademen gehad? **Yes yes** (1.9) pain on the chest during breathing? 463 I Göğsünde ağrı oluyo mu (.) nefes alınca? do you get pain on the chest (.) when you breathe?

EC WITH INTERPRETER-INTRODUCED EOs		
Box 10 Introduced EO	Challenge EO expressed by the patient's companion (C) in line 526 "in Syria there is war in Syria now Turkey has invaded Syria" is introduced by the interpreter (I) in line 529-532	526 C يعني، هلأ بسوريا في حرب بسوريا هسة تركيا داخلة سوريا بسبب هذا I mean, in Syria there is war in Syria now Turkey has invaded Syria that's the cause 529 I Hmhm (.) [ah ja] misschien euh vanwege de aanvallen van euh Turkije in euh in Syrië nu Hmhm (.) [ah yes] **maybe eh because of the attacks of Turkey in eh in Syria now** 531 D Ah (.) dat dat ook ja Ah (.) yes that also 532 I Oorlog **War**
Box 11 Matched ER	Level 2 ER expressed by the doctor (D) in line 680 "that's a problem (.) hmhm" to the introduced emotion EO in line 679 "now I'm afraid" is matched in the level of empathy by the interpreter (I) in line 681	678 P ben on senedir burda tedavi görüyorum (.) ben dokuz sene hatta dokuz seneden beri (.) ben dokuz seneden beri gelip bir şey demedim (.) işim vardı (.) kendi işimde çalışıyordum (.) ama kendi işimi kapattıktan sonra (.) işte bu şekilde de (.) başka bir yerde çalışma imkanım (.) zor (.) bir hafta ben gelmiyorum desem kimse beni almaz for ten years I get a treatment here (.) I nine years already nine years (.) for nine years I never said anything (.) I had my job (.) I worked in my own shop (.) but after I've closed my shop (.) and in this way (.) the chance that I would work somewhere else (.) difficult (.) if I say that I won't come for a week nobody will employ me 679 I Hmhm (.) maar het probleem is (0.6) maar ik kom hier al negen jaar en ik (.) ik had mijn eigen werk dus (.) da was geen probleem (.) nu ik ben bang (1.0) wie gaat mij werk geven als ik zeg ik heb dit ziekte en ik moet dan (1.0) een week dan thuis blijven (.) wie gaat mij werk geven Hmhm (.) but the problem is (0.6) but I already come here for nine years and I (.) I had my own job so (.) that was no problem (.) now I'm afraid (1.0) who is going to give me work when I say I have this disease and then I have to stay (1.0) one week at home (.) who is going to give me work (1.5) 680 D Dat is een probleem (.) hmhm **That's a problem** (.) hmhm 681 I doğru o bir problem tabii **Yes that's a problem of course**

Box 12 Omitted ER	Level 1 ER expressed by the doctor (D) in line 82 “yes okay” to the introduced challenge EO in line 81“now it is still difficult” is omitted due to the immediate response by the patient (P) in line 86	80 P Сейчас, хоть ей сложно, но она ходит в школу но, пока такая ситуация чуть-чуть могу собой заняться Now, even though it’s still difficult for her, she goes to school but now the situation is so that I can take of myself for a very tiny bit 81 I Nu: is het nog altijd moeilijk maar ze gaat al naar school dus ik heb misschien een beetje tijd voor mezelf Now it’s still difficult but she goes to school so I have a bit of time for myself 82 D Ja ok (1.1) eu:hm (0.7) dus (.) das de vorige keer ook begrepen (.) dus gij had een knobbeltje in de schildklier (.) dus we hebben daarin geprikt (.) en we zien eigenlijk toch dat dat knobbeltje (.) dat da kwaadaardig kan zijn en dat dus (.) de hele schildklier moet verwijderd worden **Yes okay** (1.1) euh (0.7) so (.) you understood this the last time (.) so you have a little lump in your thyroid gland (.) so we punctured that (.) and we actually do see that this little lump (.) that it’s malignant and therefore (.) the whole thyroid gland has to be removed 83 P Hmhm 84 (0.8) 85 D Eu:hm (2.2) da heeft mevrouw vorige keer (1.2) goed begrepen? Eu:hm (2.2) madam understood this well (1.2) the last time? 86 P Да! **Yes**!

Box 13 Increased ER	Level 2 ER expressed by the doctor (D) in line 2296 “yes yes (…) misery” to the introduced challenge EO in line 2295 “that’s a problem” focuses on a peripheral aspect (patient’s symptoms), whereas the interpreter’s rendition (I) in line 2297 pursues the core of the EO (not finding work) as a level 4 ER	2288 P şimdi biz anladık da ben benim şimdi on beş aydan beri çalışmıyorum (.) işsizim yani bu şekilde de çalışmam (.) kendileri de biliyorlar (.) hep bi diare oluyorum diare [hastalığı] Now we’ve understood that but I don’t work since fifteen months (.) I am unemployed (.) to work in this way (.) they know it as well (.) I always get diarre diarrhea sick *(side conversation between patient & his wife omitted for reasons of space)* 2292 P cık ama ben işte kendileri de biliyorlar benim bir hafta benim yani iğne vuruldum mu (.) durumum kendileri benden iyi [biliyorlar (.) yani bunların ( ) var ya]] no but I well they know it as well one week when I get the syringe (.) they know my circumstances better than I know them (.) well they’ve (inaudible) 2293 I [Ja ok (.) meneer heeft daarnet ook euh uitgelegd] (.) vorige keer ook euh tegen mij] omdat hij dan (.) elkes keer zo een [week (.)] om de zes weken een week thuis Yes okay (.) sir just explained euh a moment ago (.) last time also euh to me because he then has to (.) each time stay one week (.) every six weeks stay one week 2294 D [diarree ja] diarrhoea yes 2295 I [moet blijven moeilijk is (.) om] werk te vinden euh (.) dat is het probleem at home is hard (.) to find work euh (.) that’s a problem 2296 D [maar daarom da wij zo (.) I know] but that’s why we (.) I Know hmhm ja ja ma daarom da wij ook zeggen van ja ma ge kunt dit allemaal oplossen door u te laten opereren (.) ma da zeggen wij al tien jaar dus had hij al gedaan (1.0) dan hadden we deze discussie nie moeten voeren ma dus (1.2) hij moet dan kiezen voor een operatie (0.7) en dan is dat allemaal gedaan die miserie **Yes yes but that’s why we also say yes but you can fix all of this by getting the surgery (.) but that’s what we’ve been saying for ten years so if he would have already done this (1.0) we didn’t need to have this discussion but then (1.2) he would have to choose an operation (0.7) and then it would all be over this misery** 2297 I şimdi diyo ki (.) ben (.) çareyi gösteriyom sana ameliyat olcan on yıldır söylüyorum (.) şimdi eğer çaresi varsa (.) oraya da yazamayız diyo hani bu adam [çalışamaz diye] **now she says (.) I (.) show you the solution you will undergo the operation for ten years I have been saying this (.) if there is a solution for it (.) we can’t write there well that this men can’t work**

Box 14 Reduced ER	Level 1 ER expressed by the doctor (D) in line 393 “hmhm okay good” to the introduced challenge EO in line 391 “I have a lot of problems” is reduced to level 0 as the interpreter (I) did not translate these words in line 396	390 P У меня именно вот это здание очень старое и(ли) он старый с тех пор как я туда заехал семь месяцев а также он (inaudible) Well this building where I’m staying it’s well this building where I’m staying it’s very old and it’s old so since I’ve moved in there seven months and it’s also (inaudible) 391 I Dit gebouw is heel oud waar ik nu moet verblijven en in die zeven maanden dat ik dat ik daar verblijf (.) [ik heb heel veel problemen] (.) ik heb ook allergie euh tegen voor [stof] This building is very old where I have to stay now and in those seven months I’ve been staying there (.) [I have a lot of problems] (.) I also have eh allergy for [dust] 392 P [У меня есть тоже аллергия на пыль] I also have allergy against dust 393 D [hmhm] (.) ok (.) goed (.) ik zie ook da je gekend bent met HIV (.) is dat onder controle? **[hmhm] (.) okay (.) good** (.) I see that you also have been diagnosed with HIV (.) is that under control? 394 I ТакжеуВас было (.) HIV? (.) °ja° You also have (.) HIV? (.) °yes° (Interpreter says ‘HIV’ and ‘yes’ in Dutch) 395 D Ja Yes 396 I Ja Так же у Вас был вирус HIV это тоже под контролем? So you also have the HIV-virus is that under control?