Adherence

Using interpreters in medical consultations: What is said and what is translated—A descriptive analysis using RIAS

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Abstract

Objective: To analyse the concordance of original utterances by healthcare providers (HCP) and patients with the corresponding translations by interpreters using the Roter Interaction Analysis System (RIAS).

Methods: Video recordings of interpreted consultations were transcribed. Transcription was performed by professional interpreters, who first transcribed consultations in both languages, then provided a translation of what was said in the foreign language. Based on the translations, the videos were coded and analysed using RIAS.

Results: Overall, 19 consultations with a total recording time of 865 min were analysed. The main finding is the large difference in the number of utterances in the original language compared to the number of utterances in the target language: about one third of the HCPs’ and the patients’ utterances were not translated. In no instance were omissions explained to HCP or patient.

Conclusion: Interpreters in this sample did not always translate what had been said precisely; they omitted utterances by both HCPs and patients.

Practice implications: All participants of an interpreted consultation must be made aware of potential omissions in the process of translation. Further understanding of the causes and consequences of omissions is needed.

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1. Introduction

With four national languages, 26 federal independent cantons and 42% non-Swiss inhabitants, Switzerland is marked by diversity. For Swiss healthcare institutions this poses a challenge because they face an increasing number of patients who do not speak one of the three major languages: German, French, and Italian [1]. Accurate comprehension of what is being said plays a crucial role in communication between healthcare providers (HCP) and patients. The use of interpreters has become a common procedure in most western countries [2–8] to support healthcare

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units, called utterances that “are the smallest discriminable speech segment to which a classification may be assigned. The unit may vary in length from a single word to a lengthy sentence. A sentence is considered one unit if it conveys only one thought or relates to one item of interest” [22]. RIAS thereby circumvents the problem that different languages need different numbers of words to convey a certain meaning; it is not the correspondence of words in language A versus language B that we analysed but the ‘one thought’ or ‘item of interest’. We provide a complete and quantified description of single utterances in 19 interpreted consultations which were completely transcribed and translated.

2. Methods

This paper is part of a larger national study conducted in Switzerland that examined the roles of medical interpreters [11].

2.1. Participants and videotaped consultations

Routine medical and psychological consultations requiring interpreters in three university hospitals in German-speaking Switzerland (Basel, Bern, and Zurich) were videotaped from December 2011 to May 2012. For practical reasons, we decided to videotape consultations in two languages only: Turkish and Albanian. According to the annual report of an interpreter service of both cantons of Basel in 2004, Turkish (28%) and Albanian (12%) were the languages for which interpreting services were requested most often. All participants – healthcare providers, interpreters, and patients – were asked to participate in the study and gave written informed consent to be videotaped during the encounter. The study was approved by the ethics committees in the respective cantons (Basel, Bern, and Zurich) and was carried out in accordance with The Code of Ethics of the Declaration of Helsinki.

2.2. Sample description

Overall, 19 consultations (14 in Turkish, 5 in Albanian) with a total recording time of 865 min were analysed. A total of 23,744 utterances were coded. 3815 out of 7571 utterances by HCPs were translated into Turkish or Albanian. 4195 out of 6140 patient utterances in Turkish and Albanian were translated into German.

Interpreters were employed by the hospitals involved or by interpreter services of the respective canton. Two interpreters out of 17 participated in two different consultations twice. Nine interpreters underwent qualifying examinations at their employing institutions (Table 1). Eight interpreters obtained a specific interpreter training accredited by the official Swiss interpreter organisation ‘Interpret’ [23]. Interpreter training consists of three aspects: language proficiency, intercultural and communication issues, and knowledge about the functioning of Swiss medical and social institutions.

Ten consultations were conducted by medical doctors, four by clinical psychologists, and five by nurses.

Patients were seen mainly in different departments within Internal Medicine (n = 10). One patient was seen in Anaesthesiology (n = 1), one at the Academy of Swiss Insurance Medicine (n = 1), and seven patients were from a unit treating victims of torture or war. Most of the patients were male. Healthcare providers and interpreters were predominantly female. Patients’ age varied between 34 and 65 years. The majority of patients had higher education, four had an elementary education and two had no formal education (Table 1).

2.3. Transcription and translation

All video recordings were transcribed using the conversation analytic transcription system GAT (Gesprächsanalytisches Transkriptions-System), a method used in conversation analysis for the textualisation of spoken language [24]. We applied the minimal transcript method which contains the texts of speech and information about the course and structure of the conversation (e.g. laughter, reception signals [ja], [hmhm], suspected words, sounds or syllables).

For the transcription we worked with EXMARALDA [25], a tool widely used in discourse analysis.

Transcription was performed by professional interpreters (‘interpreters’), who were not involved in the videotaped consultations. Transcribers first transcribed consultations in both languages, then provided a translation of what was said if it was in a foreign language. The transcriptions were counterchecked by a second transcriber. When transcribers disagreed on the translation of words or utterances they showed the particular video sequences to yet another transcriber. If the content was still unclear, bilingual medical professionals, a Turkish medical doctor and an Albanian clinical psychologist, both fluent in German were consulted.

As RIAS coders did not speak Turkish or Albanian, they used video-recordings as well as the transcripts that contained the German translations of non-German utterances.

2.4. Coding of transcripts

Interviews were coded with the Roter Interaction Analysis System, which is an observation system of clinical interactions with proven validity and reliability [21]. In the RIAS-coding system, the unit of analysis is the smallest discriminable segment of speech, called an utterance, to which a certain category can be assigned. RIAS categories include task-oriented utterances (asking questions, giving information, counselling) and affect- or rapport-oriented utterances (personal remarks, showing empathy, offering reassurance, etc.). Rating was done from video-recordings; German utterances were assigned to RIAS categories by ticking

Table 1
Sample characteristics.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Healthcare provider, n = 19</th>
<th>Interpreter, n = 17 (%)</th>
<th>Patients, n = 19 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years M (range)</td>
<td>Was not registered</td>
<td>43 (32–52)</td>
<td>56 (34–65)</td>
</tr>
<tr>
<td>No formal education</td>
<td>–</td>
<td>–</td>
<td>2 (10)</td>
</tr>
<tr>
<td>Primary school</td>
<td>–</td>
<td>3 (18)</td>
<td>4 (21)</td>
</tr>
<tr>
<td>Secondary school</td>
<td>–</td>
<td>3 (18)</td>
<td>3 (16)</td>
</tr>
<tr>
<td>University-entrance diploma</td>
<td>–</td>
<td>2 (12)</td>
<td>3 (16)</td>
</tr>
<tr>
<td>Polytechnic degree</td>
<td>–</td>
<td>–</td>
<td>1 (6)</td>
</tr>
<tr>
<td>University degree</td>
<td>14 (74)</td>
<td>9 (52)</td>
<td>2 (10)</td>
</tr>
<tr>
<td>Not specified</td>
<td>5 (26)</td>
<td>–</td>
<td>4 (21)</td>
</tr>
<tr>
<td>Completed professional training</td>
<td>19 (100)</td>
<td>7 (37)</td>
<td>8 (42)</td>
</tr>
<tr>
<td>Specific Interpreter Training</td>
<td>–</td>
<td>8 (42)</td>
<td>–</td>
</tr>
<tr>
<td>Work experience, years (range)</td>
<td>15 (5–29)</td>
<td>5.8 (1–23)</td>
<td>–</td>
</tr>
</tbody>
</table>
corresponding buttons on a computer screen (MEDIATAGS system “MediaTags für RIAS Gnosis Facialis Saarbrücken 2014”). For non-German utterances, coders had to use both the transcripts and the video-recordings going back and forth between the video and the transcript.

2.5. Inter-rater reliability

Both coders conducted RIAS rating independently and met regularly to discuss discrepancies between their ratings. Inter-rater reliability was assessed on the basis of two excerpts from two interviews, each lasting about nine minutes. There were three criteria for inter-rater-reliability between the two coders. First a) the total number of utterances was examined for congruence: rater 1 identified 815 utterances while rater 2 coded 863 utterances. This 5–6% difference is considered acceptable [26,27]; b) total number of utterances by speaker: the congruence in the total number of utterances by speaker (interpreter/hcp/patient): raters assigned approximately the same number of units in the 6 different layers of actors (hcp, hcp translated; patient, patient translated; interpreter in both languages; \( \chi^2 = 5.3, df = 5, p > 0.30; \)); and c) total number utterances by category. There was high congruence between the two raters – the \( \chi^2 \)-test shows no interrater-effect (\( \chi^2 = 16.5, df = 29, p > 0.90 \)). All calculations were performed with SPSS.

3. Results

Professional utterances made up a total of 32.0% of all utterances. Patient utterances comprised 26% of the utterances. The remaining utterances were provided by interpreters. Almost half of the HCPs’ utterances were not translated into the patients’ language. Furthermore, about one third of patient utterances did not reach the HCP.

3.1. Quantitative data according to RIAS categories

To provide the reader with some background information on the types of interaction that form the basis of our analyses, and to further demonstrate which RIAS categories are most affected by missing translations, we report on the RIAS categories first. In Table 2, RIAS categories are grouped under the following headings: Exchange of bio-medical information (e.g. giving and asking for medical information), exchange of psychosocial information (e.g. providing and asking about lifestyle and psycho-social information), affective talk (e.g. asking and giving reassurance, critique, appreciation), and instrumental talk (e.g. explicit restructuring, back-channel responses, orientation, asking patients’ opinion or permission).

The highest number of utterances is found in categories pertaining to the exchange of bio-medical information (Table 2), accounting for almost one third of utterances in the interaction between HCP and patient. The second most important topic relates to categories related to affective talk, which accounts for about one fifth of total utterances. Likewise, exchange of psychosocial information accounts for about one fifth of all utterances. The categories of instrumental talk made up about 17.8% of total utterances. Interestingly, the distribution of RIAS categories was altered after translation. Only about 25% of all utterances concerning affective talk by HCP and 21.5% of all utterances concerning instrumental talk by patients were translated. Affective talk by patients and instrumental talk by HCP were remarkably less often translated as well (61.6% and 44%).

3.2. Types of omission

We identified three different types of omissions in our data [11]: a) non-translation, b) shortening and c) incidents, when patients speak German. We will briefly describe these types of omission and provide an example for each of them in the next section.

Non-translation

Non-translation means that the interpreter did not translate the statement of the HCP or the patient at all, not even at a later stage in the consultation. The omitted utterances referred to content, structural or emotional information. Example 1 shows how a request by the healthcare provider for the patient’s agreement to continue with the consultation (an orientation statement) was not translated.

**Example 1. HCP** Well, ok, well. Now I had, I don’t know, do you have any question, a problem, if not, I would continue.

**INT** (Not translated)

HCP continues . . .

**Shortening**

Shortening means that the interpreter did not translate utterance by utterance but summarised what had been said by the patient or health care provider. In Example 2, the interpreter reduced the patient’s utterances, suppressing the apparent urge of the patient who repeatedly complains about cognitive deficits.

**Example 2. PAT** Bir de bende, yani başim, normal olarak başım şey değil, bende unutkanlık çok, bu işkenceden sonra banyo unutkanlık başlamış bende. Ee, bazı şeyler unutuyorum, bırakmışım bir şeyi unutabilirim yorum.

**PAT translated** And with me, so my head is normally not so . . . For me the forgetfulness has increased after this torture. After this torture I became more forgetful, an extensive forgetfulness has occurred. Eh, I forget some things, for example, where I put something.

**HCP** hmhm

**INT** Uhmm, after these tortures uh I became more forgetful – and I very often forget things.

**Patient speaks German**

Sometimes interpreters did not translate what the HCP said because the patients responded directly in German. In some

<table>
<thead>
<tr>
<th>RIAS Category in groups</th>
<th>Number of all utterances from HCP</th>
<th>Number of translated utterances from HCP (%)</th>
<th>Number of all utterances from Patient</th>
<th>Number of translated utterances from patient (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange of bio-medical info</td>
<td>1900</td>
<td>1414 (74,4%)</td>
<td>2368</td>
<td>1686 (71,2%)</td>
</tr>
<tr>
<td>Exchange of psychosocial info</td>
<td>1239</td>
<td>891 (71,9%)</td>
<td>2115</td>
<td>1588 (75,1%)</td>
</tr>
<tr>
<td>Affective talk</td>
<td>2243</td>
<td>546 (24,3%)</td>
<td>1406</td>
<td>867 (61,7%)</td>
</tr>
<tr>
<td>Instrumental talk</td>
<td>2189</td>
<td>964 (44,0%)</td>
<td>251</td>
<td>54 (21,5%)</td>
</tr>
</tbody>
</table>
consultations, patients’ German answers were limited to yes and no, while in others, patients provided detailed explanations in German. Example 3 shows how a patient immediately responded in German without providing the interpreter with the opportunity to translate.

**Example 3. HCP** Well, Mr. M. right? not Mr. K., M.?

**PAT** M. is my last name

**HCP** How are you now, Mr. M.?

**PAT** Yes, probably now is much better. You know, may we right now, you know, rather with the interpreter?

**HCP** Yes, I think, this is the idea. I think, that she, that she translates everything

4. Discussion and conclusion

We analysed the concordance of utterances in the original language (either German or Albanian or Turkish) with utterances in the target language (German translated into Albanian or Turkish; Albanian/Turkish translated into German) in 19 medical consultations. The translations were provided by professional interpreters.

4.1. Discussion of main findings

A fundamental finding is the large amount of utterances that is not translated from language A to language B. Only about 25% of all utterances concerning affective talk by HCPs and 21.5% of all utterances concerning instrumental talk by patients were translated.

There is no doubt that the exchange of bio-medical information is of great importance in every medical consultation [28]. Patient-centered communication, however, encompasses more than the provision of biomedical information: it includes responding to patients’ emotions, identification of patients’ views and patients’ needs, and checking for patients’ understanding [29]. Thus, affective talk by HCPs, e.g. asking for and giving reassurance, appreciation, critique, is also important in determining the quality of an interaction [30].

Omissions can have clinical consequences. Several studies have examined the frequency and relevance of medical errors in bilingual encounters. Nápoles et al., for example, rated 7.1% of the errors as moderately/highly clinically significant, Gany et al. found that there were 12 times as many medical errors of moderate or greater clinical significance if translated by ad hoc interpreters compared to professional interpreters [13,31].

Both authors found omissions to be the most frequent interpretation error, although error rates were substantially lower than in our study. However, the absolute numbers are difficult to compare because these studies used a different mode of analysis in counting errors (Nápoles) and in the baseline material that they analysed. In Gany's study the analysis was based upon transcripts read aloud and then translated.

A more general question is why omissions should matter or why they may not be crucial. One could argue that a given content could be conveyed correctly, albeit in a different style, one being more stringent and another more detailed. The interpreter has the privilege of translating the end-result of a speaker’s more or less concise attempts to formulate his ideas – therefore, he can be shorter and translate just the gist of what was said and not everything. This is certainly true and it is precisely for this reason that we chose RIAS and did not attempt to compare a word for word version of a consultation in two different languages. The unit of analysis in RIAS is an utterance, i.e. a string of words ranging from 1 to many, as long as it conveys just one distinct content like a thought, a piece of factual information, or a communicative act like asking a question. A discrepancy between content in language A compared to language B denotes a clear loss of information; the speaker said something that the listener is not aware of.

A second line of argumentation could be that such a loss of information might be irrelevant; people often talk about less important matters. This is also certainly true as we all would agree when we hear ourselves speaking or when we listen to others interacting. The problem here is that we must find someone who is able to judge what is relevant and what is not. Who should this person be? Should this be a board of experts that e.g. defines which piece of information must be given to a patient with non-cardiac chest pain? Medical experts do not necessarily agree [32]. Even if this problem is solved after many iterative rounds of rating the relevance of medical information, we do not know how to decide what is relevant from the patient’s perspective. We know that patients and physicians do not agree on the relevance of findings and symptoms [33]. Therefore having medical experts rate the relevance of patient’s utterances does not necessarily cover what patients believe is relevant to them. In our results, the interpreter alone decides on the relevance of an utterance by patient and professional, with no attempt undertaken to clarify which information can be omitted and which must be kept.

The gap between content in language A versus language B may also arise from content that either needs not be translated or cannot be translated. We took this into account when we identified categories that might not need translation. Even though this choice of categories is arguable (e.g. the category ‘laughing’ not only refers to the visible act of laughing but also to jokes or ironic remarks), our decision not to include these categories lead to an underestimation of the loss of content in the process of translation.

In addition to simply not translating, interpreters also reduced the number of utterances by ‘shortening’, i.e., summarising what had been said by the HCP or the patient. On the one hand, shortening can lead to a more concise reflection of what was said. On the other hand, it can also cause problems because the repetition of certain content may indicate high relevance for the patient or the HCP. Translated utterances were also reduced as some patients spoke German during the consultations. As shown in example 3, the interpreter did not translate what the HCP said, as the patient responded immediately in German. One might argue that interpreters should only start translating when they are really needed. However, this only holds true when the patient has understood the question to which he responds directly, correctly. If this is not the case, his response may be understandable but nevertheless yield false information.

4.2. Limitations

Although the number of utterances analysed is well within the range of other publications, the number of interviews that were analysed in this paper is small. We must therefore be careful when generalising our findings. In an attempt to counterbalance selection bias, we covered a broad range of clinically relevant situations. However, a larger sample would certainly be useful. Another limitation relates to RIAS methodology: counting utterances is a reductionist means to describe the content of an interaction. A loss of data does not necessarily imply a serious risk of false diagnosis or maltreatment. However, we would argue that the decision to change the amount and the content of what was said should not be left to the interpreter; he should at least communicate that his translation is different from the original version of a series of utterances.

The selection of cases may not be representative for clinical interviews in general; this could limit the generalizability of our results.
4.3. Conclusion

Interpreters, healthcare providers, and patients should be cautioned that loss of information may result from incomplete translation from language A into language B. All participants need to be reminded regularly to follow guidelines of practice with interpreters. Such instructions exist in health services in many jurisdictions. Most such material advise healthcare providers to avoid technical language; give information in small amounts and in a clear and complete manner.

If this loss of information is due to the discrepancy between the number of utterances said and interpreters’ memory capacity, interpreters should be encouraged to interrupt lengthy statements by health care providers and patients to create sustainable working conditions promote complete translation.

Conflict of Interest

The authors declare that they have no competing interest. The study received funding by the Commission for Technology and Innovation, CTI N 11424.4 PFES-ES.

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