Exploring the translation process for multilingual implementation research studies: a collaborative autoethnography

Victoria Haldane,[1] Betty Peiyi Li,[1] Shiliang Ge,[2] Jason Zekun Huang,[1] Hongyu Huang,[1] Losang Sadutshang,[1] Zhitong Zhang,[1] Pande Pasang,[3] Jun Hu,[3,4] Xiaolin Wei[1]

[1]Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada
[2]Termerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada
[3]Shigatse Centre for Disease Control and Prevention, Shigatse, Samzhubze District, China
[4]Public Health Management, Shandong University of Traditional Chinese Medicine, Jinan, Shandong, China

Correspondence to
Dr Xiaolin Wei;
xiaolin.wei@utoronto.ca

ABSTRACT

Introduction In an increasingly globalised and interconnected world, evidence to evaluate complex interventions may be generated in multiple languages. However, despite its influence in shaping the evidence base, there is little literature explicitly connecting the translation process to the goals and processes of implementation research. This study aims to explore the processes and experience of an international implementation research team conducting a process evaluation of a complex intervention in Tibet Autonomous Region, China.

Methods This study uses a collaborative autoethnographic approach to explore the translation process from Chinese or Tibetan to English of key stakeholder interview transcripts. In this approach, multiple researchers and translators contributed their reflections, and conducted joint analysis through dialogue, reflection and with consideration of multiple perspectives. Seven researchers involved with the translation process contributed their perspectives through in-depth interviews or written reflections and jointly analysed the resulting data.

Results We describe the translation process, synthesise key challenges including developing a 'voice' and tone as a translator, conveying the depth of idioms across languages, and distance from the study context. We further offer lessons learnt including the importance of word banks with unified translations of words and phrases created iteratively during the translation process, the need to collaborate between translators and the introspective work necessary for translators to explore their positionality and reflexivity during the work. We then offer a summary of these learnings for other implementation research teams.

Conclusion Our findings emphasise that in order to ensure rigour in their work, implementation research teams using qualitative data should make concerted effort to consider both the translation process as well as its outcomes. Given the numerous multinational or multilingual implementation research studies using qualitative methods, there is a need for further consideration and reflection on the translation process.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ The work of translating from the language in which an intervention is implemented into English, the dominant language of academic production, influences knowledge production in global health.
⇒ Yet little is written about the translation process in implementation research and even fewer global health research efforts reflect on the role of the translator in the production of knowledge.

WHAT THIS STUDY ADDS

⇒ Translation is a process that includes developing a 'voice' as a translator, conveying depth of context, and often navigating distance from the implementation site despite having a shared language and/or culture.
⇒ The translation process can be improved by using iterative word banks, team building between translators, researchers and the implementation team, and encouraging introspection and reflexivity as an integral part of the translation process.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE AND/OR POLICY

⇒ Implementation research in global health must consider the ways in which qualitative data is produced by ensuring translation is a place for reflexivity and participation.
⇒ Attention to the translation process is a key step towards prioritising perspectives and experiences from marginalised groups and shifting the power balance towards meaningful sharing of knowledge across languages beyond English.

INTRODUCTION

Evidence implementation relies on robust primary data to guide decision making on the uptake of interventions to practice or policy. In an increasingly globalised and interconnected world, evidence to evaluate complex interventions is frequently generated in multiple languages. These languages may be then translated to a dominant language in the research setting to provide primary data for

analysis and knowledge translation activities. Commonly, English translation is conducted as either a first or subsequent step to ensure research outputs both reach a wider audience, as well as fit within the dominant academic publishing paradigm.[1]

However, despite its influence in shaping the evidence base, there is little literature explicitly connecting the translation process to the goals and processes of implementation research. There is a fulsome literature on translation in quantitative global health research, most notably the extensive exploration of survey design and validation across both written and spoken language.[2–4] Further, while much has been written on the conduct and analysis of qualitative research in translation, particularly from the nursing literature, there are fewer examples within the implementation research discourse exploring work between and across languages.[5] Many studies of the translation process discuss epistemological considerations underpinning the act of translation, yet the often-pragmatic approach best suited to answering implementation research questions warrants a focused exploration of conducting qualitative research in translation for this purpose.[6] Importantly, there is a need for greater and more nuanced description of the processes and experiences of translation from the perspective of implementation research teams undertaking this work; not only to describe processes, but also to shed greater light on the complexities and tensions inherent in this work.[7]

This study uses a collaborative autoethnographic approach to explore the processes and experience of an international implementation research team conducting a process evaluation of a complex intervention in China. Specifically, we describe the translation and transcription process of qualitative interviews conducted in both Mandarin and Tibetan language to English. In doing so, we offer practical lessons learnt for other teams conducting similar work.

Research setting

This work was a part of a larger randomised control trial in Shigatse prefecture, Tibet Autonomous Region (Tibet), China. The intervention aims to pilot and evaluate the effectiveness of a programme using electronic pill boxes ('e-monitors') to monitor and encourage people receiving tuberculosis (TB) treatment to take their medications. The intervention also uses a smartphone app (WeChat) to connect people taking TB medication and their family 'treatment supporters' with their healthcare providers. The overall aim is to improve treatment adherence among people newly diagnosed with pulmonary TB across five sites (four rural counties and one urban district). A full description of the trial intervention can be found in Wei et al.[8] The process evaluation of the trial uses an implementation research framework to understand what worked and why in the implementation of the intervention and to offer contextual framing for the interpretation of the trial results.

The process evaluation team included a Research Coordinator based in Canada who facilitated the study (VH); a Trial Coordinator based in China with extensive knowledge of the study setting, who coordinated the trial and conducted most of the interviews (ZZ); two bilingual Mandarin-English translators jointly based in China and Canada (BPL and JH); one bilingual Mandarin-English translator based in Canada (SG) and one bilingual Tibetan-English translator based in Canada (LS). The overall trial and process evaluation were led by a senior researcher who is a Chinese national with extensive research experience in China (XW), and two local senior field site leaders with extensive implementation experience in the setting (PP and JH).

To achieve the aims of the process evaluation, 61 interviews were carried out across study sites with policy makers, health workers, and persons affected by TB (persons living with TB and their family members) between April 2019 and August 2021. These interviews were conducted in person either in Mandarin, or in Tibetan through an interpreter. Interviews were consented, conducted, recorded and data were stored in compliance with ethical review board requirements to uphold the confidentiality of participants. Full qualitative study procedures can be found in Haldane et al.[9] The research setting proved challenging for data collection as the mountainous terrain and long distance between villages required hours of transit time to conduct one or two interviews. Further, given the high altitude, team members conducting interviews experienced hypoxia at times with symptoms such as dizziness and headache among others, which made interviewing particularly challenging. However, participants were enthusiastic to be interviewed, welcomed the research team and candidly shared about their experiences. These barriers and facilitators to the interview process ultimately shaped the quality of data collected, however overall interviews were of good quality, meaning that audio quality of the recordings allowed for clear verbatim transcription, and the content met the objectives of the interview guide and study purposes.

METHODS

We adopted a collaborative autoethnographic approach to explore the process and synthesise lessons learnt from the translation work undertaken in this implementation research study. In autoethnographic studies the researcher's experience offers primary data for analysis and interpreting the sociocultural meanings of events.[10 11] In a collaborative autoethnography, multiple people involved in a process or phenomenon contribute their reflections and experiences, conduct joint analysis and engage in dialogue, reflection, and synthesis of the material.[7 12] In doing so, collaborative autoethnography offers an opportunity for sense-making of collective experiences by connecting narratives to the social context.[13] This sense-making through collective exploration of challenges, solutions and processes of knowledge production is

particularly important when the space in which research happens spans borders, languages and contexts.[14]

The team was composed of seven members directly involved with the translation process. All members of the translation team embraced the opportunity to discuss their experiences translating the interviews. Translation team members were based in both Canada and China, had university education, and were affiliated with the project lead's (XW) research team. Despite sharing a common language with the data, and in some cases being based in China or with experience working in other Chinese-speaking contexts, translators were not familiar with Shigatse, Tibet. LS, a Tibetan translator born and raised in exile, described engaging with the audio recordings as a privilege and way to connect with his culture despite the distance. The Trial Coordinator (ZZ) was instrumental in overcoming this distance and navigating local nuance; however, we also recognise it is challenging to understand the breadth and reality of a place without multiple perspectives and lived experiences. Thus, as a group we navigated our own intersectionalities and 'Otherness', of being outsiders, to the context with limited inroads to greater understanding given the workloads and capacities of the local team. This Otherness was amplified and complicated by the act of translation, which as Bassett describes, 'the translator has to steer between extremes, between staying so close to the source that the new readership is alienated…by that which is perceived to be Other and, at the opposite extreme, leaving the source so far behind in an attempt to satisfy the needs of that new readership'.[15] The team needed to both navigate the Otherness inherent in translation, as well as that felt in their identities throughout the process. A further reflection on the study can be found in online supplemental file 1, further reflections from the team can be found in online supplemental file 2.

To gather information on the translation process, VH invited the other six team members actively involved in the qualitative research and translation work to participate in a 1-hour interview to explore their perceptions and experiences with the work, or to provide a free form written response to the prompt 'please describe the qualitative research and translation process from your perspective in your own words—including any specific examples of challenges or strengths of our process.' Participants were recruited between August and October of 2021, after the interviews and translation work had occurred. All team members participated, five participated in interviews and one provided a lengthy written reply. Team members were invited to participate as coauthors and were provided written details on the study including details on confidentiality and security of their responses. Interviews were held via videoconference and team members were explained the study aims and procedures at the start of the interview. Participants were then provided additional verbal consent. Interviews were conducted by VH, a PhD candidate who is experienced in collaborative autoethnographic methods and who has acted as the process

evaluation Research Coordinator since 2018, thus having an established rapport with team members.

Interviews were transcribed in full and anonymised. Based on these transcripts, VH curated an overarching 'master narrative' of the translation process. Data interpretation and curation was reviewed in dialogue with BPL and SG. This included active discussion of the foreign gaze and interpretation of meaning, in the condensation, categorisation and creation of the cohesive master narrative from the interviews.[16] All team members reviewed and provided candid feedback that added depth of experience to the curated master narrative. Once the master narrative was finalised, two team members (VH and BPL) analysed the data thematically. The team members employed an inductive coding process to the master narrative and agreed on themes that conveyed challenges when undertaking implementation research in translation.[17] These themes were agreed on by all authors in an iterative process.[18] We then synthesised our collective lessons learnt into key takeaways for other multi-national, multi-lingual implementation research teams. This process relied on reflection among research team members during multiple meetings to identify and refine the principles.

Patients and the public were not involved in the design, recruitment, conduct or dissemination of the study.

RESULTS

The programme being implemented is a partnership between the University of Toronto research team and local Tibet Centre for Disease Control (CDC) stakeholders. Thus, the research team was jointly based in China and Canada to support implementation research efforts. At the start of the project training sessions were held on site in Tibet, and in Toronto, to onboard research team members, including interviewers and translators. We also defined a process to guide our research activities to ensure coordination between activities across sites. We offer an overview of our transcription and translation process in figure 1.

Data collection, transcription and quality check

Interviews to inform the process evaluation were conducted in Mandarin and Tibetan. Mandarin interviews were conducted with health workers and policymakers. Tibetan interviews were conducted with patients. An interpreter translated questions posed in Mandarin by the trial coordinator or local research team. The interpreter was fluent in both languages and familiar with the context and the project. Interviews were recorded in full, and members of the research team affiliated with the study site listened to the recordings and transcribed them verbatim into Chinese text. Transcripts were deidentified and assigned participant numbers at this stage. To ensure quality and accuracy, a subset of these Chinese transcripts were chosen to ensure representation of different interviews, interview sites and interview participants. These
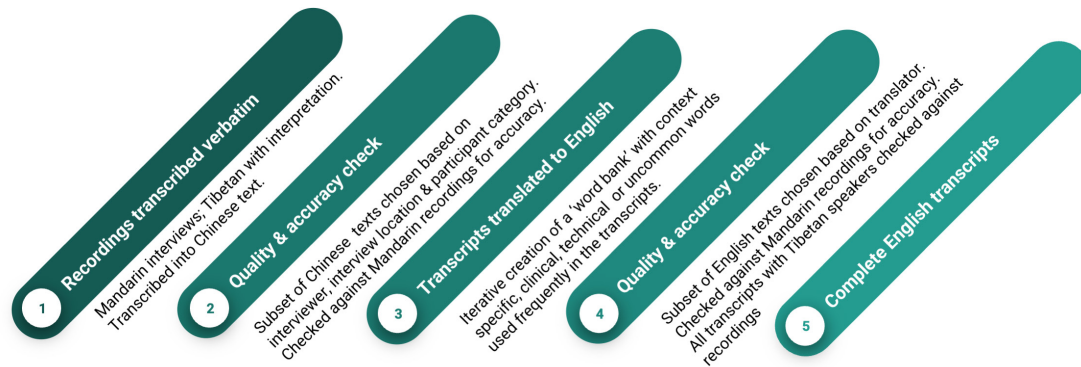
Figure 1 Translation process from Mandarin to English.

were then checked against the recordings for accuracy by a research team member. While no major discrepancies were found, the contingency plan in case of major or multiple errors was to conduct a full check of transcripts and retranslate and rereview. Having texts in Chinese was important to ensure that local team members could fully engage with the data from the project. However, given the joint nature of the programme and wider knowledge translation needs, these Chinese transcripts needed to be translated into English.

Translation to English

The Chinese transcripts were then sent to the Research Coordinator in Toronto (VH) who assigned them at random to the four members of the translation team. The translation team in Canada was composed of trainees who are bilingual in English and Mandarin. Translators were selected based on an interview process to determine their skillset, their familiarity with Chinese or Tibetan and past translation experience. Translators were given documents to familiarise them with the study and were briefed by both the local Trial Coordinator (ZZ) and the Research Coordinator (VH). Briefings included information on the study, the study context, as well as expectations and approaches to translating the documents such as ensuring completeness of meaning rather than word-for-word translation. After receiving the Chinese transcript file, they then translated these texts from Chinese into English. This process involved the creation of a 'word bank' to ensure that the translation team had a shared understanding of uncommon or context-specific words. This word bank included words identified a priori by ZZ, the Trial Coordinator, as being likely to be misinterpreted by those not familiar with the setting, context or clinical aspects of the interviews. It then grew to include words requiring clarification by translation team members as they encountered unfamiliar or professional/clinical terms in the Chinese transcripts.

Translators described that it took some time to develop their approach to translation. In general, once settled into the work, translators described a similar process. Translation would begin with reading through the entire manuscript to get a sense of the content of the interview, both the questions posed and the answers provided. This process included understanding the target interviewee given that different interview guides were used for different categories of participant (eg, patients, family treatment supporters and village/township/county hospital doctors all had unique interview guides). The translators would then go phrase by phrase to translate the words while retaining the same meaning across the phrase. This process was at times challenging as translators described the tensions that arose between accuracy, their interpretation of the text, and ensuring that they were not introducing bias through their translation or interpretation. Translators described how after conducting a first round of translation they would reread the transcript for grammar and spelling, but also to ensure that the text was coherent and that the English translation accurately reflected the Chinese text. This included understanding the implicit meaning in the Chinese text, which would need to be made explicit in the English translation, otherwise the meaning could not be fully understood by reading a direct translation from Chinese to English. Importantly, this included a need to consider the 'bigger picture' of the sentence or conversation to convey the correct contextual use of the word from Chinese to English.

Quality and accuracy check

A subset of the English transcripts from each translator were checked against recordings for accuracy by ZZ, who is fluent in Mandarin and English and who conducted most of the interviews. All English transcripts in which Tibetan interpretation was required were checked in full against the original recording by a research team member in Toronto bilingual in English and Tibetan language (LS) to ensure accuracy. This process involved the team member listening to the recording in Tibetan while reading the manuscript in English and making corrective notes and comments to elaborate on the text. Here, it should be noted that there were recurrent Mandarin words present in the conversations in Tibetan, and so the researcher had to rely on the translations from Mandarin to English to discern the co-opted terms.

The process generally occurred in 'batches' given the iterative nature of qualitative research, where initial interviews are reviewed and analysed to inform the content

Table 1 Key challenges and lessons learnt in translation implementation research

Theme	Exemplary quote
Challenges	
Developing your voice and tone as a translator	"The first 10 or 15 transcripts I was doing, I was still trying to figure out how to translate, I was developing my style in translating." (P02)
Conveying the depth of idioms	"Sometimes I feel like maybe there are certain words that could have been better translated, but I couldn't find a specific way to express them…That's one of the main challenges that I encountered." (P01)
Distance from the study context	"I still remember my first transcript, it was brutal… because I didn't know if I could translate it well… and then we accumulate more experience, it became much easier to translate. And then you could start analysing the stories behind the transcript [because] there's a story that comes together. You know the different levels of work from the clinics to the township hospitals to the CDC. Gradually the picture started to come together nicely." (P03)
Lessons learnt	
Iterative word banks increase accuracy and understanding	"The unified word translation document helped it to be consistent between translations." (P04)
Team building between translators can strengthen the translation process	"If you're able to connect with other translators, I think it would be very helpful…And to ask how they would approach the same problem." (P01)
Introspection and reflexivity are important towards translator engagement and sense-making	"The conditions in Tibet were reminiscent of the stories of my parents growing up in kind of rural China…Like for me, in a way, it also kind of brought a different deeper sense of connection [to the text)." (P02)

and direction of subsequent interviews, and to determine if saturation has been met insofar as subsequent interviews offer no new information.

Key challenges and lessons learned

We identified key challenges and lessons learnt in translating qualitative data for use in implementation evaluation (table 1).

Key challenges: developing a voice, conveying idioms, distance

The team described several challenges during the translation process. First, there was a learning process around developing a 'voice' and tone as a translator. Translators described an iterative process of translating and reviewing, and how particularly with the first set of transcripts there was a clear learning curve as they engaged with the content and texts. One translator described the process,

It wasn't until I got to the first ten or fifteen, I was like okay, this is my style. And the ones I translated afterwards have a very distinct kind of more objective style, because I think with the first two, I was almost struggling with wanting to translate word-for-word but I also know that [doing so] did not click as well… Like it is a skill that you're developing, you're still finding out how to do in a very standardised same way. It's almost like you need a little bit of trial period, almost needing to hone that skill a bit more. And then you can produce your best work from that onwards. (P02)

One translator expanded on the interpretative aspect of translating tone and the process of developing translation skills to express this well, explaining:

Even though we were told to transcribe it word-for-word it's just your own interpretation of how the words come together. And even how you choose to write how those words come together can actually influence what that sentence ends up meaning in a way… As I translated more, it became easier for me, and I knew like which steps I should take before. I knew the whole process of how, what is the best way to approach this. I tried out several methods. And I finally, like found the best one I should go with, and I just stick to that one for most of the other transcripts. (P01)

A second challenge during the translation process was correct word choice, conveying the depth of Chinese idioms and capturing the nuance of these expressions. Translators described the challenges in word choice when translating. As one translator described:

One word in Chinese doesn't have just one meaning, it can have multiple meanings, but the true meaning is greatly affected by the other words around it. The phrasing is at times more important that the solitary word itself. The idea of a word for word direct translation approach doesn't really apply as well in that case because of this. Like anything else the translational process depends on the context, on the words around it to better elucidate the meaning. (P03)

Translators described how participants would use idioms to possibly signal their emotions in answering questions. Often these idioms were difficult to convey in English with the same emotional nuance and contextual understanding of the emotions and experiences they signal towards. As one translator summed up 'sometimes in Chinese when they converse with each other they tend to use something a little bit more abstract,' (P03). Another translator explained how this aspect of the translation process was challenging:

Even just looking at the transcriptions I feel there were undertones of maybe emotions that when I translate to English it doesn't seem to carry as much weight. And in Chinese, we have these groups of four words which they almost rhyme and then it just gives the technical [phrase] a lyrical feel to it. But when I translate it word for word, it never kind of quite comes across…and we do try to get it across, but you always carry a personal bias in how you choose to write it. (P02)

A third translator described how there were differences across transcripts in the expressions used given that our study population comprised healthcare providers, and a variety of patients and their family members. The translator highlighted that 'Some people's word choice is quite simple, while others are more poetic,' (P01).

A related challenge was the difficulty in conveying the discrepancy between some commonly used phrases in Chinese and their literal translations in English, with the latter coming out as more emotionally charged. One translator offered an example, describing 'A lot of Chinese people would say 'I don't think so' if they're arguing [a point] but they're really just saying 'maybe we should consider other ideas.' But you know, in English 'I don't think so' it's a stronger expression [in this situation],' (P03).

When considering the Tibetan interviews, the translator reflected on how not only words, but also silences can hold meaning, describing:

I feel like the formalized format of the interviews and the data compilation and conversion process sometimes overlooked or failed to recognize the nuances in the interviewee's response. There was hesitancy heard before answering some questions, however, these could not be completely reflected in the transcript because they were sometimes long pauses, (P05).

The research coordinator reflected how the translation process can try to manage the use of idiom and differences in phrases saying:

There's so much layer to these four-character Chinese sayings that doesn't come across in English. There's a whole tapestry of meaning that you feel is being lost. I think that's a limitation maybe with translating to English because Chinese uses so much metaphor and imagery, like, what can you do? I think that the best we can do is expand as much as possible on the meaning through notes or in discussions and be transparent where we've had more personal interpretation in the text. This holds true where perhaps English readers may read more tone into a text than is there, we can make notes about where phrases may be more or less emotional, (P07).

In the interviews conducted in Tibetan, a related challenge was the use of different dialects. While the researchers verifying the accuracy of the translations was able to understand these dialects, this too involved a learning curve, particularly when different words were used interchangeably across the dialects. For instance, patients would interchangeably use words for 'food' or 'child' in the Tsang dialect of Shigatse with the Ü dialect's terms for the same terms.[19]

Finally, the team based in Canada described challenges given their distance from the study context. This manifested as challenges with word choice, understanding how concepts related to each other, and the experience, research and learning needed to gain an understanding of the context. Regarding word choice, a specific challenge was how to romanise place names that at times used the Chinese pinyin and at other times used the Tibetan transliteration, as well as navigating the implication of these choices in the study context. One translator described how they managed word choice considerations and the work to supplement their understanding:

If I really don't have the word for those I usually go to the dictionaries. And you know, often I don't find the answer in the dictionaries. For example, when they're referring to their own group within the CDC or within the township hospital, they usually just omit the names or omit the subject. So, who are they talking about? Sometimes translating you're like, I should try to research more, (P03).

The researcher verifying the Tibetan interviews reflected on the nuance of his linguistic and cultural connection saying:

You felt like you were studying something that you were familiar with, but at the same time, you could sense that there was this unfamiliarity…you're able to really appreciate how you can connect with the patients through these interviews, not only because of the shared language but also because of the shared cultural values that you could instinctively sense from the conversations. However, there were indeed moments where differences became evident—this was especially the case when patients included borrowed terms from Mandarin. But then, when you reflect on the conversations during the interviews, you realise that these are experiences that are not easily accessible, and it's a privilege to be able to hear them share their experiences in Tibetan, (P05).

This complements a reflection from the Research Coordinator on interpreting and analysing the data considering the foreign gaze, explaining that:

This is the fundamental issue with being a researcher who doesn't speak the language, that we don't have the ability to access a more nuanced side of the conversation and I don't try and go there alone with the text. I'm not going to just presume to understand or access these experiences that people trust us with when they are interviewed. I'd rather acknowledge my position, my foreign gaze, and work more closely with someone closer to the context, who can dig in a bit more, than try myself to interpret and overstep. I want to co-create an understanding of the situation so that I'm not assuming things I can't assume, (P07).

Some team members reflected on the importance of the connection with the Trial Coordinator who had extensive knowledge of the implementation site. The Trial Coordinator in turn explained the importance of his connections and relationships at the local level to elaborate on the context.

Lessons learnt: word banks, team building, introspection and reflexivity

The team also identified key lessons learnt that may benefit others undertaking similar work. First, the team emphasised the importance of creating unified word banks of jargon or technical/clinical words and phrases commonly used in the interviews. These word banks should offer standard 'unified' translations of common words be shared between the translation and implementation team and regularly updated through an iterative process during translation. The study team had an extensive word bank first established by the Trial Coordinator and updated by translation team members. One translator described how:

> The document on unified words was very helpful, especially when I was first starting the translation…because there's some specific nouns like the 'e-monitor box' that if I didn't receive the [unified word] list I would have translated it in a different way. It's helpful to know how other people are translating and follow it, (P01).

Another translator explained how having this document accessible to all team members was important because as questions or words were added by translators, the Trial Coordinator's replies were visible and enabled transcripts to be updated.

Another lesson emphasised by many on the team was the importance of collaborating between translators. This was in some ways a missed opportunity in the current work. Although the team had an introduction to the work, the shared unified word bank, and transcripts were checked for accuracy after their completion, there was room for greater connection and checking between team members. This team building effort can help with increasing confidence in decision making among translators regarding word choice, as well as creates a space for shared solution-finding during difficulties in the process. Further, such a team approach would allow the group to develop a more consistent style or 'voice' that may help reduce bias or inconsistencies during the process. As one translator described:

> I think looking back, it would have been helpful to have a meeting and gone through a transcription together…because I think I was always like 'Am I doing this right? What are other people doing' and it would have been nice to develop a team approach and then go off into your individual work…I think it helps to have the [Trial Coordinator], but it's good to have [a translator] there to second check your work, (P02).

Another translator underscored this need for connection saying:

> If you're unsure about how to translate something, where you have difficulty in the process…maybe together you can find a better solution instead of just trying to find the solution on your own, (P01).

The Research Coordinator explained how:

> It was challenging because there were a lot of moving parts, data coming in at different times, different availabilities and I think sometimes translation is seen as a more technical skill, when really it is a skill that needs teamwork and connection. This was a lesson learned about how conducting this type of research also needs attention to the translation team and their experience, (P07).

Another translator explained how sharing protocols, interview notes from the field, emerging findings and other materials associated with the overall project and how the data was collected could further strengthen translation by providing greater contextual understanding and help identify words for the unified word bank.

Finally, team members highlighted the importance of introspection and reflexivity towards sense-making when interpreting the texts. Translators discussed how the work allowed them to connect to aspects of their own culture, while also reflecting on the experience of others. This was important to their ongoing engagement in the work. As one translator described:

> I guess being in Canada you actually don't get as many exposures to Chinese language as much, so for me personally was a good kind of learning opportunity…It kind of helps me keep engaged with my own language and culture, which is really nice, (P02).

Another described how the process involved empathy to the participants situation, explaining that:

> Every time I translate, I just read through, and I sort of know what the interviewees they're going through. I think it's very just fascinating for me to learn about their experiences and the entire system of the medical environment, how it's working in Tibet, or can it be applied to other rural areas in China, (P04).

Another reflected on the ways in which a translator's 'background, upbringing, as well as their interpretation of the text, as well as the whole translation process, created a complex macrocosm of interconnected microcosms' (P03) that shaped the act of translating.

The translator verifying the Tibetan interviews, reflected how few studies there are exploring the Tibetan experience with TB in their native language and the importance of studies that connect to these experiences. The translator noted the importance of interacting with the patients in their own language and suggested that this can help the study, to some degree, pivot away from 'Othering' the patients and provide a more authentic understanding of their circumstances. The translator said:

> By communicating through their Indigenous language, Tibetan, the conveyance of true, and whole perspectives, is enabled, and this in turn can help in our endeavor towards establishing a database that can genuinely be representative of the patient population, (P05).

However, team members reflected on inherent challenges due to distance from the study site and for some, limited insights into the culture that may limit the

Box 1 Practical approaches for teams conducting work in translation

⇒ Allow time for translators to develop their voice and tone.
⇒ Use notes and discussion to better understand 'untranslatable' elements.
⇒ Ensure a clear connection to the implementation team from the start to clarify contextual elements.
⇒ Create an 'word bank' of unified translated words or phrases as a living document accessible to the translation team.
⇒ Build connections across the translation team for cross-checking and problem-solving.
⇒ Give space for the translation team to work introspectively and explore their positionality and reflexivity during the work.

completeness of any translation. These reflections also engaged with an exploration of our 'Otherness' when engaging with the text and the challenges in rendering unfamiliar concepts, forms, and language into a different cultural context.[15]

DISCUSSION

This study adopted a collaborative autoethnographic approach to explore the translation process of qualitative primary data collected through participant interviews as part of an implementation research study. Our findings offer important insights for similar multi-lingual or international research and implementation teams evaluating programmes or interventions. We highlight several challenges in this work including the process of developing voice and tone in translation; limitations in conveying the depth of idiomatic expressions; and issues arising from translators' unfamiliarity with the implementation site. We also offer key lessons learnt including the use of word banks with unified translation to increase accuracy; the need to build a translation team for cross-checking and problem-solving; and the need for translators to be introspective and reflexive as part of the sense-making process. These practical and actionable findings can be adopted by implementation research teams to strengthen their research efforts when requiring translation (box 1).

Importantly, our findings emphasise that to ensure rigour in their work, implementation research teams using qualitative data should make concerted effort to consider both the translation process as well as its outcomes. Translation processes can be conceptualised using established approaches such as the TRAPD approach of translation, review, adjudication, pretest and documentation used for survey translation, or other similar approaches that encourage researchers to think systematically about translation.[20] Without such a rigourous translation process, depth may be lost from the translated outputs used for qualitative analysis. Conceptually this interrogation of process aligns with the goals of implementation research, but instead asks the research team to reflect inwards on its own processes.[21] Translation is commonly seen only as a procedural step,

necessary to ensure that research enters English, the lingua franca of modern academic knowledge dissemination.[1] Our findings show that the translation process itself is a microcosm of tensions, negotiation, reflection and sense-making that both shapes and is shaped by the data itself. This is an area with great potential for reflective implementation research and an important place for attention and exploration to ensure accurate representation of qualitative data. Further it is an important jumping off point from where emerging discourses can challenge power asymmetries in the global production of knowledge and an opportunity to avoid epistemic injustice by valuing the words of those omitted from the dominant academic discourse.[22 23] As efforts to decolonise implementation research (and health research more broadly) progress, a deeper understanding and attention to the translation process will be key to dismantling hegemonic language structures, prioritising perspectives and experiences from marginalised groups, and shifting the power balance towards meaningful sharing of knowledge across languages beyond English.[24]

A strength of this work is the collaborative autoethnographic approach, which allows for description of a collective experience, interrogation of a process and also highlights the narratives of those conducting the translation work. Autoethnographic studies, in which authors are the subject of study, as well as actively shaping analysis, are crucial to more deeply exploring the experiences of research teams and unravelling the many ways in which research in translation is done.[7] However, our study has some limitations, mostly those inherent in the collaborative autoethnography process, including the potential for desirability bias shaping how participants responded to the questions posed. This was mitigated by the strong and collegial rapport between the co-authors and the interviewer allowing for free and frank sharing of experiences. Another limitation is that our work highlights the process of translating from Mandarin, with less opportunity to explore the written translation of Tibetan text given the use of an interpreter for these interviews. Future studies, including those adopting autoethnographic methods such as this, should explore the translation process between other languages across various teams to enhance the evidence base on using translation for implementation research.

CONCLUSION

Given the numerous multinational or multilingual implementation research studies using qualitative methods, there is a need for further consideration and reflection on the translation process. This is a crucial step that both shapes and is shaped by the data. Our study underscores the importance of capacity building the translation team to ensure more accurate and nuanced data for analysis and knowledge translation.

Map disclaimer The inclusion of any map (including the depiction of any boundaries therein), or of any geographic or locational reference, does not imply the expression of any opinion whatsoever on the part of BMJ concerning the legal status of any country, territory, jurisdiction or area or of its authorities. Any such expression remains solely that of the relevant source and is not endorsed by BMJ. Maps and geographic or locational references are provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval Ethical approval for the study was obtained from the Office of Research Ethics at the University of Toronto (Ref: 36569) and the Ethics Review Committee of the Xizang Centre for Disease Control and Prevention (Ref: 006).

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as online supplemental information. N/A.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Author note The reflexivity statement for this paper is linked as an online supplemental file 1.

REFERENCES

1 Crystal D. *English as a global language*. 2nd ed. Cambridge: Cambridge University Press, 2003.
2 Vujcich D, Roberts M, Gu Z, *et al*. Translating best practice into real practice: methods, results and lessons from a project to translate an English sexual health survey into four Asian languages. *PLoS One* 2021;16:e0261074.
3 Hanna L, Hunt S, Bhopal RS. Cross-Cultural adaptation of a tobacco questionnaire for Punjabi, Cantonese, Urdu and Sylheti speakers: qualitative research for better clinical practice, cessation services and research. *J Epidemiol Community Health* 2006;60:1034–9.
4 Forsyth BH, Kudela MS, Levin K, *et al*. Methods for translating an English-Language survey questionnaire on tobacco use into mandarin, Cantonese, Korean, and Vietnamese. *Field methods* 2007;19:264–83.
5 Chen H-Y, Boore JR. Translation and back-translation in qualitative nursing research: methodological review. *J Clin Nurs* 2010;19:234–9.
6 van Nes F, Abma T, Jonsson H, *et al*. Language differences in qualitative research: is meaning lost in translation? *Eur J Ageing* 2010;7:313–6.
7 Ratnapalan S, Haldane V. We go farther together: practical steps towards conducting a collaborative autoethnographic study. *JBI Evid Implement* 2021. doi:10.1097/XEB.0000000000000302. [Epub ahead of print: 16 Nov 2021].
8 Wei X, Hicks JP, Pasang P, *et al*. Protocol for a randomised controlled trial to evaluate the effectiveness of improving tuberculosis patients' treatment adherence via electronic monitors and an app versus usual care in Tibet. *Trials* 2019;20.
9 Haldane V, Zhang Z, Ma Q, *et al*. A qualitative study of perspectives on access to tuberculosis health services in Xigaze, China. *Infect Dis Poverty* 2021;10:120.
10 Chang H. Autoethnography in health research: growing pains? *Qual Health Res* 2016;26:443–51.
11 Ellis C, Adams T, Bochner A. Autoethnography: an overview. *Forum Qualit Resea* 2011;12:10.
12 Blalock AE, Akehi M. Collaborative Autoethnography as a pathway for transformative learning. *J Transfor Educa* 2018;16:89–107.
13 Representation HN. legitimation, and autoethnography: an autoethnographic writing story. *Inter J Qualit Metho* 2003;2:18–28.
14 Oliver K, Kothari A, Mays N. The dark side of coproduction: do the costs outweigh the benefits for health research? *Health Res Policy Syst* 2019;17:33.
15 Translation BS. Gender and otherness. *Perspectives* 2005;13:83–90.
16 Haldane V, Ratnapalan S, Perera N, *et al*. Codevelopment of COVID-19 infection prevention and control guidelines in lower-middle-income countries: the 'SPRINT' principles. *BMJ Glob Health* 2021;6:e006406.
17 Braun V, Clarke V, Hayfield N. *Handbook of research methods in health social sciences*. Singapore: Springer, 2019: 843–60.
18 Creswell JW, Miller DL. Determining validity in qualitative inquiry. *Theory Pract* 2000;39:124–30.
19 Bielmeier R. *Comparative dictionary of Tibetan Dialects (CDTD)*. Berlin: DeGruyter Mouton, 2018.
20 Mohler P, Dorer B, de Jong J. Translation: Overview. In: Centre SR, ed. *Guidelines for best practice in cross-cultural surveys*. Ann Arbor: Survey Research Centre, Institute for Social Research, 2016.
21 Bauer MS, Kirchner J. Implementation science: what is it and why should I care? *Psychiatry Res* 2020;283:112376.
22 Abimbola S, Asthana S, Montenegro C, *et al*. Addressing power asymmetries in global health: imperatives in the wake of the COVID-19 pandemic. *PLoS Med* 2021;18:e1003604.
23 Bhakuni H, Abimbola S. Epistemic injustice in academic global health. *Lancet Glob Health* 2021;9:e1465:70–1470.
24 The Lancet Global Health. Closing the door on parachutes and parasites. *Lancet Glob Health* 2018;6:e593.