

Title

Linguistic diversity and interpretation in health and social services interventions: A systematic review of reviews

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Abstract: This systematic review of reviews aimed to identify the factors that can help health and social care providers maintain the quality of an intervention when using interpreters. A keyword search was done in nine bibliographical databases in 2015 and updated in 2017. Qualitative and quantitative reviews were selected if they included studies of health and social service interventions involving health and social care providers or interpreters, in a language barrier context. Among the 1632 references identified, 24 met the inclusion criteria. Two themes were

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identified and developed to answer the review questions: balancing access to an interpreter and the service user preferences, and factors that influence transmission of information. Implications of these results for practice and future research are discussed.

Keywords: interpreter, interpretation quality, language barrier, systematic review

1| INTRODUCTION

Populations with little or no proficiency in the language of health and social services institutions are at higher risk of experiencing a deterioration in their health over time (Pottie et al., 2008). Language divergence, or absence of a common language, is one of the most important obstacles to accessing health care (Rocque & Leanza, 2015). In these situations, the presence of an interpreter is not a luxury, but rather a common adaptation to societal diversification. Further, a recent study shows that an increase in interpreting services is associated with a decrease in readmission rates, along with shorter stays for these service users (Beagley, Hlavac, & Zucchi, 2020). It is therefore increasingly common for health and social care providers to hire interpreters.

The research on interpreting distinguishes two types of interpreters: trained and untrained. Trained interpreters possess several skills that exceed simple fluency in the language of interpretation. They need ample knowledge of the terminology in intervention, strong communication skills, the ability to situate information in an intercultural context, and an understanding of the functioning of the institution where they work (Dubus & LeBoeuf, 2019). They must also be well versed in the ethical principles of the profession and be able to make informed decisions based on these principles. These skills have been theorized (e.g., Kelly (2005)) and are applied in university training programs, yet interpreters' training varies widely.

An untrained interpreter may be a colleague of the health and social care provider or a friend or family member of the service user. They are characterized by bilingualism but have not studied interpretation. Although the use of trained interpreters is generally recommended for better

healthcare outcomes (Karliner et al.,2007), Pollock (2021) notes that the use of a family or network member as an interpreter is a question of individual choice that must be respected.

Hsieh (2006) argues that each of these types of interpreters presents a different interpreting style and proposes orienting research toward those styles. Styles vary with the type of interpreter, but also with the communication strategies of the other speakers involved (Hsieh, 2006). It is therefore possible to improve interpreted communication by tailoring the recommendations to the type of interpreter. Thus, this review answers the following questions: Which factors should health and social care providers weigh when choosing one type of interpreter over another? Once this choice is made, what issues must health and social care providers consider surrounding the transmission of information?

2| METHODS

An initial exploration established that the amount of existing literature reviews was sufficient to initiate a review of reviews. The method used to undertake this review was based on the standards for systematic reviews in health and social sciences (Martin, Renaud, & Dagenais, 2013), and reporting conforms with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2009).

2.1| Data sources

Research was performed by professional librarians between August and September 2015 and updated on June 27, 2017. The following databases were searched: Embase (OVID: 1974 - 2015), PsycInfo (OVID: 1967 –2015), CINAHL plus (EBSCO: 1937 –2015), Medline (OVID: 1946 –2015), Social services abstract (Proquest: 1979 –2015), Social work abstract (OVID: 1968 –2015),

Dissertation and theses (Proquest: 1861 –2015), Francis (EBSCO: 1984 –2015), and Web of science (Thomson Reuters: 1945 –2015). The update was performed in Embase, PsycInfo, CINAHL plus, and Medline, given that only one thesis and no original literature reviews were identified through the other databases.

The following concepts were used and translated in each database by using free-text terms and controlled vocabulary: interpretation, including any kind of interpreters and interpretation services; Communication barriers, including linguistic abilities or barriers; health and social services, including services, professionals and settings and systematic reviews, or reviews with systematic method or scoping review, and meta-analysis. Full search strategy for PsycInfo is presented in Appendix S1. No date or language restrictions were applied. Additional searches were performed in the Cochrane and Campbell Library, and bibliographies of selected reviews were screened. From the 1632 records identified, after duplicate removal, 1246 distinct references were identified for selection.

2.2| Study selection

Two reviewers selected studies independently, first based on the titles and abstracts, which led to the exclusion of 1111 records, and second, based on the full text of the remaining 135 references. Disagreements were resolved by discussion. The intervention of a third reviewer was not necessary. Figure 1 summarizes the selection process.

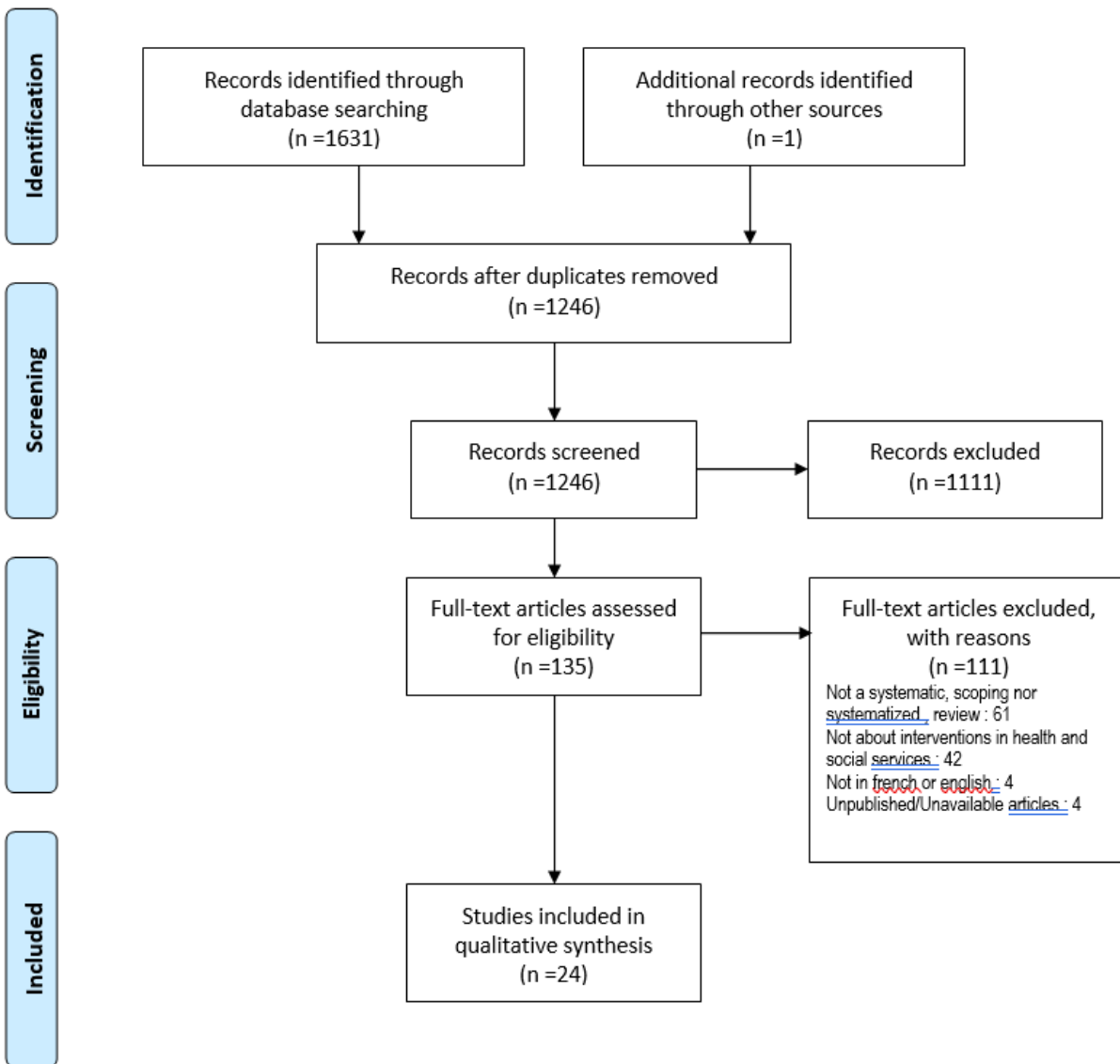


Figure 1. PRISMA Flow Diagram

2.2.1 | Inclusion and exclusion criteria

Literature reviews were selected if they included health or social services interventions in the context of language barriers and involving interpreters (regardless of the interpretation modality used).

Reviews were excluded if they did not include data about interventions in health or social services; were about interpretation in a judiciary or conference context, interventions for deaf people, the management or organization of interpretation services, or the academic education or training of interpreters only; or were in a language other than French or English, due to translation constraints.

2.3| Analysis

2.3.1| Data extraction

A structured form was designed to record the following information: Name of author(s), year and country of publication, sources of funding, method, primary and secondary objective of the review, design, population, interventions, outcomes, and settings of included studies. The extraction via this form was tested on four studies and discussed between reviewers in order to establish a common understanding and a strong cohesion in their approach. Tests did not lead to any modification of the form. Data extraction of all the selected reviews was done by two reviewers independently. Their results were compared to ensure completeness.

2.3.2| Quality assessment

Quality assessment was performed using the Critical Appraisal Skills Program - Systematic Review Checklist (CASP, 2013), by two reviewers independently. Disagreements were resolved by discussion. No studies were excluded based on quality, but limitations of each study were identified.

2.3.3| Data synthesis

To carry out the narrative synthesis, a thematic analysis was done (Paillé & Mucchielli, 2013). One team member identified common themes among the studies and reported the frequency with which these themes were addressed. A second team member read-back to ensure that no item was missed. At the end of the synthesis, two major themes were identified.

3| FINDINGS

3.1| Included reviews

The review included 24 articles. Sixteen derived from the initial research and eight from the update done in 2017. Most of them were systematic reviews (n = 16), others were scoping reviews (n = 2) or systematized reviews (n = 4). Grant and Booth (2009) maintain that a scoping review, “provides a preliminary assessment of the potential size and scope of available research literature. It aims to identify the nature and extent of research evidence (usually including ongoing research)”, whereas systematized reviews, “attempt to include one or more elements of the systematic review process while stopping short of claiming that the resultant output is a systematic review. They may identify themselves parenthetically as a systematic review”.

Appendix 2 presents the characteristics and limitations of the reviews included. The limitations of these reviews are also elaborated in the discussion section.

Results are organized according to two themes, each of which corresponds to one of the review questions. The first refers to the main factors that health and social care providers must consider when choosing an interpreter: access to an interpreter and service user preferences. The second

refers to issues related to transmission of information depending on the choices made based on the two previous factors.

3.2 | Balancing access to an interpreter and service user preferences

The review by Karliner and colleagues (2007) shows that trained interpreters are associated with better care than untrained interpreters. However, finding a trained interpreter is not always possible (Rocque & Leanza, 2015). It may be difficult to locate an interpreter with experience in the specific area of intervention (e.g., mental health or oncology), and who is fluent in the patient's preferred language or dialect. Studies demonstrate that some service users even experience difficulties finding an untrained interpreter in their family or network (Alhomoud et al., 2013; Farooq, Kingston, & Regan, 2015; Wilson et al., 2012; Zeh, 2013). Patients are thus responsible for filling a gap in the healthcare system, which creates undesirable delays in healthcare services (Alam, Speed, & Beaver, 2012).

Generally, patients prefer trained to untrained interpreters (Azarmina & Wallace, 2005; Karliner et al., 2007; Rocque & Leanza, 2015; Zeh, 2013). For example, service users are more satisfied with interventions done by trained interpreters than those in which friends or family members act as interpreters. The use of medical staff as interpreters is the least satisfactory option for patients (Azarmina & Wallace, 2005). However, two primary studies (Hudelson & Vilpert, 2003; Rhodes & Nocon, 2003) within two systematic reviews (Probst & Imhof, 2016; Wilson et al., 2012) conclude that service users prefer untrained interpreters. This preference is attributable to the belief that untrained interpreters can provide more confidentiality and a better common understanding (Wilson et al., 2012). Hadziabdic and Hjelm (2013) recommend that patients and

their family be always involved in the decision process and kept informed about the possibility of free access to a trained interpreter.

Regardless of the type of interpreter, other factors seem to influence service users' preferences and satisfaction. When choosing an interpreter, it is important to consider the patient's and interpreter's membership in cultural or religious communities or associations because a common heritage can impinge on the patient's privacy (Hadziabdic & Hjelm, 2013; Hemmings et al., 2016). Further, the emotional engagement of the interpreter, plays a major role in service user satisfaction (Larrison et al., 2010). However, studies show that service users are ambivalent about how emotionally committed interpreters should be. When the interpreter and service user know one another, the level of familiarity influences user satisfaction with the services offered (Li, Pearson, & Escott, 2010). Lastly, service user satisfaction is linked to the gender concordance with the interpreter (Hadziabdic & Hjelm, 2013; Li, Pearson, & Escott, 2010; Suphanchaimat et al., 2015). Gender concordance facilitates communication and favours respect for personal integrity and intimacy, notably for pregnancy follow-ups or consultations for gynecological and sexual health conditions (Hadziabdic & Hjelm, 2013).

3.3 | Transmission of information

3.3.1 | Disclosure of information

The presence of an interpreter influences the patient's disclosure of information. More complete disclosure of information occurs in interventions carried out in cooperation with trained interpreters, versus untrained interpreters or without an interpreter (Bauer & Alegria, 2010). This may be due to the practical challenges raised using untrained interpreters in terms of security,

confidentiality, and quality of communication. These challenges can be due to the interpreter's involvement in the service user's social network, their own traumatic experiences, or limited understanding of specialized terms (Hassan et al., 2016). Service users may also feel embarrassed and uncomfortable in the presence of untrained interpreters (Rocque & Leanza, 2015).

When a friend or a family member act as interpreter, service users are more willing to disclose physical symptoms (Rocque & Leanza, 2015), but more hesitant to disclose more private information (Kalich, Heinemann, & Ghahari, 2016; Farooq, Kingston, & Regan, 2015; Rocque & Leanza, 2015). These disclosure difficulties are greater when the family member who acts as an interpreter is young (Farooq, Kingston, & Regan, 2015). An additional level of challenge occurs when the interpreter and service user both come from the community (Hemmings et al., 2016).

The results of the studies analyzed by Hadziabdic and Hjelm (2013) are mitigated regarding the sense of trust and security provided by a family member acting as an interpreter. Some studies report that service users feel confident and secure, while others found that they are embarrassed and hesitate to transmit some information to the health and social care provider, notably regarding mental health. In terms of threats to service users' safety, several studies reviewed by Hemmings and colleagues (2016) show that on occasion people survivors of trafficking or conjugal violence are interviewed in the presence of their abuser acting as interpreter. Therefore, it is important to never allow a person accompanying a possible survivor to interpret for that person (Hemmings et al., 2016).

3.3.2| Modification of the discourse

The type of interpreter influences the reliability of the discourse transmitted. Errors in transmission of information are less frequent with trained interpreters (Dilworth et al., 2009; Karliner et al., 2007; Li, Pearson, & Escott, 2010). When trained interpreters make mistakes, they are clinically less significant than those made by untrained interpreters (Flores et al., 2003), but the rate is nonetheless high (Hsieh, 2006; Li, Pearson, & Escott, 2010). When the untrained interpreter is a family member, this may engender poor communication, omissions or modifications of the information, and possible family conflicts (Alhomoud et al., 2013; Allford et al., 2014; Cheng, Drillich, & Schattner, 2015; Hadziabdic & Hjelm, 2013; Silva et al., 2016). For example, studies compiled by van Eechoud and colleagues (2016) report that family members sometimes ask professionals to modify the information, hoping that they can spare their loved one emotional pain. Modification of discourse is among the concerns of service users who report that interpreters do not seem to be transmitting their message in its entirety to the health and social care provider, and, conversely, that the interpreters do not fully explain the medical concepts used by the health and social care provider (Cheng, Drillich, & Schattner, 2015).

In addition to the type of interpreter, other elements can influence the discourse. Interpreters who are less at ease in the language of the intervention, especially untrained interpreters, make more mistakes when transmitting information (Bauer & Alegria, 2010; Hadziabdic & Hjelm, 2013). Similarly, interpreters' perception of their role in the intervention influences the discourse transmitted. Interpreters who perceive their role as a cultural mediator tend to modify the health and social care providers' discourse by paraphrasing, changing the format of some questions or adding questions (Farooq, Kingston, & Regan, 2015). Brisset and colleagues (2013) argue that to

ensure the quality of care, these changes must be made transparently, i.e., not unbeknownst to the patient. Regarding transparency, Hadziabdic and Hjelm (2013) contend that it is normal for an interpreter to occasionally consult a dictionary, ask for specifications or paraphrasing if they do not understand the content of the discourse. The level of transparency varies depending on the type of interpreter (Bauer & Alegria, 2010). Untrained interpreters tend to be less transparent than trained interpreters when they do not understand the service user's words. Instead of mentioning the issue, untrained interpreters generally doubt the service user's coherence (Drennan & Swartz, 2002).

Lastly, changes to discourse by interpreters are also influenced by the language level of the health and social care provider and the specificities of the service user's language (Bauer & Alegria, 2010; Brisset, Leanza, & Laforest, 2013; Fisher & Hinchliff, 2013; Hadziabdic & Hjelm, 2013). Use of specialized language may pose a problem for interpreters who have no experience or specific training in healthcare (Fisher & Hinchliff, 2013). Given that each language has its own features, some words or concepts may not have an exact equivalent in another language (Fisher & Hinchliff, 2013; Hadziabdic & Hjelm, 2013). Adaptations by the interpreter to transmit the original meaning of the discourse are necessary in this case (Brisset, Leanza, & Laforest, 2013). Hence, when choosing an interpreter, one must consider the cultural and linguistic specificities of the patient's region of origin, which may influence their ability to communicate with the patient (Hadziabdic & Hjelm, 2013).

4| DISCUSSION

The first finding of this review of reviews is the validation of the widespread recommendation that trained interpreters should be favoured (Karlner et al., 2007; Rocque & Leanza, 2015).

Trained interpreters are generally associated with higher satisfaction, better care, and better disclosure of information by service users, along with greater reliability of the discourse transmitted, which favours the quality of the intervention.

Despite this well-supported recommendation, health and social care providers should always determine service users' preferences related to languages, dialects, gender, and religious and ethnic affiliations. If an available trained interpreter meets these preferences and is knowledgeable in intervention, this choice should be prioritized. Otherwise, it is preferable to choose a trained interpreter who best meets these criteria. As a last resort, the health and social care provider could turn to an untrained interpreter. Ethically, it is always better to have an interpreter than not (Bjorn, 2005).

The health and social care provider should always introduce the interpreter to the patient, specify everyone's role, and agree with the interpreter on these roles, in the case of an untrained interpreter (Farooq, Kingston, & Regan, 2015). To this end, it is recommended to hold pre- and post-intervention meetings with the interpreter to discuss the intervention, adaptations to the discourse, and things not said during the intervention (Leanza et al., 2014).

However, trained interpreters may be unavailable, or service users may prefer to work with an untrained interpreter from their family or network. In other cases, the service user may refuse to have an interpreter during an intervention. Therefore, the choice of an interpreter is not a simple, linear process. Health and social care providers may have to make a choice that seems to run counter to good practices. This review sets guidelines for these situations (untrained interpreter or refusal to use an interpreter).

When an untrained interpreter is used, the health and social care provider must ensure that the patient made this choice freely, without the pressure of a friend or family member. This could avoid having an abuser interpret for a victim (Hemmings et al., 2016). The health and social care provider should also recommend recruiting an adult who does not represent a threat to the patient's security or undermine the patient's sense of trust (Alam, Speed, & Beaver, 2012; Farooq, Kingston, & Regan, 2015). The health and social care provider should explain to the patient the possible issues in interpreting information in the absence of a trained interpreter. For example, they can point out that interpreting is a trade that requires skills, just as medicine or psychology does.

The health and social care provider must ensure that the service user understands the messages conveyed, particularly when the interpreter does not have all the necessary qualifications (Ouiment et al., 2013). For example, they may ask the patient to repeat the diagnosis or treatment instructions in their own words. Health and social care provider should also document the service users' preferences to simplify the choice process for other health and social care providers (Azarmina & Wallace, 2005; Panayiotou et al., 2019).

When the service user refuses an interpreter, the health and social care provider should ensure that the service user clearly understands the role of the interpreter in the intervention and the consequences that poor communication can have on their health and the quality of care (Brisset, Leanza, & Laforest, 2013). Should the services of a trained interpreter be available free of charge, the health and social care provider must inform the service user thereof. Health and social care providers can also reassure service users that the services are confidential. If the service user still refuses an interpreter, the health and social care providers could, by exercising precaution,

employ simple strategies to deliver the necessary services, particularly for emergency care (Briand-Lamarche, Maltais, & Guériton, 2017). For example, they can use simple vocabulary in a common language and regularly ask the patient to repeat the information transmitted in their own words. The health and social care provider can use reference works or language tools (e.g., dictionaries and specialized language translation apps). Note that language apps should be used with great caution, and popular online translation tools should be avoided in an intervention context (Khoong et al., 2019; Panayiotou et al., 2019). They can also use, when available, documents written in the service user's language, and graphic or audiovisual materials.

4.2 | Limitations of the review

Limitations of this systematic review of reviews are largely specific to the reviews compiled. These limitations mainly concern methodological aspects. Some reviews did not specify their research method or selection of primary studies. Others did not establish inter-rater agreement on the selection of studies or the evaluation of their quality. Many did not evaluate the quality of the primary studies compiled or reported very little information about this assessment. The other limitations of the reviews concern the presentation of results. In several reviews the results were not sufficiently synthesized. In addition, many reviews did not contextualize the results or did not describe interpreted interventions sufficiently. To compensate for these limitations, we rigorously followed the standards for production of systematic reviews. In addition, we ensured that the results were triangulated by several primary studies.

4.3 | Future research

To enhance interpreted intervention conditions and to ensure continuous improvement of the quality and accessibility of interpreters, further evaluations and research studies are required (Sultana et al. 2018). These research studies and evaluations must document the needs, service offer and intervention processes with interpretation, along with their efficiency. Ideally, the triad of actors involved in interpreted interventions must participate in these processes for their different perspectives to be considered.

In terms of knowledge mobilization, tools popularized for health and social care providers and interpreters should be prioritized to improve interpreted intervention. The development of tools to help decision-making, adapted to local realities, as Gray and colleagues (2012) did in New Zealand, is promising. Ideally, these tools would be based on a combination of best scientific knowledge and clinical expertise and tested by health and social care providers in different intervention contexts.

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Appendix

Appendix S1 : Full search strategy for PsycInfo database

PsycINFO (Ovid)	
#1	interpreters/
#2	interpreter*.ti,ab,id.
#3	(interpret* adj2 (informal or service* or profession* or interaction* or work* or language or medical)).ti,ab,id.
#4	language proficiency/
#5	(language adj3 (barrier* or proficien*)).ti,ab,id.
#6	(limited adj2 proficien*).ti,ab,id.
#7	1 or 2 or 3 or 4 or 5 or 6
#8	exp health care services/
#9	exp mental health personnel/ or clinicians/ or counselors/ or exp medical personnel/ or psychologists/ or social workers/
#10	exp psychiatry/
#11	exp social services/
#12	exp child welfare/
#13	(child welfare or child protecti* or protective service* or CPS or protection service* or out-of-home placement* or out-of-home care* or group home* or group living).ti,ab,id.
#14	((social or psychiatric or psychological or medical or clinical or residential or institution* or substitute or foster or primary or first line or home) adj2 (care or service* or practice* or work* or encounter* or setting* or facilit* or unit* or treatment)).ti,ab,id.
#15	(ambulatory or emergency or clinics or CLSC).ti,ab,id.
#16	(staff or doctor* or medical personnel or nurse* or psychologists or clinician* or health personnel or practitioner*).ti,ab,id.
#17	(health care or healthcare or health center* or health service* or hospital* or mental health or rehabilitation center*).ti,ab,id.
#18	((juvenile or youth or young or teen or adolescen*) adj2 (prison or detention or correction* or probation*)).ti,ab,id.
#19	8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or (Alam, Speed et Beaver, 2012)
#20	7 and 19
#21	(meta-analysis or systematic review or literature review).md. or (systematic review* or meta-analysis or metaanalysis or literature review*).ti,ab.
#22	20 and 21

Appendix 2: Characteristics and limitations of included reviews

1st Author (Year)	Review type	Topics/Aims	Key findings related to our study	Nb of studies	Main limitations
Alam & al. (2012)	Scoping review	“Experiences and preferences of Bangladeshi patients and service providers in gaining access to diabetes-related health care information and services.”	- Access to interpreters	8	<ul style="list-style-type: none"> ● Scoping review: no quality assessment of studies ● Interpreting interventions are described superficially
Alhomoud & al. (2013)	Systematic review	Type(s) and contributing factor(s) of medicine-related problems experienced by ethnic minority populations in the UK.	- Access to interpreters - Modification of the speech	15	<ul style="list-style-type: none"> ● No inter-rater assessment ● Lack of information about the quality assessment of studies ● Interventions are poorly described
Allford & al. (2014)	Systematic review	Minority ethnic access to cancer genetics services in English-speaking developed countries.	- Access to interpreters - Modification of the speech	11	<ul style="list-style-type: none"> ● Lack of information about the quality assessment of studies. ● Interventions are poorly described
Azarmina & al. (2005)	Systematic review	Remote interpretation.	- Interpreters on- or off-site - Users’ preferences - Modification of the speech	9	<ul style="list-style-type: none"> ● Few information about the quality assessment of studies ● No mention of inter-rater assessment
Bauer & al. (2010).	Systematic review	“Effects of patients' limited English proficiency and use of professional and <i>ad hoc</i> interpreters on the quality of psychiatric care.”	- Information disclosure - Modification of the speech	14	<ul style="list-style-type: none"> ● Lack of results synthesis
Brisset & al. (2013)	Systematic review	Interpreting in healthcare settings. Relational issues involved in interpreted consultations with different types of interpreters.	- Interpreters’ roles - Users’ preferences - Modification of the speech	61	<ul style="list-style-type: none"> ● Meta-ethnography does not involve reporting original results, but an interpretation based on results and interpretations of the included studies
Cheng & al. (2015)	Literature review with systematic method.	Experiences of refugees and asylum seekers concerning general practice services in resettlement countries.	- Modification of the speech	23	<ul style="list-style-type: none"> ● Does not provide a summary table of results and limitations of included studies.
Dilworth & al. (2009)	Literature review with systematic method.	Communication between pharmacists and Spanish-speaking patients.	- Modification of the speech	7	<ul style="list-style-type: none"> ● Lack of information about the quality assessment of studies. ● Interventions are poorly described
Farooq & al. (2015)	Systematic review	Effect of language barriers and use of interpreters for mental health problems in old age. Effects of use of interpreters in patient satisfaction and quality of care.	- Access to interpreters - Information disclosure - Modification of the speech	4	<ul style="list-style-type: none"> ● Conclusion strength limited by the number of included studies.
Fisher & al (2013)	Systematic review	“Experiences that immigrant women have when encountering the maternity services in the UK.”	- Modification of the speech	12	<ul style="list-style-type: none"> ● Few information about search strategy and selection process ● Very brief presentation of results

Hassan & al. (2016)	Systematic review	to inform mental health and psychosocial support (MHPSS) staff of the mental health and psychosocial wellbeing issues facing Syrians who are internally displaced and Syrian refugees.	<ul style="list-style-type: none"> - Access to interpreters - Information disclosure 	n/d	<ul style="list-style-type: none"> • Lack of information about selection of studies included in this review
Hadziabdic & al. (2013)	Literature review with systematic method.	“To improve communication in healthcare when an interpreter is used by providing practical advice to healthcare staff when they consider using interpreters.	<ul style="list-style-type: none"> - Access to interpreters - Interpreters on- or off-site - Interpreters’ roles - Users’ preferences 	37	<ul style="list-style-type: none"> • No summary table with key findings and limitations of included studies
Hemmings & al. (2016)	Systematic review	“To review literature that provided guidance or research on care provision for people who have been trafficked.”	<ul style="list-style-type: none"> - Information disclosure 	44	<ul style="list-style-type: none"> • No information about study design of included studies. • No distinction for data issuing from expert recommendations and those from studies
Kalich & al. (2016)	Scoping review	Barriers that adult immigrants face when accessing Canadian healthcare services.	<ul style="list-style-type: none"> - Information disclosure 	26	<ul style="list-style-type: none"> • Scoping review: no quality assessment of primary studies
Karliner & al. (2007)	Systematic review	Impact of professional medical interpreters on clinical care for limited English proficiency patients.	<ul style="list-style-type: none"> - Access to interpreters - Modification of the speech - Users’ preferences 	28	<ul style="list-style-type: none"> • Limitations of primary studies are mentioned, but no information about their quality assessment
Li & al. (2010)	Literature review with systematic method.	Importance of language barriers and interpreted medical consultations (primary care).	<ul style="list-style-type: none"> - Users’ preferences - Modification of the speech - Access to interpreters 	n/d	<ul style="list-style-type: none"> • Lack of information about selection process and the quality assessment of studies • No summary table with key findings and limitations of included studies
Probst & al. (2016)	Systematic review	“Examine the interventions that are most successfully used to overcome language discordance in nursing practice.”	<ul style="list-style-type: none"> - Access to interpreters - Interpreters’ roles - Users’ preferences 	24	<ul style="list-style-type: none"> • Lack of information about documentary search strategy
Rocque & al. (2015)	Systematic review	Communication between patients and physicians.	<ul style="list-style-type: none"> - Access to interpreters - Information Disclosure - Users’ preferences 	57	<ul style="list-style-type: none"> • No research of grey literature, nor checking of references lists of included studies
Silva & al. (2016)	Systematic review	To understand the influence that interpreters have on communication across language barriers in palliative care.	<ul style="list-style-type: none"> - Modification of the speech - Interpreters’ roles 	10	<ul style="list-style-type: none"> • No research of grey literature, nor checking of references lists of included studies
Sleptsova & al. (2014)	Systematic review	Interpreters’ roles. Perspective of expert interpreters, patients, and health care providers.	<ul style="list-style-type: none"> - Interpreters’ roles 	34	<ul style="list-style-type: none"> • Lack of information about the quality assessment of studies.
Suphanchaimat & al. (2015)	Systematic review	Perceptions and practices of healthcare providers in managing care for migrants, as well as the challenges and barriers that health personnel faced.	<ul style="list-style-type: none"> - Users’ preferences 	37	<ul style="list-style-type: none"> • Results are poorly contextualized
van Eeoud & al. (2016).	Systematic review	Views and experiences of oncology healthcare providers when caring for ethnic minority patients.	<ul style="list-style-type: none"> - Interpreters’ roles - Information disclosure 	(Alam, Speed et	<ul style="list-style-type: none"> • No research of grey literature, nor checking of references lists of included studies

				Beaver, 2012)	
Wilson, C., & al. (2012)	Systematic review	Barriers and facilitators in accessing healthcare services and optimizing self-management by ethnic minority groups living with diabetes.	- Access to interpreters - Users' preferences	47	● Interpreting interventions are only superficially addressed
Zeh, P. (2013)	Systematic review	Barriers and solutions to delivering high quality diabetes care to people from ethnic minority groups.	- Access to interpreters - Users' preferences	33	● Interpreting interventions are only superficially addressed.