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Language barriers and use of interpreters in two Danish paediatric emergency units

Kia Hee Schultz Dungu[1], Alexandra Kruse[2,3], Signe Marie Svane[1], Daniel Thor Halberg Dybdal[1], Morten Wørmer Poulsen[1], Annika Wollenberg Juul[1], Astrid Permin[2] & Anja Poulsen[1, 2]

ABSTRACT

INTRODUCTION: Paediatric consultations require safe and unambiguous communication. For children and adolescents of foreign ethnic and language backgrounds, professional interpretation may be crucial to avoid misunderstandings and malpractice. Knowledge about language barriers in paediatric consultations in the Danish healthcare is sparse.

METHODS: The study was based on questionnaires completed by medical professionals at two paediatric emergency units in Copenhagen from March through June 2018. Questionnaire A, completed by doctors, addressed all patients aged 0-18 years regardless of the parents' first language and, if foreign, the presence of language barriers, whether clinical management was affected and use of professional interpretation. All doctors and nurses were asked to complete questionnaire B addressing their knowledge, experiences and practices with language barriers in their clinical work.

RESULTS: Language barriers were present in 37% of 136 non-native-Danish consultations. In 44% of these, clinical management was affected. Professional interpretation was not used in any consultations. Almost half of the medical professionals reported insufficient communication opportunities with non-native-Danish-speaking patients (48%).

CONCLUSIONS: Language barriers frequently affected communication and clinical decision-making in the two Danish paediatric emergency units studied. Even so, professional interpretation was not used. Further studies are needed to explore whether language is a barrier to equal health.

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ORIGINAL ARTICLE

1) Department of Paediatrics & Adolescent Medicine, Rigshospitalet
2) Paediatric Emergency Unit, Bispebjerg Hospital, Denmark
3) Department of Paediatrics & Adolescent Medicine, Hvidovre Hospital

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Examination, diagnosis and treatment of children and adolescents are often challenging and require safe and unambiguous communication. Children and adolescents of foreign ethnic and language background are particularly vulnerable, and professional interpretation may be crucial [1, 2]. Since 2004, the number of immigrants and thus non-native-Danish-speaking citizens has doubled in Denmark [3]. In Copenhagen, the number of immigrants is particularly high, representing 19.5% of the population. Of these, more than half are between 20 and 39 years old [3]. In 2015, the population was 454,734 in the areas of Copenhagen related to Rigshospitalet and Bispebjerg Hospital [4]. Of these, slightly less than 27% were immigrants; however, they were unevenly distributed within the area [3]. We speculate that this demographic shift may cause communicative challenges in Danish healthcare. A recent amendment to the Danish Health Act requires citizens having lived in Denmark for more than three years to pay themselves for any professional interpretation assistance they may need [5]. The consequence for non-native-Danish-speaking patients remain unclear, especially for non-western immigrants who are more likely to be socially and economically disadvantaged [6]. Even though children and adolescents are exempt from the stricter criteria introduced with the amendment of the Act, knowledge about the use of professional interpretation in paediatric consultations in Danish healthcare is sparse. A study has indicated that the use of professional interpretation in Denmark is generally inadequate [7], and that this may possibly have serious health consequences, leading to unnecessary investigations, diagnostic failures and malpractice [1, 2, 7-9]. The aim of this study was to describe language barriers and the use of professional interpretation in two paediatric emergency units, including the medical professionals' knowledge, experiences and practices. A further aim was to explore whether language barriers affected clinical management of children and adolescents.

METHODS

This prospective descriptive study was conducted during the three-month period from the end of March through June 2018 at two paediatric emergency units in Copenhagen. The paediatric emergency unit, the Department of Paediatrics & Adolescent Medicine, Rigshospitalet, is responsible for children and adolescents referred with a variety of chronic conditions and long-term follow-up as well as for patients belonging to the hospital's uptake area. Here, the patients can be admitted for short-term observation and treatment. The paediatric emergency unit, Bispebjerg Hospital is a medical service providing help after the family doctors'

working hours. Consultations are often short (10-15 minutes); and if hospitalisation is needed, the patient is referred to another hospital. Data collection was based on separate electronic questionnaires completed by medical professionals. We chose questionnaire as we found it to be the most effective method for quickly obtaining data and getting an overview of the topic. Going through existing literature about language barriers in paediatric consultations, we were unable to find any validated questionnaires matching our objectives. We therefore constructed self-administered questionnaires. Questionnaire B was based partly on the questionnaire from the Hudelson & Vilpert study [10], which we received from the authors.

Questionnaire A [11] addressed the child/adolescent's demographic characteristics (gender, age, first language) and medical evaluation outcome (e.g. hospitalisation, prescription of antibiotics). All children and adolescents aged 0-18 years were included regardless of parents' first language (Danish and non-native Danish speaking). The questionnaire was completed for each child/adolescent. In case of non-native-Danish-speaking parents, further questions included language barriers, use of professional interpretation, whether and how clinical management was affected according to the doctors. Language barrier was defined as a barrier to effective communication with non-native-Danish-speaking parent(s) present at the consultation. A language barrier was further characterised as either "no Danish", "inadequate Danish" or "unable to explain few words". Based on availability, seven randomly selected doctors were asked to complete the questionnaire on each shift during the study period. Based on approximately 27% immigrants in the population areas of Copenhagen belonging to the two paediatric emergency units [3] and on patient flows, we estimated that we needed to include more than 300 patients during a 3-4-month study period to obtain 100 non-native-Danish-speaking participants which we expected would be representative of the most common language barriers.

Questionnaire B [12] addressed the medical professionals' previous knowledge, professional experiences and practices regarding language barriers in clinical management. All doctors and nurses at the paediatric emergency units were asked to complete the questionnaire anonymously.

Before starting the study, both questionnaires were piloted for two days (questionnaire A; n = 50 patients) and evaluated by the investigator and the participating paediatricians, and minor corrections were made. Data were analysed in Stata statistical software version 11.2 (Statacorp LP, Texas, USA) using the Mann-Whitney U (Rank-Sum) test for numeric data and the chi-squared test for categorical data.

Ethics

The study was approved locally at the paediatric emergency units. Approval by the Danish Data Protection Agency was not required as no personal data (social security numbers, names or addresses) were recorded. The study was based on questionnaires completed by medical professionals only. The patients were treated according to standard procedures without additional investigations.

Trial registration: not relevant.

RESULTS

Questionnaire A

A total of 366 patients were included of whom 37% (136 of 366) had non-native-Danish-speaking parents. **Table 1** provides characteristics of all patients grouped according to their parents' first language. Doctors experienced language barriers in 37% (50 of 136) of all the non-native-Danish consultations. No differences were observed between the Danish and non-native-Danish speaking group in terms of gender, age, prescription of antibiotics and hospitalisation (Table 1). In case the consultation was conducted in English in the non-native-Danish-speaking group, the doctors noted when a language barrier was not experienced. No characterisation of English-speaking and non-English-speaking parents was recorded. In those cases where one parent spoke Danish, a language barrier was not experienced. Tourists accounted for 2% (three of 136) of cases. For the non-native-Danish speaking group, language barriers were distributed as follows: 48% (23 of 48) of the parents spoke no Danish and 29% (14 of 48) spoke inadequate Danish (**Table 2**). In almost half of the cases, doctors reported that their clinical management was affected by the language barrier (44%, 21 of 48). The stated reasons included diagnostic uncertainty due to symptoms being unclear (10%, two of 21), need for an extra blood test (10%, two of 21), prolonged consultation (42%, nine of 21) and difficulty in giving relevant information and instructions to the families (38%, eight of 21) (Table 2). Professional interpretation was not used in any of the consultations. In ten cases, non-professional interpretation was provided by either family members > 15 years of age (40%, four of ten), multilingual medical professionals (30%, three of ten) or the child/adolescent itself (30%, three of ten) (Table 2). The distribution of first languages is listed in Table 2 with Arabic as the most frequent first language (18%, seven of 40). A total of 71% (29 of 41) of the families had lived more than three years in Denmark (Table 2).

Questionnaire B

A total of 25 medical professionals completed question-

TABLE 1

Patient characteristics, grouped according to parents' first language, N = 366[a].

	Danish (n = 230)	Non-native-Danish (n = 136)	p-value[b]
Gender, n (%)			
Male	132 (57)	81 (60)	0.69
Female	98 (43)	55 (40)	0.69
Age, median (25-75% range), yrs	1 (0-5)	2 (1-5)	0.46
Antibiotics, n (%)	60 (26)	29 (21)	0.27
Admission[c], n (%)	21 (9)	9 (7)	0.06

a) Number of children/adolescents for whom information was available.
b) For categorical data Pearson's test was performed, for numeric data the Mann-Whitney U (rank-sum) test was used.
c) N = 358.

TABLE 2

Non-native-Danish-speaking parents with language barriers, N_{total} = 50.

	N[a]	n (%)
Danish language		
No Danish	48	23 (48)
Inadequate Danish	48	14 (29)
Some Danish words	48	11 (23)
1st language		
Arabic	40	7 (18)
Italian	40	6 (15)
Afghan	40	3 (8)
Indian/Hindi	40	3 (8)
Somali	40	3 (8)
French	40	2 (5)
Serbian	40	2 (5)
Spanish	40	2 (5)
Urdu	40	2 (5)
Chinese	40	1 (3)
Filipino	40	1 (3)
Ghanaian	40	1 (3)
Greek	40	1 (3)
Nepalese	40	1 (3)
Persian	40	1 (3)
Polish	40	1 (3)
Portuguese	40	1 (3)
Romanian	40	1 (3)
Affected clinical management	48	21 (44)
How clinical management was affected		
Difficulty in giving relevant information/instructions	21	8 (38)
Prolonged consultation	21	9 (42)
Extra blood test	21	2 (10)
Diagnostic uncertainty, symptoms unclear	21	2 (10)
Professional interpretation	45	0
Non-professional interpretation		
Family member > 15 yrs of age	10	4 (40)
Multilingual medical professional	10	3 (30)
The child/adolescent itself	10	3 (30)
Lived in Denmark > 3 yrs	41	29 (71)

a) Number of children/adolescents for whom information was available.

naire B. **Table 3** provides characteristics of the medical professionals and their previous experience of language barriers in clinical management. Of these, 24% (six of 25) were multilingual, meaning that they were able to speak other languages than Danish and English fluently. Most had experienced language barriers weekly (56%, 14 of 25). Only few experienced language barriers rarely or never (8%, two of 25). Regarding professional interpretation, most reported never or rarely using it (72%, 18 of 25). Instead, family, friends or siblings were preferred as interpreters (40%, ten of 25). The choice of interpreter was most often based on convenience (63%, 15 of 24). Almost half of the medical professionals reported insufficient communication opportunities with children/adolescents and parents with foreign languages (48%, 12 of 25), and that professional interpretation was not well integrated at their workplace (48%, 12 of 25). Only 12% (three of 25) of the medical professionals had received training in working with interpreters, even though 55% (11 of 20, five responses lacking) would prefer that such training was mandatory (Table 3).

Almost half of the respondents were unaware of children and adolescents' right to professional interpretation and whether the medical professionals were responsible for the interpreter's qualifications (both 48%, 12 of 25). None of the respondents believed it was legal to use family members below 15 years of age as an interpreter (Table 3).

DISCUSSION

To our knowledge, this is the first study on the use of professional interpreters in paediatric emergency units in Denmark. Our study demonstrates that even though perceived language barriers are frequent, professional interpretation is rarely used. Furthermore, doctors reported that language barriers affected clinical management in almost half of all consultations of patients with non-native-Danish-speaking parents. The reason why professional interpretation is not used when apparently warranted remains unresolved and may raise ethical issues. The fact that the children/adolescents themselves were used as interpreters in some cases is problematic. As a minor, the child/adolescent is greatly dependent on parental involvement and consent, and important details about the child/adolescent's condition may be left out (**Figure 1**). Using other family members as interpreters may also influence interpretation negatively [1, 2, 13]. Although proficiency in English is widespread in Denmark, most medical professionals are not

likely to have received sufficient training or to have much experience in performing consultations in English. In general, professional interpretation has been reported to be safer for patients and even cost-effective in international studies [1, 8, 14]. In our study, doctors reported some of the issues also reported in these studies. However, insufficient interpreter qualifications may be a problem [15]. Interpretation may not be a matter of mere communication between the patient and medical professional in a shared language, but also of overcoming cultural differences in the understanding of disease perception and behaviour, thereby achieving good clinical practice, patient safety and satisfaction. The lack of use of interpreters may be due to the fact that current interpreter services do not fit the users' needs and lack of knowledge as to whether and how such service may be obtained [16, 17].

Medical professionals' knowledge, experiences and practices may be key to this matter. Absence of an interpreter or choice of interpreter based on what is most convenient in busy emergency units, as in our study, may be considered unsurprising [7, 10]. Also, it should be taken into account that consultations lasted only 10-15 minutes at one of the two study sites. Our findings point towards possible, important obstacles to the implementation of professional interpretation; poor integration as standard/routine procedure, lack of training in working with interpreters and limited awareness of children/adolescents' rights and doctor's legal responsibilities (Figure 1) may be other important issues

TABLE 3

Medical staff's knowledge, experiences and practices, N_{total} = 25.

	N[a]	n (%)
Education		
Medical doctor	25	8 (32)
Nurse	25	17 (68)
Hospital		
Rigshospitalet	25	15 (60)
Bispebjerg Hospital	25	10 (40)
Multilingual[b]	25	6 (24)
How often do you experience language barriers?		
Every day	25	4 (16)
Every week	25	14 (56)
Every month	25	4 (20)
Rarely/never	25	2 (8)
How often do you use professional interpretation?		
Every day	25	0
Every week	25	4 (16)
Every month	25	3 (12)
Rarely/never	25	18 (72)
Preferred type of interpreter		
Professional interpreter	25	4 (24)
Telephone interpreter	25	4 (24)
Google translate	25	1 (4)
Myself, being multilingual	25	1 (8)
Multilingual colleague	25	0
Family friend/sibling	25	10 (40)
Reason for this type of interpreter		
Lower cost	24	1 (13)
Better quality	24	1 (17)
More considerate to the families	24	2 (8)
Easier to arrange	24	15 (63)
Professional interpreter use is well integrated at my workplace		
Yes	25	1 (16)
No	25	12 (48)
Partly	25	9 (36)

CONTINUES »

TABLE 3 CONTINUED

	N[a]	n (%)
Information in several languages		
Written information is available in several languages at my workplace[b]	25	8 (32)
In my opinion, my workplace lacks communication skills with children and adolescents with some languages	25	12 (48)
Working with interpreters		
Received training in working with interpreters	25	3 (12)
In my opinion, training in working with interpreters should be mandatory	20	11 (55)
Do children and adolescents always have the right to professional interpretation?		
Yes	25	12 (48)
No	25	1 (4)
Do not know	25	12 (48)
Which of the following are legally allowed as interpreters[c]		
Other family member 〉15 yrs of age	25	10 (40)
Other family member 〈 15 yrs of age	25	0
Family friend 〉18 yrs of age	25	7 (28)
Google translate	25	2 (8)
Multilingual clinical staff	25	12 (56)
Do not know	25	5 (20)
Does the clinical staff have responsibility for the interpreter's qualifications?		
Yes	25	1 (28)
No	25	4 (24)
Do not know	25	12 (48)

a) Number of children/adolescents for whom information is available.
b) Other languages than Danish and English.
c) More answers possible.

[18, 19]. This calls for consideration of organisational changes, staff awareness, knowledge sharing, increased awareness of children and adolescents' right to health in a multicultural setting and implementation of actionable instructions. Studies have indicated that telephone interpreting may increase accessibility [7, 19]. Furthermore, written patient information in languages other than Danish and English may also be valuable.

Our study was based on questionnaire data collected during a study period of only three months. It can therefore suggest only quantitative tendencies and the respondents' qualitative motivations and practices. A clear limitation is that our study was based on self-administered and non-validated questionnaires. Therefore, the individual questions have not been tested and optimised, e.g. it may be difficult to distinguish between language barrier due to "no Danish" or "inadequate Danish" as communication may be affected by several factors such as individual interaction styles and talking speeds. When using a self-administered questionnaire, careful attention to the wording of the questions is necessary in order to avoid measurement errors from arising because patients misunderstand the questions. On the other hand, data were collected unselectively on random days. Furthermore, equally trending results collected by seven different medical doctors may increase the strength of our study.

CONCLUSIONS

Language barriers frequently affected communication and clinical decision-making in the two Danish paediatric emergency units studied. Even so, professional interpretation was not used. This study points towards possible, important obstacles to the implementation of professional interpretation services. Further studies are needed to explore whether language is a barrier to equal health.

CORRESPONDENCE: *Kia Hee Schultz Dungu.*
E-mail: kiaschultz@hotmail.com

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FIGURE 1

The Danish Health Act.

The Danish Health Act

§ 50, section 4, as of July 1st 2018

Chapter 2

§ 3. The physician responsible for the treatment of the patient must ensure that the professional interpreter has the necessary language skills and is able to speak Danish.

§ 4. Children under the age of 18 years is not allowed as interpreters, unless necessary due to acute and life-threatening circumstances.

Section 2. Children over the age of 15 may, in addition to cases covered by section 1, be used as interpreters in unproblematic cases considered by the responsible physician, see §3.

https://www.retsinformation.dk/Forms/R0710.aspx?id=202255

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