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Developmental Screening of Somali Children: Use of the Parents' Evaluation of Developmental Status (PEDS) Questionnaire

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Abstract
Background. The Parents' Evaluation of Developmental Status (PEDS) is a validated tool for developmental screening of children. Physicians at a family medicine clinic that serves a large Somali population noticed that Somali parents rarely had any concerns about their children documented on the PEDS forms. Objective. The purpose of the study was to determine the effect of the use of a Somali translation of the PEDS response form on the parental concern rate. Method. A Somali translation of the PEDS response form was obtained. Interpreters were asked to use the Somali version of the form. Records were reviewed for well child visits for two months before and after the use of the Somali translation. Result. 101 visits were reviewed before and 103 visits after the Somali translation became available. After the translation was available, although an interpreter was used for 34% of the visits, the Somali form was only used 13% of the time. Concerns were expressed by few parents, regardless of the language spoken. 5% of Somali children and 1.6% of English speaking children had scores indicating developmental concerns. Ten (12%) Somali children had scores indicating problems communicating with the parent and an inability to assess the development appropriately. Six of these ten parents had an interpreter for the visit. Conclusion. The PEDS questionnaire identified many fewer children with developmental concerns than has been reported previously. The Somali translation was used infrequently by the interpreters. The translation did not improve the identification of children with developmental concerns.

1. Introduction

Developmental delays affect at least 10 percent of children in the US. Early treatment of developmental delays leads to improved outcomes for children and, therefore, reduced costs to society.[1] In order to benefit from early intervention, children with developmental delays must be identified and referred at a young age.

In 2006, the American Academy of Pediatrics (AAP) issued revised guidelines for developmental surveillance and screening.[2] The AAP defines screening as the use of standardized tools to identify and refine that recognized risk. The AAP recommends that all children undergo screening using a validated tool at 9, 18, and 30 (or 24) month well

child visits. Parent completed questionnaires, such as the Parents' Evaluation of Developmental Status (PEDS), are increasingly being used for developmental screening in primary care. [3] The PEDS is a validated 10-item questionnaire which elicits parental concerns in multiple developmental areas and takes 2 to 5 minutes to complete.

A family medicine residency clinic in Minneapolis, MN that serves a large Somali population uses the PEDS for developmental screening at well child visits. Clinic physicians noticed that Somali parents rarely have any concerns about their children's development or behavior documented on the PEDS forms. Difficulties with the English language were thought to be a contributing factor to this low rate, despite the use of interpreters. The purpose of this study was to evaluate the effect of the use of a Somali translation of the PEDS response form on the concern rate of the Somali parents. This concern rate would be compared to that of a control group of parents who speak English well and so use the English PEDS form.

2. Methods

Patients at Smiley's Clinic who do not speak English are accompanied by interpreters at their clinic visits. An electronic health record is used, which indicates the patient's or parent's primary language. In 2006, the clinic began developmental screening of all children between the ages of two weeks and 8 years having well child visits with the PEDS test in English. Interpreters translate the questions on the paper PEDS response form to parents who don't speak or read English, and document the answers. The provider reviews the answers and determines the risk category, or "Path", which is then documented in the template for the appropriate well child visit in the electronic health record. Path A, B and C results mean that the parent reported one or more developmental or behavioral concern. Path D results indicate that the parents had difficulty communicating with the provider about their concerns. If any concerns are noted on the PEDS response form, the form is scanned into the electronic health record.

A Somali translation of the PEDS response form was obtained from the PEDS company in 2010. The Somali translation was printed on the back side of the English version of the PEDS form. Interpreters were asked to use the Somali language version of the form, to ensure uniform translation. Nursing staff documented which language of the form was used in the electronic health record.

The electronic health record was reviewed for consecutive well child visits of children between the ages of 2 weeks and 8 years for two months before and after beginning the use of the Somali translation. Only children whose parents speak English or Somali were included in the study. Data collected included: child's age, language spoken, whether or not an interpreter was present, results of the PEDS screening, and any recommendations for further evaluation. Fisher's exact tests and a two group t-test (for age) were used to compare variables between the years. The University of Minnesota institutional review board approved the study.

3. Results

Approximately 100 visits were reviewed before and after the Somali translation was available. The mean age of the children and the parental language are shown in Table 1. After the Somali translation was available, although an interpreter was used for 34% of the visits, the Somali form was only used 13% of the time.

Table 1. *Baseline variables.*

	Before Translation N=101	**After Translation N=103**	**P-value†**
Age in years			0.0005
Mean (Standard Deviation)	1.81 (1.90)	2.88 (2.36)	
Minimum-Maximum	0.15-7.70	0.08-8.27	
Primary parental language, n (%)			0.1529
English	67 (66%)	58 (56%)	
Somali	34 (34%)	45 (44%)	
Interpreter used, n (%)			0.0416
Yes	21 (21%)	35 (34%)	
No	80 (79%)	68 (66%)	
PEDS version, n (%)			
English	101 (100%)	88 (85%)	
Somali	0 (0%)	13 (13%)	
Not documented		2 (2%)	

†Comparison between groups

Table 2. *Summary of abnormal PEDS results.*

Path	**Form Language**	**Parent Language**	**Somali Interpreter**
Before Somali translation			
A, B, C	English - 1	English - 1	No - 1
D	English - 5	Somali - 5	Yes - 3 No - 2
After Somali translation			
A, B, C	English - 4 Somali - 1	English - 1 Somali - 4	Yes - 2 No - 3
D	English - 3 Somali - 2	Somali - 5	Yes - 3 No - 2

The abnormal PEDS results are shown in Table 2. In 2009, only one child (1%) whose parent spoke English, had a Path A, B, or C result. After the Somali translation was available, 5 children (5%) had Path A, B or C results. Although three of these children were Somali, only one used the Somali translation of the PEDS form.

In both years, 5 Somali children (5%) had Path D results, indicating communication problems with the parents. This is despite interpreters being used for 3 of the 5 children both years, and the Somali translation being used in 2010 for the 2 children without interpreters. The remaining children, 95 (94%) in 2009 and 93 (90%) in 2010, had Path E results, indicating the parents reported no developmental or behavioral concerns. There was not a statistically significant

difference in PEDS results between the years (p=0.2913).

4. Discussion

Few English or Somali speaking parents reported developmental or behavioral problems on the PEDS questionnaire, regardless of the language of the form. The PEDS questionnaire was initially validated with 771 children from diverse ethnic and socioeconomic backgrounds, including Spanish speaking. In that study, 54% of the children's parents expressed one or more concerns.[4] A recent systematic review of the prevalence of parental concerns identified by the PEDS questionnaire in 37 studies with a total of 210,242 subjects found that 33.6% of parents had concerns indicating developmental risk.[5] In contrast, most of our clinic parents seem to agree with Garrison Keillor, Minnesota's famous humorist, that "all the children are above average".

Somali children might be expected to have an increased, rather than decreased, rate of developmental problems because of their lower socioeconomic status and increased family stress from being refugees.[5] In fact, the proportion of Somali children, ages 3 and 4, who participated in a Minneapolis special education program for autistic children was higher than for children of other races and ethnic backgrounds.[6]

Parental report of concerns did not increase with the availability of the Somali translation of the PEDS form. The translation was infrequently used by either interpreters or parents, despite encouragement from the nursing staff and providers. A barrier mentioned by some interpreters and parents was that they spoke a different dialect than that of the translation. (Somalia has three major dialects.) It also appeared that some of the interpreters and parents could not read Somali but were reluctant to say so. Somalia has a very strong oral culture, and the Somali language has only relatively recently (1972) had an official written format.[7]

The preference of the Somali interpreters to administer surveys via oral translation of the original English text rather than using the translated Somali version has been reported previously in the literature.[7] It is thought that cultures with strong oral traditions rely heavily on the flexibility and nuance of speech to be able to communicate effectively. Although using translated and back-translated documents is thought to be the best practice for cross-cultural research, it may not be for certain cultural groups, where it could lead to a loss of nonverbal subtleties.

The most common abnormal result on the PEDS form, Path D, indicating difficulty assessing development because of problems communicating with the parents, was reported in ten (12%) Somali children despite having interpreters for six of them. The clinic uses professional interpreters, who have been shown to improve clinical care when compared to the use of ad hoc interpreters. However Somali women have reported preferring ad hoc interpreters with whom they often have an ongoing relationship.[8] They report that ad hoc interpreters share the same values and culture, explain relevant clinical information, protect their privacy, advocate for them, are more available for medical encounters, and offer emotional support.[8] It is possible that Somali parents had concerns about their children's development or behavior but did not want to tell the provider out of fear that the interpreter would not keep it private, but spread the news within the Somali community. Intellectual and developmental disabilities are considered taboo and carry a stigma in the community.[9] In such a situation, the provider might be suspicious of a developmental or behavioral problem, but not able to confirm it and therefore label the child as Path D.

Problems with translations of the PEDS form have been reported for the Malay, Chinese and Tanzanian languages.[10, 11] Parental concern for behavioral and developmental problems was felt to be over reported when the PEDS form was translated into these three languages. For example, 93% of Chinese parents reported concern because, to Chinese speaking parents, to be "concerned" about a child means "to have any feelings or to care for your child" without implying any worry.

Although screening for developmental delays is a worthy goal, implementation is a challenge in patient populations that are not from a typical western culture. Tools that have been validated in one language and culture may not work at all well in another. Simple translation is not enough, as has been demonstrated with the PEDS questionnaire in the Malay, Chinese and Tanzanian languages and now with the Somali language. Because Somali children are likely to be at high risk for delays, it is especially important for providers to monitor these children's development at every well child visit. [2]

5. Conclusion

The PEDS questionnaire identified many fewer children with developmental concerns than has been reported previously. The Somali translation was used infrequently by the interpreters. The translation did not improve the identification of children with developmental concerns.

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