The Impact of Arabic Written Medical Information on Anticipated Pain in TRUS Prostate Biopsy

Caleb Richard, BS[1]; Jonathan Lutchka, BS[1]; John Knapp, MS[1]; Jack Vercnocke, MD[2]; Aron Liaw, MD[2,4]; Nivedita Dhar, MD[3,4]

Affiliations:
[1]Wayne State University School of Medicine, Detroit, MI, USA
[2]Wayne State University Department of Urology, Detroit, MI, USA
[3]Detroit Medical Center Department of Urology, Detroit, MI, USA
[4]John D Dingell VA Medical Center, Detroit, MI, USA

Introduction:

Metropolitan Detroit is seeing a growing number of Arabic-speaking men, many of whom self-identify as limited English proficient, which poses a unique challenge to healthcare providers in the area. Poor communication between physicians and patients is a barrier to medical comprehension and increases the likeliness of adverse events. While the utilization of trained interpreters can increase the effectiveness of communication, it may be hard to incorporate into the workflow of the physician. Adding complexity to the use of trained interpreters is the idea of "diglossia", which refers to a condition where two languages coexist within a given community: Modern Standard Arabic (MSA), serving as the written form, and colloquial Arabic, a regional dialect. Detailed information regarding their procedure in MSA may be useful in alleviating communication issues. This study aims to evaluate the efficacy of Arabic-written medical information (AWMI) by prospectively evaluating anticipated and actual pain levels, in Arabic men, before reading AWMI, after reading AWMI, and immediately after transrectal ultrasound-guided (TRUS) prostate biopsy. We hypothesize that AWMI will improve the quality of care and reduce anticipated pain.

Methods:

We prospectively analyzed records from 75 Arabic-only speaking/reading males aged 44-72 with elevated PSA who underwent ambulatory TRUS prostate biopsy from a single urologist between January 2015 to December 2023. Pain was graded on an Arabic-written Likert visual analog scale (Fig. 1) where 0 = no pain and 10 = excruciating pain. Patients completed the pain grading before and after reading the AWMI, for anticipated pain, and again after the prostate biopsy. The pain scores were evaluated for significance with the use of the Student t-test and the Pearson correlation coefficient.

Figure 1: Arabic-Written Likert Analog Scale

Results:

The overall mean anticipated pain score was 4.24 ± 1.20 (range 2-9) before reading AWMI, 3.15 ± 1.24 (range 2- 8) after reading AWMI, and 2.05 ± 1.20 (range 1-7) after biopsy ($p<.05$) (Table 1).

Table 1:

Time of Pain Assessment	Mean Pain Score	Range of Pain Score
Before AWMI (anticipated)	4.24 ± 1.20	2-9
After AWMI (anticipated)	3.15 ± 1.24	2-8
After TRUS Prostate Biopsy	2.05 ± 1.20	1-7

Conclusion:

Our findings suggest that the use of AWMI in Arabic-speaking men may more closely reflect the perceived pain of a TRUS-guided prostate biopsy. Our work emphasizes the importance of addressing language barriers in patient care. AWMI may empower the patient to participate in healthcare decisions and potentially increase trust in the patient-doctor relationship. This project has demonstrated a quality improvement process, but further research is needed to identify obstacles, improve access, and provide quality care for this population.