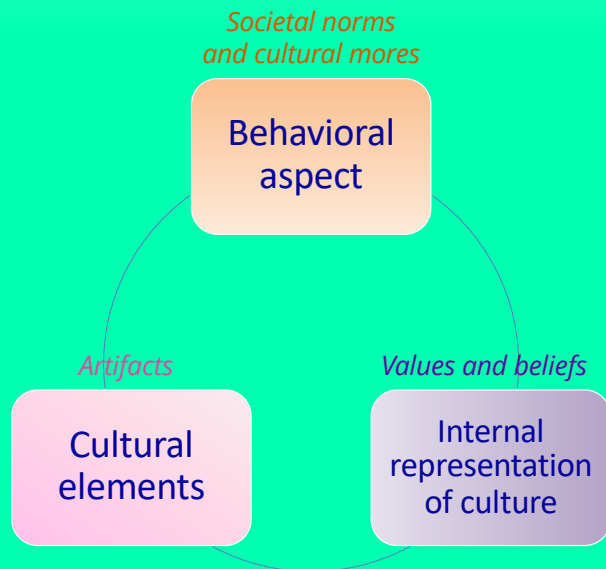


Beyond Words: Cultural Identity Factors in Functional Mapping During Awake Craniotomies

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Cultural sensitivity
should involve
establishing a **patient's
cultural identity** during
pre-mapping visits.



Graphic derived from the literature^{1,2}

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Introduction

- A patient's cultural identity is essential to all aspects of neuropsychological care. Although the field has begun to integrate cultural factors, such as linguistic considerations, into neuropsychological conceptualization^{4,5}, few studies have examined the role of other cultural factors in functional mapping³.

- Adaptations to intraoperative mapping of tasks and procedures that go beyond the assessment of language may better reflect patients' unique cultural aspects.

- We present examples of critical cultural considerations based on the following cultural dimensions: behavioral aspect, internal representation of culture, and cultural elements.

Methods

• Societal norms and cultural mores:

A 58-year-old bilingual (Russian, English) patient presented for removal of a large left frontal mass (glioblastoma multiforme). Cultural identity was assessed during pre-mapping, dictating alterations of paradigms and stimuli to reflect cultural relevance. For example, during the procedure, songs in the patient's native language and culturally appropriate reassurance were added.

- **Values and beliefs:** A 47-year-old bilingual (Thai, English) patient presented for anterior temporal lobectomy for lifelong epilepsy. A discussion of cultural identity prior to mapping revealed the conflict between the patient's deep belief in not wishing to alter the 'divine plan' and pursuing neurosurgical intervention with the goals of seizure freedom.

- **Artifacts:** A 49-year-old bilingual (Welsh, English) patient presented for posterior parietal lobectomy for lifelong epilepsy. Cultural identity was assessed during pre-mapping, which led to the alteration of stimuli assessing geographic orientation and adjustment of the vernacular used in linguistic tasks to reflect cultural relevance.

Results

Cultural sensitivity is paramount to facilitating functional brain mapping.

Establishing a patient's cultural identity during pre-mapping visits should include:

- A brief assessment, given the constraints of the pre-mapping visit, with targeted questions to effectively assess variables from the three cultural dimensions (see graphic) relevant to functional mapping
- Self-report assessment instruments may be incorporated, whenever relevant (e.g., Vancouver Index of Acculturation⁶)
- It is essential to check in with the patient about their understanding of the stimuli prior to presentation
- A concerted effort should be made to seek consultation with professionals with a shared cultural background.
- The culturally relevant information collected during pre-mapping visit should be shared with the neurosurgeon to inform explanation of the procedure to the patient
- Collaboratively integrating cultural elements into the use of technology should be considered during the pre-mapping and mapping visits (e.g., tablets, virtual reality)

Conclusions

An assessment of constructs beyond language can contribute to more successful outcomes during the functional mapping process by facilitating connectivity between patients and providers and alleviating anxiety associated with the neurosurgical intervention.



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