Article

Mentality In Medical Discourse: A Comparative Cognitive Cultural Analysis Of English And Russian Linguacultures

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Abstract: This article investigates mentality features embedded in contemporary medical discourse within English and Russian linguacultures. Drawing on cognitive linguistic and linguacultural frameworks, the study combines associative (psycholinguistic) evidence and corpus based analysis to identify universal and culture specific mental constructs reflected in professional medical communication. The research is based on the associative reaction data for the stimulus medicine, which have been extracted from the Russian associative resources and Leipzig Corpora Collection (English), plus apart from sememe interpretation through Total Brightness Index (TBI) ranking of core and peripheral sememes. "The article is dedicated to the details exploration of mentality characteristics of medical discourse in English and Russian?" Although health serves as an axiomem across both linguacultures, national mental models influence the salience of specialists, institutions, procedures and lifestyle components differently. Findings have implications for cross lingual medical communication, translation of medical protocols, and intercultural training of healthcare professionals.

1. Introduction

The late twentieth century's linguistic turn and the rise of anthropological approaches placed human cognition and socio cultural context at the center of linguistic inquiry. In the wake of this intellectual turn, mentality as such —the stable, collective-personal formation of values, stereotypes, axiologemes— arose as a central problem for the study of language and its encoding of cultural worldviews. Medical discourse, as form of communication that is both institutional and socially consequential, provides a particularly illuminating site for analyzing the representation and reproduction of mentality[1].

Medical discourse is not a monolith: it encompasses doctor-patient consultations, professional exchanges, public health messaging patient education materials and digital telemedicine interactions. It integrates objective medical knowledge, expert judgment, and communicative strategies aimed at persuasion, reassurance, and instruction. As the authors note, "As a result of the study, it was revealed that both universal and national values are presented in the medical discourse of modern times." This study asks: Which mentality features are encoded in English and Russian medical discourse? Which are universal and which are culture specific? Responding to these questions elucidates how a

language mediates trust, authority, expectations, and health-related values in different cultures[2].

Mentality and Linguistic Mentality. Mentality here is understood as a relatively stable system of images, values, and behavioral templates common to each body of population and embodied in language. Contemporary scholarship defines mentality as "stable spiritual values, deep axiological attitudes, skills, latent habits, long-term stereotypes" that regulate life within spatio-temporal limits. Linguistic mentality is the manifestation of these collective mental structures in the categories, metaphors, and lexical priorities of a language; it is the "worldview in the categories and forms of the native language"[3].

Key theoretical inputs for this study include cognitive linguistics (frames, metaphors, mental models), psycholinguistic methods (associative experiments), and linguacultural theory (the interplay of language and culture). The study treats mentality as both a cognitive and socio cultural phenomenon: cognitive because it organizes conceptual structures and associations; socio cultural because it is shaped by historical, institutional, and policy contexts (e.g., health systems, education, state provision of care)[4].

Medical Discourse as Institutional Discourse

Medical discourse is an institutional discourse characterized by specialized terminology, ritualized signs (white coats, instruments), ethical norms, and role defined communicative patterns. It is simultaneously scientific (evidence, protocols) and interpersonal (care, reassurance). Prior work identifies constitutive features (roles, motives, genre), institutional signs (chronotypes, speech clichés), and neutral discursive features (procedurality, interactivity). Unique to medical discourse are tolerance, deontological orientation, persuasiveness, and a linguatherapeutic orientation—an emphasis on "treatment with words"[5].

Comparative Linguacultural Perspectives: English vs Russian Mentalities

Comparative linguacultural scholarship highlights systemic differences between English and Russian linguistic mentalities. Following recent analyses, English is often characterized as a "language of time" with rich temporal morphology and a cultural emphasis on quantification, specialization, and institutional differentiation. Russian is described as a "language of space" with fewer tense distinctions and a qualitative orientation. These macro linguistic tendencies are hypothesized to influence how medical discourse foregrounds specialists, institutions, procedures, and values such as free access to care or trust in authority[6].

2. Materials and Methods

The study uses a mixed methods design combining associative (psycholinguistic) evidence and corpus based frequency analysis. The associative method identifies the associative verbal field of the lexeme medicine as a mirror of the mental emotional state of speakers; the corpus analysis (English) provides large scale frequency evidence for associative reactions in contemporary usage.

Data Sources

- Russian associative data: Reactions to the stimulus медицина were drawn from regional associative resources (Ufimtseva & Cherkasova, 2018) and related psycholinguistic studies (Selezneva et al., 2018). These resources compile native speakers' spontaneous associations and provide counts used to compute TBI.
- English corpus data: The Leipzig Corpora Collection (eng news 2023 subset) was used to extract frequent collocational and associative reactions to medicine (Leipzig Corpora Collection, 2024). The Leipzig resource covers materials collected between 2014 and 2023, reflecting modern perceptions.

Stimulus and Reactions

The single stimulus for both substudies was the noun medicine (Russian медицина). For each linguaculture, the ten most vivid reactions were selected and ranked by frequency. The reactions were then interpreted semantically and subjected to sememe analysis.

Sememe Interpretation and Total Brightness Index (TBI)

Sememe interpretation follows Sternin's approach: the Total Brightness Index (TBI) is calculated as the ratio of the number of subjects who produced a given reaction to the total number of subjects (or, in corpus terms, as a normalized frequency indicator). TBI allows ranking of sememes into core (high TBI), nuclear peripheral, and peripheral (low TBI) positions within the semanteme field.

Analytical Procedures

- Quantitative analysis: frequency counts and TBI ranking for the top ten reactions in each linguaculture; tabulation and visualization of core vs peripheral sememes.
- Qualitative analysis: dictionary based semantic interpretation of each reaction (using explanatory dictionaries and psycholinguistic glosses), thematic clustering into values and anti values, and cross linguacultural comparison.
- Triangulation: combining associative evidence (Russian) and corpus evidence (English) with qualitative semantic interpretation to strengthen validity.

Reliability and Ethical Considerations

Where applicable, inter annotator checks and established dictionary definitions were used to ensure consistent semantic interpretation. All data sources are publicly available or published; no private patient data were used.

Results and discussion

Russian language Medical Discourse: Core Reactions and Semanteme Structure
The Russian associative data produced the following top ten reactions (counts and computed TBI values):

Table 1. TBI reactions of Russian language medical discourse (top 10)[7]

No.	Reaction (RU)	Quantity	TBI
1	врач (doctor)	67	29.91
2	бессильна (powerless)	23	10.27
3	больница (hospital)	21	9.38
4	наука (science)	21	9.38
5	помощь (help)	20	8.93
6	лечение (treatment)	17	7.59
7	здоровье (health)	15	6.70
8	укол (injection)	15	6.70
9	бесплатная (free)	13	5.80
10	лекарства (medicines)	12	5.36

The core of the Russian semanteme is dominated by врач (doctor), followed by emotionally charged reactions such as бессильна (powerless) and institutional markers like больница (hospital) and наука (science). The presence of бессильна in the core suggests there is a significant critical or pessimistic evaluative strand in the Russian mental representation of medicine: sometimes medicine is perceived to be powerless to help[8]. The free (бесплатная) is in the nuclear-peripheral zone which indicates that state-provided free healthcare historically and socio-politically signified something important for Russia, even if the evaluation of this has been ambivalent [9].

Qualitative interpretation of core responses indicates a mixed evaluative profile: values (help, treatment, health, science) coexist with anti-values (powerlessness, fear of injections, negative hospital-related definiens). The semanteme structure (visualized in the original study) places врач at the center, with adjacent nuclear items reflecting institutional and affective dimensions[10].

English language Medical Discourse: Core Reactions and Semanteme Structure

English corpus data (Leipzig) yielded the following top ten reactions (counts and TBI approximations)[11]:

Table 2. TBI reactions to English language medical discourse (top 10)

No.	Reaction (EN)	Quantity	TBI
1	food	10,485	20.00
2	medical	6,495	12.42
3	Dr.	6,068	11.60
4	professor	5,212	9.97
5	health	4,354	8.33
6	physician	4,340	8.30
7	patients	4,114	7.87
8	University	3,848	7.36
9	traditional	3,720	7.11
10	doctor	3,661	7.00

The English semanteme core is notable for the prominence of food as the top associate—reflecting the cultural salience of nutrition and the "Healthy Eating" concept in English speaking contexts[12]. Individual nominations for specialty (Dr, professor, physician, doctor) and institutional markers (University), strongly link the medical profession, higher education and degree of professional specialization with high status. Patients appear in some of the worst reactions, we highlight this interpersonal layer[13].

A qualitative interpretation indicates an overall positive evaluative profile: focus on professionalism, education, patient-centeredness and lifestyle (food/health). Traditional appears in the nuclear peripheral zone, signaling the coexistence of traditional and innovative medical practices in English speaking contexts[14].

Comparative Discussion. The comparative analysis highlights both universal and culture specific features:

Universal axiologeme: health is central in both linguacultures—nominalized as здоровье (RU) and health (EN)—and functions as the primary value around which medical discourse orients[15].

Specialists vs. procedures/institutions:

- English language medical discourse foregrounds specialists and education (Dr., professor, physician, University). The multiplicity of specialist nominations suggests a cultural model that values professional differentiation, formal qualifications, and institutional affiliation. This aligns with the characterization of English as a "language of time" and quantification—specialization and role differentiation are linguistically salient[16].

Russian-language medical discourse, not unlike German, foregrounds procedures and institutions (больница, укол, лечение) and includes affective reactions (бессильна). The preeminence of врач still suggests that specialists are at the centre but rather the associated field absorbs conditions under which care is provided and effectiveness attributable to medicine reflecting qualitative orientation and socio-historical expectations, e.g., free medicine[17].

Trust and evaluative orientation: English-speaking respondents assess specialists as more competent (education, university affiliation), Russian respondents were ambivalent — trust in the specialist role is prevalent but skepticism about effectiveness

and institutional conditions is also high. The presence of бесплатная (free) in Russian associations highlights the socio-political aspect of healthcare expectations[18].

lifestyle and prevention: The high status of food and healthy eating in England suggests a preventive, lifestyle-based mind-set where health is dependent on nutrition and self control. This is in contrast to the Russian focus on treatment and institutional care[19].

Traditional vs. innovative medicine: In the context of pluralistic healthcare markets, where patients can choose between traditional and modern care options, the term traditional likely finds its way into English associations. The state-centered, regulated system in Russia lowers the associative salience of there traditional as a unique category [20].

Implications

Cross-lingual Medical Communication and Translation

Terminology and role labels: In English, translators and communicators should retain differences between specialist titles (Dr., physician, professor) as these are evaluative and institutional nuance that gets lost in translation. In contrast, Russian conditioned expectations may lead to a different path where explicitation (e.g., indicating or reflecting specialization) might be needed when translating English specialist labels into Russian[21].

Patient information materials: English materials may focus more on lifestyle and prevention framing (nutrition, healthy living), while Russian language materials may need to respond to effectiveness and institutional conditions concerns[22].

Telemedicine and digital health: Cross cultural templates should account for differing emphases—English templates can foreground shared decision making and specialist credentials; Russian templates should include clear procedural explanations and reassurance about effectiveness[23].

For Medical Education and Intercultural Training

• Training programs for multilingual clinicians should include modules on linguistic mentality: how titles, institutional references, and procedural descriptions are interpreted differently across cultures. Awareness of these differences can improve patient trust and adherence[24].

For Research Methodology

• The combined use of associative data and corpus evidence proved productive. Future studies could expand sample sizes, include reception studies (patient comprehension), and incorporate experimental pragmatics to test communicative outcomes[25].

Limitations

• Data sources: Russian associative data derive from regional associative dictionaries and psycholinguistic studies; English data come from the Leipzig corpora. Differences in data collection methods (associative elicitation vs. corpus frequency) may affect comparability[26].

• TBI computation: TBI in corpus contexts is an approximation when raw subject counts are not available; normalization procedures were applied but cannot fully substitute for controlled psycholinguistic elicitation[27].

• Genre coverage: While the corpus samples include institutional and public health genres, further granularity (clinical consultations vs. public advisories vs. advertising) would refine genre specific conclusions[28].

• Sociodemographic variation: The associative data do not fully control for age, region, or socio economic status; these factors likely influence associative profiles[29].

Conclusion

Medical discourse carries the imprint of linguistic mentality: it encodes universal but also national models of value — most centrally, health; as well as authority and

institutional organization and expectations about care. In English-language contexts, the associative field highlights specialists, education and lifestyle (food/healthy eating); in Russian contexts, it foregrounds procedures, institutions and ambivalent assessments of effectiveness as well as the historic salience of free medicine. These distinctions have real implications for translation, patient communication and intercultural medical education. Future studies could include expanding comparative corpora, ideally adding reception and experimental methods; and considering how the digitalization of the last pandemic era continues to shape medical mentality in various contexts.

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