

Professional communication of doctors in wartime: A trauma-informed approach

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ABSTRACT

Aim: To identify discourse markers of a trauma-informed communicative model in professional medical dialogue.

Materials and Methods: The empirical basis consisted of a collection of «doctor–patient» dialogues recorded between 2022 and 2025. Two samples of doctor speech were formed: in dialogues with patients being internally displaced persons (IDPs) (n=36) and with patients residing in rural regions (n=48). Content analysis was performed using the Textanz software. The study employed a set of general scientific and linguistic methods, including biblisemantic analysis, content analysis, psychosomatic and comparative analyses, as well as discourse analysis of communicative strategies and descriptive statistics.

Results: A total of 7770 statistically significant lexical units were recorded. In interactions with internally displaced persons, doctors demonstrated a higher frequency of the pronoun «you» (49.11% vs. 44.42%) and a lower proportion of the pronoun «we» (5.20%). The category «Communication and its components» dominated among verbs (33.63% vs. 30.48%). In interactions with patients from rural regions, a higher frequency of the pronoun «we» and a more even distribution of verb categories were observed, indicating a partnership model of communication; in working with IDPs, a patient-centered approach with an emphasis on individualization predominates, whereas in interactions with patients from rural regions, a shared decision-making model prevails.

Conclusions: Medical communication under martial law generates a spectrum of trauma-sensitive professional discourses. The identified discourse markers can be integrated into medical university curricula and clinical communication protocols.

KEY WORDS: professional communication, martial law, doctors

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INTRODUCTION

Since February 24, 2022, Ukraine's healthcare system has been operating under an unprecedented burden. The number of patients with acute stress reactions, post-traumatic stress disorder, and chronic psychotraumatization has risen sharply. According to the World Health Organization, more than 14.6 million Ukrainians required humanitarian assistance as of the end of 2024, and nearly 5 million people became internally displaced [1, 2]. The «doctor–patient» dialogue under these conditions becomes a psychologically burdened interaction that can either facilitate recovery or cause additional harm through re-traumatization [3, 4].

The concept of trauma-informed care (TIC) was systematized by the US Substance Abuse and Mental Health Services Administration (SAMHSA). The approach is based on six principles: safety; trust and transparency; mutual support; collaboration and part-

nership; empowerment, voice, and choice; and cultural, historical, and gender sensitivity [5]. The linguistic and discursive dimension of TIC remains understudied, particularly in zones of armed conflict [6, 7].

J. Pennebaker [8] found that trauma survivors exhibit characteristic changes in pronoun usage and frequency of emotional words. Y. Tausczik and J. Pennebaker [9] demonstrated that computerized text analysis can reliably identify psychological states from linguistic patterns. A. Asanova and O. Khaustova [10] identified typical challenging situations in «doctor–patient» interactions, and O. Chaban and O. Khaustova [11] described the medical and psychological consequences of wartime distress.

Our previous studies focused on the psycholinguistic features of doctors' professional communication [12, 13] and the gender characteristics of medical communication [14]. The present study shifts the focus to traumatic aspects.

AIM

The aim of the study is to identify discourse markers of a trauma-informed communicative model in professional medical dialogue.

MATERIALS AND METHODS

The empirical basis consisted of a collection of «doctor – patient» dialogues gathered between 2022 and 2025 during official consultations in compliance with ethical, bioethical, and legal standards, and with the voluntary informed consent of all participants [12–14]. The dialogues were typologized according to the category of the patient's traumatic experience. Two samples of doctor speech were formed:

- Sample 1 – dialogues with IDP patients (n=36; individuals from Donetsk, Luhansk, Zaporizhzhia, and Kherson oblasts);
- Sample 2 – dialogues with civilian patients (n=48; residents of Kyiv, Ternopil, and Vinnytsia oblasts; data from [12]).

The transcribed texts were subjected to content analysis using the Textanz software. Words with a frequency of 3 or more were included in the analysis. For each sample, the frequency of parts of speech, dominant categories, and discourse markers was calculated according to the adapted SAMHSA model [5].

FRAMEWORK

The research was performed within the framework of a research topic «Professionally oriented language practices in the education of students of medical education» (2023–2026; № state registration 0123U105310).

RESULTS

A total of 7770 statistically significant lexical units were recorded: 2733 in Sample 1 (IDPs) and 5037 in Sample 2 (civilians). The qualitative and quantitative results for the first sample are summarized in Table 1.

The most frequent – comprising more than one-third of all recorded statistically significant words among the main parts of speech in professional medical doctor–patient communication – are pronouns (total count: 961, accounting for 35.16%). Within this part of speech, the category “You” clearly dominates (almost half – 49.11%). This result is expected given the doctor's professional role position in the context of the trauma-informed approach, which reflects the principle of cooperation and participation.

The category “I” occurs approximately three times less frequently (142 lexemes – 14.78%), demonstrating the doctor's patient-centered focus. At the same time, the

low proportion of the “We” category (50 – 5.20%) may be an indicator of insufficient application of the “peer-to-peer” principle. It is advisable to recommend that doctors use the lexemes “we” and “our” more frequently to reinforce the effect of team-based interaction.

The second most frequent part of speech was the noun (741 – 27.11%), with the dominant category “Diseases and Their Symptoms” (181 – 24.43%). Among lexemes: “problems, complaints” (78), “pain” (23), “stress, tension” (16). The absence of jargon is positive, reflecting adherence to the principles of transparency and the peer-to-peer model. Addressing patients by name was recorded in only 24 of 36 dialogues (66.67%). The “health” category proved to be one of the least frequent (11 – 1.48%).

The third was the verb (559 – 20.45%), with the dominant category “Communication and its components” (211 – 33.63%). Doctors invite patients to “speak, recount” (66 lexemes), confirm what they heard with “I understand, understood” (41), and use “let's” for encouragement. The proportion of verbs in “Diseases and Their Symptoms” (104 – 18.60%) exceeds “Treatment and Its Options” (79 – 14.13%), indicating the need to shift the emphasis toward positive prognoses.

The fourth was the adverb (405 – 14.82%), with the dominant category “Temporality” (133 – 32.84%): “now” (44), “after, then” (39), “today” (10). The category “Uncertainty, imprecision” accounts for 16.54%, which may both reflect adaptation to the patients' situation and become a factor of “stagnation” in the traumatic situation.

The adjective was less represented (55 – 2.01%), with a predominance of “neutral” forms (37 – 67.27%). Adjectives with positive connotations total only 7 (12.73%). The numeral was the least frequent (12 – 0.45%). This fact can be explained in various ways. First, in conditions of uncertainty, reality is difficult to quantify. Second, the majority of the recorded dialogues in the “doctor–patient” system reflect an initial consultation, when it is still difficult to operate with specific figures.

In Table 2, we present examples of those categories and lexemes that appear in doctors' speech during their interactions with IDP patients, but currently in small numbers. This reflects the potential – the nearest “zones of development” for medical personnel in terms of further aligning the content of professional medical communication with the principles of the trauma-informed approach.

Thus, Ukrainian doctors generally take into account the core principles of the trauma-informed approach in their professional communication with IDPs, including transparency of content and the peer-to-peer model. The areas of potential growth are associated with increasing the proportion of communal pronouns “we”, personalized nouns, verbs with positive prognostic value, adverbs of certainty, and adjectives with positive connotations.

Table 1. Dominant categories and lexemes of the main parts of speech. (Sample 1 – IDPs; total number of statistically significant words – 2733)

Part of Speech	Doctors' Sample		
	Total count / %	Primary Category (abs. / rel. count)	Primary Lexemes
Pronoun	961 / 35.16%	«You» (473 / 49.11%)	«You», «To you»
Noun	741 (27.11%)	«Diseases and Their Symptoms» (181 / 24.43%)	«problems», «complaints», «diseases»
Verb	559 (20.45%)	«Communication and its components» (188 / 33.63%)	«speak, recount», «understand»
Adverb	405 (14.82%)	«Temporality» (133 / 32.84%)	«now», «after», «then»
Adjective	55 (2.01%)	«Neutral» (37 / 67.27%)	«possible», «general»
Numeral	12 (0.45%)	–	«time», «three», «first», «several»

Source: compiled by the authors of this study

Table 2. «Zones of potential development» of professional communication in the system. «doctor – IDP patient» in the context of the trauma-informed approach

Part of Speech	Categories	Lexemes
Pronoun	«We»	«we», «our»
Noun	«Examination, Treatment, and Outcomes»	«effect», «result»
	«Communication and its components»	«question»
	«Health»	«health»
Verb	«Communication and its components»	«thank you»
	«Treatment and its options»	«to help»
Adverb	«Certainty, precision»	«indeed»
	«Familiarity and generalization»	«usually»
Adjective	«Positive»	«healthy», «good»

Source: compiled by the authors of this study

Table 3. Dominant categories and lexemes of the main parts of speech in doctors' Speech (Sample 2 – civilians; total number of statistically significant words – 5037)

Part of Speech	Total count / %	Primary Category (abs. / rel. count)	Primary Lexemes
Pronoun	1,621 / 32.18%	«You» (720 / 44.42%)	«You», «Your»
Noun	1,272 / 25.25%	Diseases and Their Symptoms (253 / 19.89%)	«problems», «pain», «diseases»
Verb	1,099 / 21.82%	Communication and its components (335 / 30.48%)	«speak», «think», «understand»
Adverb	834 / 16.56%	Temporality (249 / 29.86%)	«after», «then», «now», «often»
Adjective	174 / 3.45%	Neutral (99 / 56.90%)	«that», «possible», «general»
Numeral	37 / 0.73%	–	«time», «several», «one», «first»

Source: compiled by the authors based on [12]

We now focus on the analysis of the characteristics of doctors' speech in communication with patients residing in relatively safe regions. Such analysis will allow us to compare the identified features of the trauma-informed approach with discursive practices in a less pronounced traumatic context.

Doctors' speech in dialogues with civilian patients (Sample 2): data obtained from our previous study [12]. Results are presented in Table 3.

In Sample 2, pronouns also rank first (32.18%), but the proportion of «You» is lower (44.42% vs. 49.11%), indicating a more balanced model. The noun category «Diseases and Their Symptoms» has a lower proportion (19.89% vs.

24.43%), while «Examination, Treatment, and Outcomes» ranks second (213 – 16.75%), reflecting a greater emphasis on diagnostics. Among verbs, the «Communication» category has a lower proportion (30.48% vs. 33.63%). Adjectives are more broadly represented (3.45% vs. 2.01%) with a lower proportion of «neutral» forms (56.90% vs. 67.27%), indicating greater emotional diversity.

The analysis of doctors' speech in Sample 2 (patients from rear regions) reveals a communicative model close to Sample 1 but more balanced. The lower proportion of the «You» form (44.42% vs. 49.11%) indicates that doctors concentrate the discourse on the patient's person less intensively, distributing attention between

procedures and clinical aspects. This is evidently related to the fact that such patients do not have as acute a sense of trauma, which reduces the need to verbally «hold» them at the center of attention.

The shift from the category «Diseases and Their Symptoms» (19.89% vs. 24.43%) to «Examination, Treatment, and Outcomes» (16.75%) points to a greater emphasis on the diagnostic-therapeutic domain, whereas in Sample 1 the higher concentration of pain-related lexemes reflects a longer presence in the patient's emotionally loaded field. The lower proportion of communication verbs (30.48% vs. 33.63%) demonstrates that meta-communicative efforts (providing feedback, checking comprehension accuracy) are less pronounced in a safer communicative environment.

The most telling difference lies in adjectives: a higher overall proportion (3.45% vs. 2.01%) combined with a lower percentage of neutral forms (56.90% vs. 67.27%) indicates greater emotional differentiation of the vocabulary. In the frontline context, doctors probably resort to emotional restraint as a defense mechanism, whereas in rear regions they have more communicative space for evaluation and emotional responsiveness.

DISCUSSION

The present study continues our previous work [12–14] with a shift in analytical focus from gender to the type of traumatic experience of the patient. The results demonstrate that medical communication under martial law generates a spectrum of trauma-sensitive communicative models determined by the nature of the traumatic impact.

In interactions with IDP patients, doctors demonstrate an enhanced «You»-orientation (49.11%), a higher frequency of communicative verbs (33.63%), and encouraging constructions. From the perspective of the trauma-informed approach, this pattern corresponds to the phenomenon of testimony described by J. Herman [15] as a fundamental mechanism of recovery after political violence. B. Van der Kolk [16] also emphasized the importance of verbalizing traumatic experience. Our data provide empirical linguistic confirmation of this phenomenon in the context of a wartime medical consultation.

In interactions with civilian patients, doctors display a more balanced discourse: a higher proportion of adjectives (3.45% vs. 2.01%), a lower proportion of neutral forms among them (56.90% vs. 67.27%), and greater emphasis on diagnostics and treatment. This is consistent with a lesser need for narrative stimulation and a more partnership-oriented model of communication.

The identified discourse markers (empathy markers, open-ended questions, avoidance of directive pressure)

can serve as indicators for evaluating the trauma sensitivity of clinical communication [5, 6].

Doctors intuitively adjust their communicative strategies depending on the patient category, yet this adaptation is not systematic. Considerable variability indicates the need to develop trauma-informed communication skills already at the stage of professional training. Thus, the methodology of applying the trauma-informed approach must extend beyond current clinical practice into the space of medical education. Medical university students must acquire the competence to recognize linguistic markers of trauma in patients' speech and to respond with appropriate communicative strategies [7, 19, 20].

The effectiveness of such training directly depends on incorporating contemporary approaches to the digitalization of medicine [22–24], the potential of elective disciplines [23], and distance learning formats [25, 26]. In practice, this involves integrating trauma-informed communication modules into professional language courses, introducing selective educational components oriented toward the digitalization of medical communication and the use of artificial intelligence, as well as simulation-based training using authentic dialogues and specialized workshops [19–21].

CONCLUSIONS

Based on a comparative discourse analysis of doctors' speech in dialogues with patients who are internally displaced persons and patients from rear regions, the following was established:

1. Medical communication under martial law is characterized by the adaptation of the doctor's professional discourse depending on the type of traumatic experience of the patient.
2. In interactions with internally displaced persons, doctors demonstrate patient-centered discourse with an enhanced «You»-orientation (49.11% vs. 44.42%), a higher frequency of communicative verbs (33.63% vs. 30.48%), and encouragement constructions.
3. In communication with patients from rear regions, a higher frequency of the pronoun «we» and a more even distribution of verb categories with greater emphasis on diagnostics is observed, indicating a partnership model of communication.
4. Doctors demonstrate adaptive trauma-informed communicative behavior, but its unsystematic nature confirms the need for targeted professional training.
5. The identified discourse markers and communicative strategies should be integrated into medical university curricula, trauma-informed communication training programs, and clinical protocols to reduce the risk of re-traumatization.

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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