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Psychological Factors in the Development of Medical Students' Language Personality in the Conditions of War

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ABSTRACT:
The empirical research was conducted from February to April 2026 to identify the overall language personality of future healthcare professionals in Ukraine under wartime conditions. The study involved 72 respondents, including 54 medical students in their third to sixth years of study and 18 young healthcare workers with up to two years of professional experience. Data were collected through a 32-item questionnaire and analyzed using descriptive statistics, reliability testing, correlation analysis, group comparisons, and semantic or thematic grouping of open-ended responses. Speech readiness was assessed as generally good but not flawless, with a mean language personality index of 3.82 on a five-point scale. Social responsibility demonstrated the highest mean score (4.16), followed by empathy (3.54), while resilience had the lowest score (3.48). The language personality index showed the strongest association with social responsibility (Spearman's $\varrho = 0.68$), followed by empathy ($\varrho = 0.62$) and resilience ($\varrho = 0.54$), all indicating statistically significant positive relationships. Respondents with direct patient-contact experience demonstrated a higher language personality index (4.01) than those without such experience (3.48). The most frequently identified communication difficulties involved explaining medical procedures, providing emotional support, communicating with patients' family members, and maintaining self-control in stressful situations. The findings indicate that speech training for healthcare professionals should be integrated with psychological readiness, clinical communication practice, and trauma-informed approaches to patient care. Overall, the results demonstrate that direct communicative experience with patients is positively associated with the development of a stronger language personality among future and early-career healthcare professionals in wartime healthcare settings.

Keywords: education in wartime; martial law; competency-based education paradigm; language; speech; language personality; medical students; healthcare workers; psychological factors; empathy; resilience; social responsibility.

1. Introduction

With the ongoing war, it is more crucial than ever for medical students and emerging healthcare providers to develop language personality. This procedure needs to be regarded not only according to the traditional logic of educational language but also for

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psychological burden, social disintegration, and the ethical requirements on communications with traumatized persons. Language fulfils numerous interconnected functions in healthcare. It reinforces professional reasoning, facilitates accurate transmission of healthcare information, supports the teaching of patient safety through medical instruction and guidance, and provides emotional support for public trust. Thus, the development of professional language behaviour hinges on consideration of the psychological processes through which, in educational and clinical settings, future healthcare professional learners learn, select, and modulate language. Wartime scenarios place medical students and other healthcare personnel in situations with sustained uncertainty, dislocation, witnessing of traumatic situations and increased burden to care for people. Today, Ukrainian society faces trials and social upheavals unprecedented in the experience of country's independence. Due to military actions, participants of the educational process are in circumstances associated with severe psycho-traumatic events (injury or death of loved ones, sounds of explosions or aircraft, destruction of housing and deprivation of material values, despair, uncertainty about family status or activity profile, internal and external displacement due to the occupation regime, adaptation to a new socio-cultural environment).

These conditions can impair emotional self-regulation, decrease potential communicative flexibility, and pose a challenge to patient, family member and staff interaction. Zhyhaylo et al. (2023) highlighted that the capacity to mobilize psychologically, resilience, and the capability for self-regulation and meaningful activity under stress are key personal resources in war. Additionally, these characteristics are important in professional communication in general, as healthcare workers are called upon to report factual information to an audience, be polite, respond to distress in a caring manner and maintain communicative stability in crises. At the same time, the Ukrainian medical higher education system was significantly modernized. Radziievska et al. (2022) linked the modernisation of medical education with greater practical focus, more professional training, and responsiveness to the current social challenges. However, the communicative training often continues to take second place to clinical, diagnostic and technical competences. This imbalance can lead to students being trained to carry out technicalised procedures, but underprepared to convey these, manage emotional responses, communicate with family members, or have difficult encounters with susceptible patients subjected to psychologically challenging situations. Using the concept of language personality as a theoretical platform, we can understand this issue. Samchuk (2021) defined language personality as a social and cultural ability to communicate in language through specific values, meanings, norms, and speech patterns.

Applied to healthcare education, this notion is more than mastery of vocabulary or grammatical rules. It also indicates how a future health care provider uses language to convey responsibility, professional judgment, the need for cultural sensitivity, and respect for the role of the interlocutor. In wartime, these same dimensions are apparent in that the use of the state language, professional words, patient-centred explanations, empathy and ethical restraint coalesce in the same communicative context. Research on language consciousness also shows that speech development cannot be segregated from the emotional, motivational, and value perspectives on personality. Marchak (2022) connected the emergence of language consciousness with the psychological and pedagogic

circumstances that mould worldview, self-expression, and social actions. This relationship is especially significant for medical students and early-career healthcare professionals. Their professional language use involves not only grammatical correctness but also modulating speech in response to the patient's emotional state, the clinical situation, professional ethics, and the potential psychological effects of communication.

Research concerning communicative competence in healthcare education further underlines the professional relevance of the issue mentioned. Humenna (2013) identified communicative competence as a part of the professional culture of future physicians, noting that healthcare practice relies on contact, the ability to explain information effectively, and sustaining constructive interaction. The principle applies not only to doctors but also to healthcare professionals more broadly (e.g., nurses, rehabilitation specialists, paramedics, and other practitioners whose responsibilities involve direct communication with patients and their relatives). However, existing studies have concentrated on communicative proficiency, language culture, professional terminology, or speech accuracy. The psychological aspect of how language personality develops among wartime healthcare professionals with future and early-career backgrounds has received relatively little attention. The central research gap is that the limitations outline that limitation.

While previous studies consider language personality, medical education reform, communicative competence, and the psychological adaptation to wartime stress, fewer studies have sought to combine them into a single empirical framework. In this sense, for example, the links between empathy, resilience, social responsibility and professional language behaviour remain under-explored. So the issue is not so much linguistic. The range of words, tone, explanatory strategies, and types of emotional responses also depends on a healthcare professional's ability to recognize distress, remain in control of behaviour and emotions, anticipate the consequences of speech, and modify communication for patients who show evidence of fear, pain, grief, uncertainty, or distrust. In this study, the language personality of a healthcare professional is framed as a professional ability, embodied in practicing accurate, ethical, mindful, and flexible language in relationships with patients, relatives, and colleagues. It combines knowledge of speech norms with professional terminology as well as patient explanations, empathy, psychological self-regulation and understanding of the social impact of communication. This interpretation moves the definition beyond formalized language and places it in the real world healthcare setting.

In light of this, the study sought to determine the level of linguistic personality among medical students and early-career healthcare workers and to examine its associations with social responsibility, empathy, and resilience during wartime. A further objective was to determine whether respondents with direct patient communication experience differed from those whose professional communication experience was limited to simulated, classroom-based, or supervised settings.

The conceptual integration of linguistic personality, psychological factors, and clinical communication in wartime medical education is a critical condition for the preparation of a resilient and professional physician. In wartime, the traditional triad of medical education is transformed under the influence of chronic stress, trauma, and the need for emergency decision-making, and the main challenges remain cognitive overload,

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the need for delicate communication, and overcoming sociolinguistic conflicts. In the context of integrating language education with psychological preparation, trauma-informed communication, and ethical responsibility, empathy, resilience, and social responsibility are both determinants and components of linguistic personality, but not simply its correlates. When integrating language and psychological training, these three phenomena should be considered as target determinants that need to be developed in students in order to form a professional language personality with built-in components of ethical and trauma-informed communication.

The scientific contribution of the study lies in the integration of linguistic, psychological, and clinical communication dimensions into one empirical model of the language personality development process in wartime healthcare education service.

2. Literature Review

The language personality of a medical student should not be characterized by general language ability or the ability to reproduce professional terminology. It emerges at the intersection of language knowledge, communicative experience, cognitive and emotional regulation, ethical judgement, and social responsibility. These elements have previously been studied within several disciplines that were partly separated, e.g., the psychology of speech activity and language, medical pedagogy, intercultural communication, language education, and philosophical approaches to the study of language. However, these viewpoints have rarely been incorporated in a coherent model for teaching a healthcare workforce under wartime conditions.

Psychological studies are an essential starting point for understanding internal processes and their effect on language behaviour. Buchatska (2012) classified foreign-language acquisition as a psychologically mediated process: it involves thinking, memory, attention, reflection, and the conversion of perceived information into coherent speech. On this view, language development is reliant not solely on the accumulation of linguistic knowledge, but also on the learner's ability to process experience and regulate verbal expression. Using psychological hermeneutics, Chepeleva (2015) linked personality development to inner experience, interpretation, meaning-making and textual expression. With this context, we can then see that language personality is a dynamic system – it helps individuals to read experience and to convey personally and socially relevant meanings.

These psychological explanations apply to healthcare education insofar as clinical communication encourages students to process emotionally complex material into clear, ethical and comprehensible speech. However, the previous studies' emphasis on trauma-informed communication, psychological resilience, and working effectively with vulnerable patients in times of war was not the focus of Buchatska and Chepeleva's work (2012/2015). The conceptual addition thus has to fit the professional healthcare setting, and verbal behaviour depends on personal experience and care for another individual's emotional and physical health. Another perspective is presented by Krysalo (2013), who explores the representation of a writer's language personality in an original literary text and its translation. While the present study does not address healthcare education per se, it demonstrates that speakers' linguistic decisions and semantic choices, as well as their particular communicative style, reflect the speaker's worldview and cultural experience.

Similar individual differences are evident in students' explanations of medical procedures, responses to patients' questions, management of patient anxiety, and maintenance of an appropriate ethical tone in professional healthcare communication. Thus, language personality is not only conveyed through abstract knowledge of the rules of a language but instead through context-sensitive verbal decisions.

The discussion has brought the medical-pedagogical literature close to professional practice. Mikaelian (2017) stated that developing professional speech competence in medical university students is a necessary condition for effective healthcare practice. The author drew the relationship between language training and the quality of communication between healthcare providers and patients, where professional speech can remain underdeveloped while explanation, comprehension, and collaboration lag. So, this position is especially pertinent to our study because it situates communication as part of the functional structure of the healthcare sector, not as an additional educational skill. Nonetheless, Mikaelian's (2017) research was implemented before the extensive wartime medical education transformation and as such did not include experiences in prolonged stress, forced mobility, exposed trauma, or institutional insecurity when communication was the focus. The idea of social responsibility also contributes to the understanding of ethical regulation of occupational communication. Okhrimenko & Ivanova (2015) defined social responsibility as the conscious regulation of behaviour as a reflection of an understanding of the importance of others and society. In healthcare, the principle is evidenced by respect for patient autonomy, correct explanation of medical information, confidentiality, steering clear of language of stigma or emotional damage, and being ready to express ideas responsibly under tight deadlines.

While their approach did not target medical students per se, it provides a conceptual underpinning for discussing social responsibility as one of the psychological and ethical determinants of the behaviour of professional language. This has been developed within existing language education research with respect to cultural identity, socialization, communicative competence, and educational guidelines. Bilavych & Piddubrivna (2021) reiterated the significance of language education to the development of national consciousness, cultural memory, and communicative behaviour. Bohush (2007) investigated a child's language personality development across various cultures, linking language use to socialization and the cultural diversity of that language.

These studies lay the groundwork for the cultural and developmental framework of language personality. However, the empirical contexts of the above are childhood and primary education. At the same time, the language personality of a healthcare provider derives from unique expertise, asymmetry, patient-centeredness, and contact with individuals suffering from sickness or psychopathology. Kucherenko (2016) noted that the standardization of educational content was a necessary condition for the development of a person's language personality. From the author's standpoint, language education should not be restricted to the knowledge of linguistic modalities. It can also nurture significant, competent, and socially responsible language use, as Nikitina (2018) described pedagogical discourse as a communicative system constituted of participants, channels, intentions, and a situation. These studies reveal that language personality is constructed through structured educational interaction. However, their primary focus is on school education and on

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discussion between teachers, where communicative connections are unlike those typically cultivated in healthcare.

Cultural-information asymmetry, time pressure, ethical dilemmas, emotional risk, and potential risks to patient safety define the dynamics of clinical communication. Another pertinent dimension is intercultural competence. Bakum et al. (2019) asserted in foreign language education that we need to cultivate students' capacity to read between the lines of intercultural speech phenomena, engage with local representatives, and choose appropriate ways of speaking. A follow-up study by Bakum et al. (2022) linked prospective language teachers' training with tolerance, cultural sensitivity, and preparedness for intercultural discussion. This study has implications for healthcare education, because medical providers deal with patients who differ in regional origin, culture, language proficiency, education, cultural orientation, and views of medical organizations and institutions. The researchers' findings were based on cultural and societal exposure, including how to communicate with learners with language difficulties. Yet such transfer must be done cautiously.

The communicative goals of foreign-language teacher education, as a whole, contrast with objectives of clinical practice, as speech decisions can affect informed decision-making, compliance with treatment, psychological safety, and trust. In the context of this paper, the language personality of a healthcare professional is defined as an integral professional attribute demonstrated in the capacity to speak accurately and in a more conscious, ethical, and adaptive manner with patients, relatives, and colleagues. It encompasses command of the state language and professional terminology, the ability to articulate specific information in understandable words, awareness of the interaction between the speaker and listener's emotional state, control over speaking under emotional pressure, and awareness of the expected consequences of verbal activities. This definition combines the idea of language education with the practical needs of healthcare communication.

So the literature on language personality has identified several complementary aspects of language personality. Psychological research explains the cognitive, emotional and interpretive mechanisms of speech. Medical-pedagogical studies suggest that professional communication is important to health care professionals. Ethical approaches explain the regulatory role of social responsibility. Language education and intercultural studies show how communication behaviour is shaped by education and cultural awareness and context. The conceptual relationships discussed in the literature are summarized in Figure 1. The model distinguishes between three psychological dimensions that are important to professional language behaviour: empathy as sensitivity and adaptation to the patient's emotional state, resilience as the ability to remain communicative under stress and social responsibility as awareness of the ethical and practical implications of professional speech.

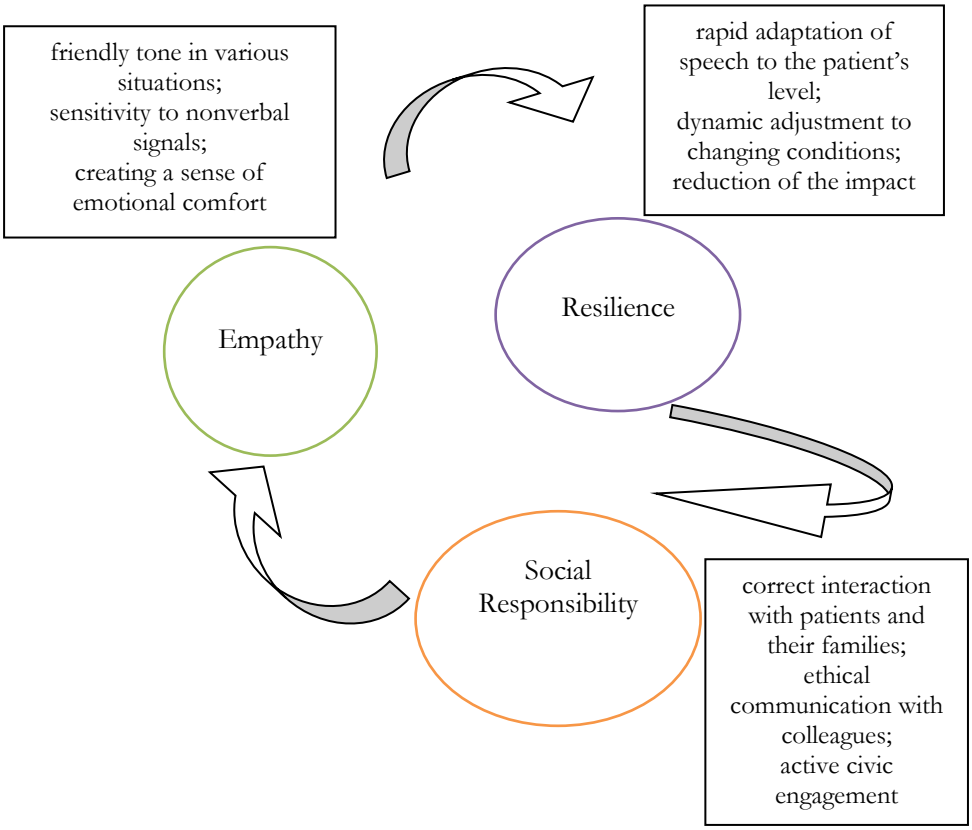

Figure 1: *Psychological factors associated with the language personality of medical students and early-career healthcare professionals*
Source: Developed by the authors based on the reviewed literature

Despite these contributions, the interaction among these dimensions in wartime healthcare education remains insufficiently examined. Existing studies do not establish how empathy, resilience, and social responsibility are associated with the language personality of medical students and early-career healthcare professionals. Nor do they adequately explain how direct communication with patients may correspond with differences in ethical, adaptive, and psychologically regulated speech behaviour. This gap justifies an empirical focus on the relationships between psychological factors and the capacity to communicate clearly, responsibly, and sensitively in crisis-related healthcare situations.

3. Materials and Methods

The study was conducted from February to April 2026 and combined theoretical and empirical components. Its empirical component examined the relationships between medical students' language personality and three psychological factors – empathy,

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resilience, and social responsibility – under wartime conditions. Data collection was carried out at two Ukrainian higher medical education institutions that continued their educational activities under martial law using blended learning formats.

The theoretical piece consisted of 29 scholarly papers on language personality, language consciousness, professional speech competence, empathy, resilience, social responsibility and healthcare communication. Normative and educational texts were also considered to explain the status of the state language and the role of professional communication in Ukrainian medical education. This context was used to interpret empirical data as an additional layer of analysis and not as a source of independent analysis. For the empirical component, we used a cross-sectional questionnaire-based survey. The sample consisted of 72 respondents, 54 of whom were medical students in their third to sixth year of education, and 18 were early career healthcare providers with up to two years of experience. Conducted in wartime conditions, the respondents were 18 years or older and had either studied or worked in the healthcare industry. Forty-six respondents said they were directly communicating with patients in clinical practice or the workplace. The 26 respondents had no direct patient communication experience and had only used simulated, classroom, or supervised communication in their professional life.

They were recruited using non-probability purposive sampling. Eligibility criteria included: age 18 years or older; current enrollment in a medical education program or employment as an early-career healthcare professional; experience of studying or working under wartime conditions; voluntary participation; informed consent provision; and questionnaire completion. Responses were excluded when the participant did not belong to a medical or healthcare field, did not provide consent, submitted an incomplete questionnaire, or provided a duplicate response. The sample was not designed for all medical students and healthcare providers in Ukraine. Rather, this estimate was used to identify the empirical links between psychological variables and professional language behaviour in the group studied. Data were obtained from an author-developed questionnaire (32 items) which has 4 sections. The first block consisted of six questions about demographic, educational, and career characteristics.

The volume of 72 respondents is quite sufficient for a qualitative interview or questionnaire with open questions, allowing for a reliable comparative content analysis between the two groups. Since there are two institutions, the sample is divided approximately in half, which provides a sufficient number of observations to identify local patterns in each institution. The sample size is justified by the criterion of accessibility, time frame and focus on a specific group of respondents. The selection of institutions is justified by the strategy of comparative analysis: institutions are typical representatives of their sector, therefore, the selection of two similar institutions allows for data verification: if the results in both institutions coincide, this increases the reliability of the conclusions. The questionnaire increases the objectivity of the study, as it assesses one problem from different points of view. This allows for comparing subjective assessments and identifying "blind spots". The draft questionnaire was reviewed by experts to check the clarity of the formulations.

For qualitative research, such a sample is adequate, but for quantitative generalization to the entire country it is insufficient. The purposive sampling method and the size of 72 respondents are suitable for a deep understanding of the experience, but

have significant limitations in terms of representativeness, institutional specificity, and geographical bias.

The second block consisted of eight statements describing language personality during medical communication. These statements evaluated the capacity to express medical information clearly, use the state language with confidence, use an ethical tone, adapt language to the patient's condition, appropriately use professional terminology, gather anamnesis, offer structured recommendations, and maintain professional language behaviour under stress. The third block consisted of 12 items based on three psychological constructs. Empathy was characterized by four items regarding recognition of patients' emotions, modifying words and tone, attentive listening, and giving emotional support without offering false reassurance. Resilience was assessed with four items focused on composure, clarity of explanation during stressful situations, restoration of emotional balance, and control of tone in a conflict situation.

The 20 statements in the second and third blocks were evaluated on a five-point Likert scale ranging from 1, "strongly disagree", to 5, "strongly agree". Four integral indicators were calculated by averaging the scores for the relevant items. The language personality index was based on items 7–14, the empathy index on items 15–18, the resilience index on items 19–22, and the social responsibility index on items 23–26. Higher scores indicated a higher level of the respective characteristic.

The fourth block contained six open-ended questions concerning communicative difficulties under stressful or wartime conditions. The questions addressed anamnesis collection, explanation of medical procedures and treatment recommendations, emotional support for distressed patients, communication with colleagues, interaction with patients' relatives, and communicative skills requiring further development in medical education. The responses were processed through semantic grouping. Five principal categories were distinguished: explanation of medical procedures, emotional support, self-control under stress, communication with relatives, and communication with colleagues.

Quantitative data were processed using Microsoft Excel 2021. Frequencies and percentages were calculated to describe the distribution of responses and the prevalence of communicative difficulties. Means, standard deviations, medians, minimum values, and maximum values were used to characterize the language personality and psychological indices. Cronbach's alpha was calculated to assess the internal consistency of the 20-item Likert-scale section and each scale.

Spearman's rank correlation coefficient was applied to examine the strength and direction of the relationship between the language personality index and the indices of empathy, resilience, and social responsibility. This non-parametric method was chosen because the indices originate from ordinal Likert-scale responses. A Mann–Whitney U test was used to compare people with direct experience of communicating with patients vs. those with no direct experience. The two groups were independent and unequal in size. Statistical significance was assessed at $p < 0.05$. Participation was anonymous and voluntary. Respondents were provided information about the study, and consent was obtained before completion of the questionnaire. No sensitive medical information or personally identifying biographical data were recorded.

4. Results

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Our empirical analysis investigated the language personality of medical students and early-career healthcare professionals and its association with empathy, resilience, and social responsibility under wartime conditions. The following four phases of analysis were conducted. The first step was to examine the internal consistency of the scales used. Second, descriptive statistics and the distribution of responses were presented. Third, we estimated relationships between the psychological indices and the language personality index. Lastly, respondents with direct experience communicating with patients and those without were compared, and open-ended comments were categorized based on semantic grouping. Cronbach's $\alpha = 0.91$ for the 20-item Likert-scale questionnaire exhibited high internal consistency. Similarly, the eight-item language personality scale presented very high internal consistency $\alpha = 0.88$. The reliability coefficients for the psychological scales were $\alpha = 0.84$ for empathy, $\alpha = 0.81$ for resilience, and $\alpha = 0.86$ for social responsibility.

These coefficients were used for the calculation and evaluation of the four integral indices. The mean language personality index was 3.82 (SD = 0.61) and the median language personality index was 3.88, with observed values of 2.25 to 4.88. The results are above the midpoint of the five-point scale, but the level of variation between the responses indicates that professional language behaviour is not consistently developed in all the different cases of communication. The social responsibility index had the highest mean value, M = 4.16 (SD = 0.53), and empathy was second, M = 4.08 (SD = 0.57). Resilience had the lowest mean value, M = 3.54 (SD = 0.70), and had the largest variation of the three psychological indices.

Table 1: Descriptive statistics of language personality and psychological factors

Indicator	Number of items	Mean	Standard deviation	Median	Minimum	Maximum
Language personality index	8	3.82	0.61	3.88	2.25	4.88
Empathy index	4	4.08	0.57	4.13	2.50	5.00
Resilience index	4	3.54	0.70	3.50	1.75	5.00
Social responsibility index	4	4.16	0.53	4.25	2.75	5.00

Note: All indices were calculated on a five-point Likert scale, where 1 represented the lowest level of agreement and 5 represented the highest level of agreement.
Source: Compiled by the authors based on the empirical survey.

The item-level distribution was high for ethical communication and the use of the state language. A total of 59 respondents (81.9%) agreed or strongly agreed that a future healthcare professional should continue to ethically communicate with patients even in a very tense moment. Fifty-six respondents (77.8%) also said the use of the state language in the professional medical community was very confident. 39 respondents (54.2%) said they were confident in their ability to adjust their speech to the patient's age, emotional

state, educational background, and anxiety level. This distribution indicates that this confidence in formal and ethical language requirements was higher than that in situational ability to adapt. In the context of medical education, forming a linguistic personality is an important aspect of future work, because good medical care requires continuous interaction.

The semantically defined open-ended responses provided five types of communication difficulty. The most common category was medical procedure explanation or treatment recommendations, limitations, and sequences of actions in plain and non-threatening language. This challenge was highlighted in 41 responses (56.9%). Emotional support was mentioned in 38 responses (52.8%), which means to be friendly to people and not to give them false reassurance or to give them a false promise. In 34 of the responses (47.2%), people mentioned difficulties controlling themselves under stress and the problems associated with fatigue, fear, emotional stress, sleep deprivation, and the general psychological stress of war. In 31 of the responses (43.1%), patients' family members were mentioned as being in contact, given relatives' expectations for instant certainty, explanations, or emotional support.

Issues with communicating with colleagues were reported in 22 responses (30.6%). They were mainly related to reporting a patient's condition, seeking clarification, and avoiding conflict when dealing with colleagues at work under distress. Accordingly, the qualitative responses indicated that the most challenging situations did not revolve only around using the correct medical terminology. More often, respondents reported challenges that required some combination of explanation, concern or emotional sensitivity, ethical constraint, and controlling their own psychological state. The language personality index was positively associated with the three psychological indices, according to correlation analysis.

The most significant coefficient was that of social responsibility, $\varrho = 0.68$, $p < 0.001$. With higher scores in social responsibility, respondents also tend to describe more clarity, ethical appropriateness, accuracy, and patient orientation in the mode of professional communication. Empathy was also positively related to the personality index for language, $\varrho = 0.62$, $p < 0.001$. Higher empathy scores reflected higher reported ability to perceive patients' emotional states, modify explanations, listen to the patient well, and choose less threatening forms of expression. Resilience had a positive relation of somewhat lower magnitude, $\varrho = 0.54$, $p < 0.001$. As such, the greater emotional self-regulation reported by respondents was associated with more consistent professional speech behaviour during stress, fatigue, and tension.

Table 2: Correlations between psychological factors and the language personality index

Psychological factor	Spearman's rho	Significance level	Interpretation
Empathy	0.62	$p < 0.001$	Strong positive association
Resilience	0.54	$p < 0.001$	Moderate positive association
Social responsibility	0.68	$p < 0.001$	Strong positive association

Note: Spearman's rank correlation coefficient was used to estimate the direction and strength of associations between indices derived from Likert-scale responses.

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Source: Compiled by the authors based on the empirical survey.

The correlation results did not establish causal effects. They showed that higher levels of empathy, resilience, and social responsibility co-occurred with higher language personality scores in the examined sample. Among the three factors, social responsibility had the strongest association with the language personality index, whereas resilience had the lowest mean value and the weakest, although still statistically significant, association.

The comparison according to direct patient communication experience also revealed statistically significant differences. Respondents with direct patient communication experience (n = 46) had a higher mean language personality index, M = 4.01 (SD = 0.50), than respondents without such experience (n = 26), M = 3.48 (SD = 0.62). The Mann–Whitney U test confirmed that the difference was statistically significant, U = 306.50, p = 0.001.

Regarding the interpretation of key correlations, a high level of linguistic personality development (communicative competence, empathetic listening, tolerance) is directly correlated with social responsibility, while the ability to recognize verbal and non-verbal markers of a patient's pain or anxiety enhances empathy. Although empathy without linguistic and psychological literacy can lead to burnout, a developed linguistic personality helps to ecologically reflect stress, which increases the overall resilience of a specialist. There is also an effect of direct contact: live contact requires instant mobilization of empathy and responsibility, while theorists or administrators are in relative isolation from these triggers.

Key variables include course of study (junior year students may have higher idealized empathy, which is transformed into pragmatic resilience in senior years under the influence of clinical practice), professional experience (more experienced professionals develop coping strategies, which can potentially reduce empathy scores but significantly increase clinical resilience), specialization (working in intensive care, oncology, or psychiatry requires a critically high level of resilience, where empathy has strict professional boundaries), workload (excessive workload provokes burnout), and stressful clinical situations (the experience of losing patients or working in crisis situations is a bifurcation point).

Differences were also observed for all three psychological indices. The mean empathy score was 4.24 (SD = 0.49) among respondents with direct patient communication experience and 3.79 (SD = 0.61) among those without such experience, U = 341.00, p = 0.003. The corresponding resilience scores were 3.70 (SD = 0.63) and 3.26 (SD = 0.74), U = 389.50, p = 0.013. Social responsibility was also higher in the group with direct patient communication experience, M = 4.31 (SD = 0.46), than in the group without such experience, M = 3.89 (SD = 0.55), U = 332.00, p = 0.002.

Table 3: Differences between respondents with and without direct patient communication experience

Indicator	Direct patient communication experience, n = 46, M ± SD	No direct patient communication experience, n = 26, M ± SD	Mann–Whitney U	p-value

Language personality index	4.01 ± 0.50	3.48 ± 0.62	306.50	0.001
Empathy index	4.24 ± 0.49	3.79 ± 0.61	341.00	0.003
Resilience index	3.70 ± 0.63	3.26 ± 0.74	389.50	0.013
Social responsibility index	4.31 ± 0.46	3.89 ± 0.55	332.00	0.002

Note: The Mann–Whitney U test was used to compare two independent groups of unequal size. The observed differences indicate associations with direct patient communication experience but do not demonstrate that such experience independently caused the differences.
Source: Compiled by the authors based on the empirical survey.

Respondents with direct patient communication experience scored higher on professional language behaviour, resilience, and social responsibility – also for more empathy, resilience, and social responsibility. This pattern was in line with their qualitative descriptions. Those who had spoken directly to patients more often stressed the importance of tailoring the explanation to the age, psychological state, education and anxiety level of the patient. They also described communication as more of an essential attribute for professional responsibility than an addendum to clinical procedures. The open-ended responses also revealed that respondents appreciated language personality as a professional quality rather than only a linguistic attribute.

They most commonly mentioned clarity, calmness, empathy, accuracy, responsibility, and respect in describing their work. Effective communication in healthcare was thus related not only to the use of correct vocabulary, but also to the selection of words appropriate to the patient's psychological state and the maintenance of professional speech behaviour under stressful conditions. Overall, the quantitative and qualitative findings indicated that language personality was associated with linguistic, psychological, ethical, and professional dimensions of healthcare communication. Empathy was associated with greater sensitivity to patients' emotional states and greater flexibility in adapting explanations to their individual needs. Resilience was associated with greater stability in speech behaviour under stress. Social responsibility showed the strongest association with the overall language personality index. However, rather than being considered causal determinants or independent predictors of language personality, these elements should be viewed as related traits, given that the study employed a cross-sectional methodology and non-probability sampling.

5. Discussion

The most prominent trend was social responsibility. This index had the highest mean value, $M = 4.16$ ($SD = 0.53$), and the strongest association with the language personality index, $\varrho = 0.68$, $p < 0.001$. This result suggests that participants who were more sensitive to the implications of professional communication also reported clearer, more precise, ethically situated and patient-centered language behaviour. Accordingly, social responsibility ought not to be perceived as an additional component of proficiency

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in language, but instead as one of the value-based means in which professional speech can be managed. This interpretation conforms to Tsybra's (2020) analysis of personality as a socially situated phenomenon, which is reflected in the links between self-realization, shared norms, and the duty to others. In the health service, "responsibility" is indicated by a full account of information about a patient's medical treatment, in terms of respect for a patient's autonomy and use of non-stigmatizing and non-painful language, but also by awareness that speaking can cause patient trust and cooperation to break down.

So an effective healthcare professional's language identity is not only related to the linguistic personality of oneself but also to the way that a healthcare professional is aware of and understands the linguistic codes: we will not only have linguistic norms but we will understand the ethical and psychological implications of communication (moral impact and mental consequences of communication). The relationship between language and professional self-awareness also sheds light on the social dimension of the social responsibility dimension within professional self-awareness. As Ozminska (2017) points out, language can strengthen personal self-awareness in the context of values, meaning, and culture by building personal self-awareness. This relationship also holds true for professional identity in this study. Higher social responsibility scores were associated with a better ability to develop ethical tone, good communication, and patient vulnerability reflection from respondents. The formation of language personality is not only vocabulary, grammar, and formal correctness in one's language. It is also the use of language to communicate with one another at the level of responsibility and trust and awareness of the consequences of healthcare communication.

Empathy was the second-highest rated psychological factor ($M = 4.08$ ($SD = 0.57$), and has a strong positive association with the language personality index ($\varrho = 0.62$, $p < 0.001$). This finding indicates that a more sensitive feeling of the emotions of others was associated with more flexible communication in the field of professional communication. Syniavskyi and Serhieienkova (2007) considered empathy to be the ability to empathize and feel another person's feelings. But empathy in healthcare is not only about being emotionally responsive. It is also reflected in the communicative choices in specific situations. This means that an explanation is modified to alleviate the anxiety of the patient, listening without diminishing the experience of the patient, not giving a false sense of security, and being calm and respectful. Empathy is especially important in wartime healthcare, when patients may be afraid, grieving, displaced, physically injured, uncertain, or distrustful of institutions. And professional terminology is not enough to communicate well in this case. Medical information should also be presented in a psychologically sensitive manner that considers the patient's emotional state and ability to process difficult information. This interpretation was supported by the responses to the open-ended questions. Forty-one respondents (56.9%) reported difficulty explaining medical procedures in simple, non-threatening language; 38 respondents (52.8%) reported difficulty providing emotional support. The aforementioned findings may be indicative of empathy as a language personality adaptive skill, the ability to determine what information to communicate and when to communicate it.

Among the three psychological variables, resilience was found to have the lowest mean value ($M = 3.54$, $SD = 0.70$) but it is still positively and statistically significantly associated with the language personality index ($\varrho = 0.54$, $p < 0.001$). This indicates that

emotional self-regulation was less frequent and thus less developed than empathy and social responsibility. However, respondents described a high awareness of ethical communication and patient needs, but their confidence in maintaining calm and clear speech was quite different under stress, conflict, and emotional strain. Resilience in nursing was described by Shevchenko (2018) as "the dynamic orchestration of emotional, motivational, volitional and cognitive resources in stressful professional environments". In the present study, we have applied resilience to professional communication. In healthcare communication, resilience is the ability to keep things clear, to regulate tone, to stay present in an interaction, and to keep from making impulsive statements under psychological pressure. The qualitative data confirmed that 34 of the 34 respondents (47.2%) had difficulties controlling their emotions while communicating in a stressful environment.

These findings are consistent with Terenda et al. (2021), who identified emotional overload, high responsibility, communication pressure, and professional burnout as persistent challenges in the healthcare sector. Such difficulties may emerge not only after graduation but also during initial clinical training and the first stages of professional practice, particularly under wartime conditions in which education and clinical work occur simultaneously. Therefore, resilience should be understood not only as an individual psychological resource but also as a construct closely associated with stable, ethical, and understandable professional language behaviour. Another key outcome was the comparison between respondents with direct patient contact and those without direct patient communication experience.

The language personality index of respondents with direct experience was greater than that of the non-experienced individuals $M = 4.01$ ($SD = 0.50$) ($M = 3.48$; $SD = 0.62$; $U = 306.50$, $p = 0.001$). Empathy, resilience, and social responsibility were also significantly different statistically. These were in connection to patients receiving direct experiences with a clinician, which in turn was associated with greater perceived psychological and communicative preparedness, as measured by self-reports. The cross-sectional design of this study precluded investigating the direction of relation. Direct communication is beneficial for the cultivation of professional language behaviour. Still, it implies that respondents with other communication and psychological resources were more likely to participate in patient contact successfully. Nevertheless, the consistency of differences in the four indices suggests that authentic or highly supervised clinical communication has educational content. It places language knowledge in an overall frame of reference when bringing linguistic knowledge into context to suit the patient's condition, ethics, emotional regulation, and potential effects of speech – that is, when such approaches are needed. This discovery is in agreement with Pentyliuk (2015) who characterized language personality as knowledge of the language, activities of speaking, and language use of higher or lower competence levels. These requirements are more specific in healthcare education. The speaker must consider the patient's emotional and cognitive conditions, the rationale for the interaction, the barriers in professionalism and ethics, and the psychological consequences of sharing the message. Language personality is not the totality of what we learn in the classroom. It is evident in the use of linguistic resources to construct a context-bound professional discourse.

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These results also resonate with those reported by Filonenko (2022), where we identify several elements that characterize personal professional development, including professional knowledge, value orientations, interpersonal sensitivity, and a readiness for responsible engagement with others. We found that empathy, resilience, and social responsibility were positively associated with the language personality index through this research, validating the multidimensional approach. Language and identity development takes place alongside both personal and career development. It cannot be disentangled from emotional maturity, ethical awareness, or the capacity to respond appropriately in socially significant situations. The broader general application relates to the type of language education programme in medical school curricula.

Traditional teaching methods place more emphasis on linguistic correctness, terminology, cultural awareness, and overall communicative competence. These factors are important, but the results now suggest they may be inadequate when students communicate with people affected by fear, confusion, uncertainty, or other emotional distress. It's not so much using a wrong term as translating the professional information to an interlocutor who is unable to see, judge, or emotionally endure the burden of knowledge for an extended period. As a result, health education can use language skills in healthcare to link mental health to practice and communication tasks. Examples of suitable formats could involve role-playing with nervous or distrustful patients, trauma-informed scripts in explaining procedures, reflecting on communication mistakes, and supervised practice in ethically challenging scenarios.

The analysis of the relationship between linguistic personality, social responsibility, empathy and resilience, in particular in the context of the preference of specialists with direct contact with patients, demonstrates a profound transformation of medical discourse in times of crisis. It is advisable to consider it according to the parameters:

1) empathy and direct contact - confirms the existing knowledge that "front-line" specialists have higher indicators of clinical empathy, and constant interaction with patients requires daily training in empathy skills; a new contribution is the consideration of empathy as a linguistic strategy in wartime, its transformation from an emotional state into a clear linguistic tool;

2) social responsibility - confirms the traditional scientific developments that doctors with direct contact demonstrate a higher readiness for prosocial behavior and altruism in crisis situations; the novelty lies in positioning professional duty as protection, because social responsibility is no longer perceived as an additional burden, but acts as an anchor of security, which reduces the level of existential stress;

3) psychological resilience - traditionally, direct contact is directly related to the risk of burnout, and resilience is a basic predictor of maintaining professional identity; at the same time, the novelty is the determination of the ability of a speech personality to regulate its tone and structure of speech in a state of threat directly regulates the emotional state of the patient.

These interventions would allow students the opportunity to learn what linguistic accuracy looks like, and to link that language to empathy, emotional self-regulation, and the capacity to manage the consequences of their words. The results also indicate that integrating training in the Ukrainian language, clinical communication training, psychology studies, and practical healthcare education will be possible. These should not be treated as

separate segments of the curriculum. Activities designed to mirror real wartime and crises will connect their content. Students will learn to collect anamnesis, explain procedures, express uncertainty, communicate supportively with distressed patients, interact with relatives, and report a patient's condition to colleagues. Communicative challenges in open-ended responses directly align with these tasks.

Thus, the study considers empathy, resilience and social responsibility to be core psychological aspects of professional language behaviour rather than peripheral aspects of language education. Empathy is one way to adapt to the patient's emotional state. Social responsibility is the ethical content and the potential consequences of communication. Resilience is like speech being stable under pressure. Taken together, these results add to the evidence that we are moving towards a coherent psychological-communicative model of healthcare education. But the interpretation should not stray from the study's methodological boundaries too. The cross-sectional design does not lead to cause-and-effect relationships and purposive sampling may limit generalizability outside the surveyed population. The study significantly complicates social desirability bias. People tend to present themselves as better than they actually are in speech in order to meet societal expectations. So the information was also self-reported and can only support the participants' own sense of competence and not just about communication behaviour.

The use of the developed questionnaire may in some way affect the validity of measurements, reliability and interpretation of psychological and communicative constructs. Regarding the validity of measurements, the questionnaire should clearly distinguish where linguistic competence ends and psychological property begins; and the questions should cover all three levels of linguistic personality (verbal-semantic, cognitive, pragmatic) in their connection with empathy or responsibility. Reliability is ensured by internal consistency and retest reliability - the questionnaire should record stable communicative patterns, and not situational linguistic reactions. The questionnaire allows you to see how internal constructs (for example, empathy) materialize in linguistic discourse, while it is necessary to avoid artifacts, when incorrectly formulated questions can distort the results due to the effect of social desirability.

Future studies should combine validated scales with actual clinical experiences, use more participants in more than one institution, and compare long-term changes in language personality.

6. Conclusions

According to the results, the language personality of medical students and early career healthcare workers in wartime is not only about language competence but also professional lexicon or formal communication competence. It includes the ability to tailor explanations to the situation of the patient, to hear the patients in an ethical way, to control speech when they are under psychological stress and to think about how communication with patients, family members, and other healthcare workers might be perceived. A questionnaire and an empirical research sample of 72 people gave a mean language personality index of 3.82 (SD = 0.61) on a 5-point scale. The most prevalent psychological characteristics were social responsibility, M = 4.16 (SD = 0.53), and empathy, M = 4.08 (SD = 0.57).

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Resilience had the lowest mean value, M = 3.54 (SD = 0.70), and exhibited the highest degree of variation. This structure indicates that respondents generally reported a high level of awareness of ethical responsibility as well as sensitivity to patients' emotional states, while confidence in continuing to maintain stable professional communication under stress was much less consistent. Language personality index was positively associated with the three psychological indices. Social responsibility displayed the most significant association, $\varrho = 0.68$, $p < 0.001$. Empathy was also significantly positively associated with language personality, $\varrho = 0.62$, $p < 0.001$, whereas resilience exhibited a modest positive association, $\varrho = 0.54$, $p < 0.001$. Thus these relationships confirm language personality as an integrative professional quality linked to ethical awareness, emotional sensitivity, and self-regulation.

However, the correlational design does not guarantee that the above psychological factors independently determined language personality. The mean language personality index of respondents with direct patient communication experience was higher (4.01 vs 3.48, U = 306.50, p = 0.001). Statistically significant differences were also found for empathy, resilience, and social responsibility. So we find evidence that direct patient communication experience has a positive correlation with self-reported communicative and psychological readiness. However, they do not indicate that clinical interaction alone is responsible for these differences.

Open-ended answers allowed the practical implications behind the quantitative results to be made clear. The main challenges identified by participants were explaining medical procedures in simple and non-threatening language (41 responses or 56.9%) and offering emotional support without false reassurance (38 responses, 52.8%). Respondents also described difficulty managing self-control during stressful interactions, communicating with patients' relatives and interacting with colleagues in high-stress professional conditions. These classes suggest that high-quality healthcare communication involves both linguistic accuracy and empathy, ethical judgment and emotional regulation simultaneously. These findings support greater incorporation of language education, psychology, clinical communication, and supervised practice in healthcare programs.

These may be trauma-informed explanations of medical procedures, role-play with anxious or distrustful patients, reflective analysis of communication errors, or supervised interaction in ethically complex situations. This training would be able to link language norms and professional nomenclature to the practical requirements (e.g. speaking with patients) of dealing with wartime communication. Some limitations should be taken into account. The sample is relatively small and purposive sampling was made at two institutions, which limits the generalizability of the results. The research also relied on an author-developed questionnaire and self-report measures, not actual communicative activity. The cross-sectional design of the study also precluded conclusions regarding causal connections or temporal trends. Future studies should include larger samples, more heterogeneous populations, more rigorous validation of the questionnaire, comparative results with a broader set of healthcare specialties, the integration of self-report tools with clinical interactions and longitudinal study on the long-term development of language personality. Prospective, longitudinal, and multicenter studies should examine whether trauma-informed communication training leads to measurable changes in patient

interactions, psychological resilience, ethical communication, and language personality over time.

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Appendix A. Author-developed questionnaire

Questionnaire for assessing medical students' language personality and psychological factors under wartime conditions

The questionnaire was developed to assess the relationship between medical students' language personality and three psychological factors: empathy, resilience, and social responsibility. The questionnaire consisted of 32 items divided into four blocks. Closed-ended statements were assessed on a five-point Likert scale, where 1 meant "strongly disagree", 2 meant "disagree", 3 meant "partly agree", 4 meant "agree", and 5 meant "strongly agree". Open-ended questions required a short written answer.

Block 1. Demographic and educational characteristics

1. Age: _____ years.
2. Gender:

☐ Female

☐ Male

☐ Prefer not to answer

3. Current educational or professional status:

☐ 3rd-year medical student

☐ 4th-year medical student

☐ 5th-year medical student

☐ 6th-year medical student

☐ Young healthcare specialist with up to two years of professional experience

4. Field of study or professional specialization: _____.
5. Have you had direct communication with patients during clinical practice or professional activity?

☐ Yes

☐ No

6. What type of professional communication experience have you mostly had?

☐ Direct communication with patients

☐ Simulated classroom communication

☐ Supervised communication during clinical practice

☐ Communication mainly with colleagues

☐ Other: _____

Block 2. Language personality in medical communication

Please evaluate each statement from 1 to 5.

7. I can explain medical information to patients clearly and logically.
8. I can use the state language confidently in professional medical communication.
9. I maintain an ethical and respectful tone when communicating with patients.
10. I can adapt my speech to the patient's age, emotional state, educational level, and level of anxiety.
11. I use professional medical terminology accurately and can explain it in understandable language when necessary.
12. I can ask clarifying questions during anamnesis collection without creating additional emotional pressure on the patient.

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13. I can provide recommendations and instructions in a clear, structured, and patient-oriented manner.
14. I can maintain appropriate professional speech when communicating with patients, relatives, and colleagues in stressful situations.

Block 3. Psychological factors of language personality development

Empathy

15. I notice signs of anxiety, fear, confusion, or emotional tension in patients during communication.
16. I take the patient's emotional state into account when choosing words, tone, and form of explanation.
17. I can listen to a patient attentively without interrupting or devaluing their experience.
18. I can provide emotional support to a patient without giving unrealistic promises or false reassurance.

Resilience

19. I can remain calm when a patient or their relatives communicate emotionally or impatiently.
20. I can continue explaining medical information clearly even when I feel stress, fatigue, or tension.
21. After difficult communication with a patient, I can restore emotional balance and continue professional interaction.
22. In conflict or emotionally tense situations, I control my tone and avoid impulsive statements.

Social responsibility

23. I understand that my words can influence the patient's trust, emotional state, and willingness to cooperate.
24. I consider it my responsibility to explain procedures, risks, limitations, and recommendations accurately.
25. I respect patient autonomy, confidentiality, and the right to receive understandable information.
26. I consider ethical and clear communication an essential part of professional healthcare practice.

Block 4. Communicative difficulties under wartime conditions

Please provide short written answers.

27. What difficulties do you experience when collecting anamnesis from patients under stressful or wartime conditions?
28. What difficulties do you experience when explaining medical procedures, treatment recommendations, or limitations to patients?
29. What difficulties do you experience when providing emotional support to patients who are anxious, frightened, grieving, or distrustful?
30. What difficulties do you experience when reporting a patient's condition or clarifying information with colleagues?
31. What difficulties do you experience when communicating with patients' relatives in emotionally tense situations?
32. What communicative skills should be strengthened in medical education to prepare students for patient-oriented communication under wartime conditions?

Appendix B. Empirical indicators and statistical processing

This appendix presents the structure of the empirical indicators, the logic of index calculation, the statistical procedures used for data processing, and the semantic coding scheme for open-ended responses. All quantitative indicators were calculated on the basis of the author-developed questionnaire used in the empirical survey of 72 respondents.

Table B1: Structure and calculation of empirical indices

Empirical index	Questionnaire items	Number of items	Scale	Calculation procedure
Language personality index	Items 7-14	8	1-5	Mean score of 8 language-related items
Empathy index	Items 15-18	4	1-5	Mean score of 4 empathy-related items
Resilience index	Items 19-22	4	1-5	Mean score of 4 resilience-related items
Social responsibility index	Items 23-26	4	1-5	Mean score of 4 social responsibility-related items

Note: The closed-ended items were assessed on a five-point Likert scale, where 1 meant "strongly disagree" and 5 meant "strongly agree". Higher values indicated a higher level of the measured characteristic.
Source: Compiled by the authors based on the empirical survey.

The integral indices were calculated by averaging the respondent's scores for all items included in the corresponding block. The language personality index reflected the respondent's ability to use the state language in medical communication, explain information clearly, maintain an ethical tone, adapt speech to the patient's condition, and use professional terminology appropriately. The psychological indices reflected three factors selected for the study: empathy, resilience, and social responsibility.

Table B2: Reliability of the questionnaire scales

Scale	Number of Likert-scale items	Cronbach's alpha	Reliability interpretation
Total Likert-scale part of the questionnaire	20	0.91	High reliability
Language personality scale	8	0.88	High reliability
Empathy scale	4	0.84	Good reliability
Resilience scale	4	0.81	Good reliability
Social responsibility scale	4	0.86	High reliability

Note: Cronbach's alpha was used to assess the internal consistency of the Likert-scale part of the questionnaire.
Source: Compiled by the authors based on the empirical survey.

Table B3: Statistical processing procedures

Research task	Statistical procedure	Purpose of use

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To describe the general distribution of responses	Frequencies and percentages	To determine the distribution of respondents' answers and communicative difficulties
To determine the level of each measured indicator	Mean, standard deviation, median, minimum, maximum	To characterize the level and variability of language personality and psychological factors
To assess the reliability of the questionnaire	Cronbach's alpha	To test the internal consistency of the Likert-scale items
To determine associations between psychological factors and language personality	Spearman's rank correlation coefficient	To identify the strength and direction of relationships between empathy, resilience, social responsibility, and the language personality index
To compare respondents with and without direct patient communication experience	Mann–Whitney U test	To test differences between two independent groups with unequal sample sizes
To process open-ended answers	Semantic grouping	To identify the main categories of communicative difficulties under wartime conditions

Source: Compiled by the authors based on the empirical survey.

Table B4: Summary of key empirical results

Indicator	Result
Language personality index	M = 3.82, SD = 0.61
Empathy index	M = 4.08, SD = 0.57
Resilience index	M = 3.54, SD = 0.70
Social responsibility index	M = 4.16, SD = 0.53
Correlation between empathy and language personality	$\rho = 0.62$, $p < 0.001$
Correlation between resilience and language personality	$\rho = 0.54$, $p < 0.001$
Correlation between social responsibility and language personality	$\rho = 0.68$, $p < 0.001$
Language personality index among respondents with direct patient communication experience	M = 4.01, SD = 0.50
Language personality index among respondents without direct patient communication experience	M = 3.48, SD = 0.62
Difference between groups by language personality index	U = 306.50, p = 0.001

Source: Compiled by the authors based on the empirical survey.

Table B5: Semantic coding scheme for open-ended responses

Semantic category	Meaning of the category	Frequency
Explanation of medical procedures	Difficulties in explaining the content, purpose, limitations, or sequence of medical actions in simple and non-threatening language	41 responses / 56.9%
Emotional support	Difficulties in supporting anxious, frightened, grieving, or distrustful patients without false reassurance or emotionally inappropriate wording	38 responses / 52.8%
Self-control under stress	Difficulties in maintaining calm, ethical, and professionally balanced speech under fatigue, fear, tension, or sleep deprivation	34 responses / 47.2%
Communication with relatives	Difficulties in explaining information to patients' relatives in emotionally tense situations, especially when relatives expected quick certainty or emotional support	31 responses / 43.1%
Communication with colleagues	Difficulties in reporting patient status, asking clarifying questions, and avoiding conflict in stressful professional interaction	22 responses / 30.6%

Source: Compiled by the authors based on the empirical survey.

The statistical processing confirmed that the questionnaire scales had sufficient internal consistency and that all three psychological factors were positively associated with the language personality index. Social responsibility showed the strongest association with language personality, followed by empathy and resilience. The comparison of groups also showed that respondents with direct patient communication experience had higher values of language personality and psychological readiness for patient-oriented communication. The semantic coding of open-ended responses clarified the quantitative results by showing that the most difficult communicative situations were related to explaining procedures, providing emotional support, maintaining self-control, communicating with relatives, and interacting with colleagues under stressful conditions.

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