Psycholinguistic Paradigm of the Medical Staff – Patients Communicative Interaction in the Conditions of COVID-19 in Ukraine and Scotland*

Психолінгвістична парадигма комунікативної взаємодії медичних працівників з пацієнтами в умовах пандемії COVID-19 в Україні та Шотландії**

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ABSTRACT

Purpose. The purpose of this research is, based on the results of our empirical research, to determine the psycholinguistic paradigms of the Medical staff – Patients...
communicative interaction in the conditions of COVID-19 in Ukraine and Scotland, in particular in the context of the perception of the emotional concepts by respondents. **Methods.** The main method of our research is a psycholinguistic experiment, the main stage of which was the exemplification experiment. It is the experiment that allows us to make a specific idea of the concept, the result of which is the selection of a set of lexical units representing some object. As additional methods we used oral interviews and questionnaires for the method of psychological diagnosis of “The Methodology for the psychological diagnostics of coping mechanisms” by Heim (2022). **Results.** Among the main associations of Ukrainians we should note a lexical unit “to die”, which is the most frequent characteristics of the youngest respondents (in age of 31–55 years old). In addition their behavior is also characterized by a reaction of “fear” – “to be scared”, “to fade” (relevant for people from 31 to 77 years old), “to complain”, “to suffer” (they are typical for respondents of 31–55 years old). Respondents of all age groups who were treated at Western General Hospital in Edinburgh (Scotland) recorded categorically different aspects of the unit “fear” by derivative word-forming units which explain: a personal state of the individual: synonymous adjectives “fearful” and “fearsome” – full of fear; traits of the character of the person (which in 96.69% of cases belonged to the Medical Staff, and only 1.54% of cases – to patients); negative assessment of the threat object; a manner of the person’s behavior. **Conclusions.** Ukrainian patients’ perception of “bad news” should be divided into two phases: the first one is existential. It is characterized by fear, despair, destruction of life plans. The second phase is mobilization, when personal resources are activated, including their adaptive and relatively adaptive coping, and “bad news” is a trigger for fight with the disease COVID-19. Respondents from Scotland think that archilexem of field “fear” is a diffuse unit “a fear of COVID-19” with a lot of meanings, which plays the role of hyperonym for all other synonyms which have the function of nominees of fear. We are talking about the actualization of conceptual structures of the meanings of synonyms which denote the forms of prototype emotion “a fear of getting sick with COVID-19”. **Key words:** psycholinguistic paradigms of the Medical staff – Patients communicative interaction, COVID-19, patients’ perception of “bad news”, archilexem of field “fear”, nominees of fear, a prototype emotion “a fear of getting sick with COVID-19”.

**Introduction**

Traditionally, the process of training of Medical Staff (doctors, nurses, physicians, etc.) has been focused on technical rather than communicative skills, according to the difficulties in interaction between Medical Staff and patients (Yang, Yang & Shen, 2020), in some cases ignoring the emotional state of the latter when reporting the
diagnosis (Arabi et al., 2017). These diagnosis are not new, but now they are very relevant, especially in the context expanding access to various (often non-professional) sources of medical information (Holshue et al., 2020). In this context, the psycholinguistic aspect of communicative interaction of medical staff with patients remains relevant, but at least it has been studied when we have the situations reporting so-called “bad news” – the emotional concept having been introduced in scientific articles and researches (Chan, Ng & Chan, 2003; Epstein, Blake & González, 2017; Li et al., 2020). In the researches done by Buckman (2005), “bad news” are described like any news that negatively and seriously affect a person’s vision of his/her future.

The way how bad news are transmitted to patients affects their interpretation of the disease (Liu, Yang & Gao, 2020), helps to provide psychological adaptation to the disease, satisfaction with medical care and determines the level of hope for recovery or stabilization of the condition (de Wit et al., 2016; Hardeman, Medina & Kozhimannil, 2016; Khwaja, 2012), in addition to the way how these bad news are transmitted, which can help for treatment and planning of the patient for the conditions of the nearest future (Noordewier, Topolinski & Van Dijk, 2016; Pierce et al., 2015). In addition to “bad news”, there is a concept “unpleasant news” – these are those news in response to which the patient may have emotional reactions, such as fear, anxiety, worry, sadness, grief (Heidari, 2019; Kalil, Metersky & Klompas, 2016; Phelan, Katz & Gostin, 2020). In any case, the message of “bad” and “unpleasant” news is negatively emotionally colored for both patients and Medical Staff (Chenguang et al., 2020). That’s why the communicative interaction between them is full of different emotional concepts (Batel, 2020; Dudschig et al., 2021; Lu et al., 2019).

Karasik (1996) considers emotional concept to be at least a three-dimensional formation that contains image-perceptual (visual, auditory, tactile, taste characteristics of objects, of phenomena or events having been reflected in human memory). Emotional concept also includes the image fixed in the language system (Aleksandrov, Memetova & Stankevich, 2020; Charles, 2000; Edwards, Lee & Esposito, 2019), its definition and description, and also values or interpretive schemes (Mykhalchuk & Bihunova, 2019) (they characterize the importance of this mental education for both the individual and for the whole language community (Cilibrasi et al., 2019; Petinou et al., 2021)).
Considering the emotional concept as a value-based manifestation of direct pre-scientific knowledge of the relevant fragment of the reality (Zou, Ruan & Huang, 2020), we have to note that among the units of its mental structure the frame is dominated – it is a structure of knowledge representation, which reflects acquired information about the stereotypical situations of emotional experience (Mykhachuk et al., 2020). Scientists (Komissarova & Grechishkina, 2020; Lin & Cook, 2020) defined the algorithm of conditional formation of emotions in the language: perception or mental representation of a certain state of the person (Tabachnikov et al., 2021); its assessment (Wu & McGoogan, 2020); actual emotions as a result of this assessment – being positive or negative (Miceli & Castelfranchi, 2019); the manifestation of emotions in a case of perception of physiological reactions beyond the subject’s control (pallor, trembling), desires (to hide, to shrink), motor activity (jump up), speech activity (shout) (Bai et al., 2020).

In Psycholinguistics, emotions are studied in close connection with cognitive processes (Ehsani et al., 2016), and their connection is substantiated in such a way: cognition evokes emotions because it is emotional, and emotions affect cognition by interfering in all cognitive processes (Charles, 2000; Kalandadze, Bambini & Naess, 2019). According to the content of the linguistic concept of emotions, which is outlined when a person (a subject) reflects the environment selectively, highlighting only what is necessary or valuable to him/her at a certain point of the existence (Kimball et al, 2020; Krasavskiy, 2008). Emotional experience, like any knowledge of the world, is able to accumulate, to store, to encode and to be adequately perceived by others, implementing the genus and species experiences of the person responding to different situations (Lane, Marston & Fauci, 2016; Ranieri, Rubenfeld & Thompson, 2012). That is why in the communicative interaction of Medical Staff with patients the most important role is played by the reactions of the latter to emotional concepts, which in a great degree depend on the meanings established in this culture, and by their own previous experience according to such life situations (Tabachnikov et al., 2021).

The key concept in describing the conceptual aspect of the emotional concept is the establishment of the keyword – representative concept (Zasiekina et al., 2019). For the concept of “bad news” analyzed by us, it is a token “disease”. Patients’ reactions to bad and unpleasant
news are usually such, as: fear, anger, despair (Gorbalenya, Baker & Baric, 2020), which are generally displayed by the emotional concepts of “illness” and “death”. In the case of bad news the dominant concept is “Disease”, then when reporting about bad news the emotional concept of “deadly disease” is actualized (Huang, Wang & Li, 2020).

In the “Tlumachnyi slovnyk ukrainskoi movy” (2021) the disease is defined as a violation of the normal functioning of the organism under the influence of adverse factors of the internal and external environment; it is the illness, the disease. The etymology of this lexical unit is given in the Dictionary “Multitran” (2021): хво́рый, хвора́ть (in Russian), хво́рий, хо́рый (in Ukrainian), chvořý (in Czech), chorý (in Slovak), chory (in Polish). The famous proverb “Not death is terrible, but illness” is emphasized the negative emotional color of this concept, putting it on a par with the concept of “death”.

In the Dictionary “Multitran” (2021) the “death” is defined as the cessation of life of the organism and its death, and “deadly” when the disease leads to death, it is obvious that the results of treatment lead to death (because of a wound, a disease, etc.). The concept of “death” in the context of Ukrainian linguistic culture is verbalized in paremias involving euphemisms and metaphors, which are formed and functioned through the mechanisms of psychological protection. The mechanism of their action is to realize and use such transformed information to create mental comfort, harmony between the worlds – a real one and a desirable world (Tlumachnyi slovnyk ukrainskoi movy, 2021). They become a tool for creating and functioning in the language some euphemisms, metaphors by which we need to verbalize the context associated with death, to perform cognitive operations to convey information of the most negative content (Chen, Zhou & Dong, 2020). By the verbalization of the concept of “death” there are obvious such operations as substitution, the transfer of one concept through another one (Wu et al., 2020). It is motivated and very relevant process. Symbols and taboos are strongly maintained in the paremy fund. Often neither doctors nor patients themselves want to talk about the death in the context of a possible end to the disease, leading to even greater taboo on death, by the intensification of the traumatic experience of patients who have been told bad news (Hayden, Farrar & Peiris, 2014).

The topic of our research is very actual in today’s world in the connection with the COVID-19 virus. So, the purpose of
this research is, based on the results of our empirical research, to determine the psycholinguistic paradigms of the Medical staff – Patients communicative interaction in the conditions of COVID-19 in Ukraine and Scotland, in particular in the context of the perception of the emotional concepts by respondents. This research will be interesting for us in terms of the possibility of providing comparative analysis of psycholinguistic paradigms of the Medical staff – Patients communicative interaction in the conditions of COVID-19 in Ukraine and Scotland.

Methods

One of the basic subjects of our research is the concept of “bad news” in the context of communication between Medical Staff and patients, in particular in oncology, palliative and therapeutic (COVID) practice. The main method of our research is a psycholinguistic experiment, the main stage of which was an exemplification experiment. It is the experiment that allows us to make a specific idea of the concept, the result of which is the selection of a set of tokens representing some object.

In our case, the use of such a technique allowed us to outline the range of vocabulary included in the concept of “bad news” by ordinary Ukrainian speakers and to identify thematic groups of words that will be classified as “bad news” for further analysis of their perception and the influence on further behavior of patients in the sphere of Medicine. Respondents were offered the following instructions: “We ask you to take part in a psycholinguistic experiment. We’d like to know investigate what people mean by the term “bad news” when communicating with a Medical Staff and how they react to it. Write three “bad news”, which of them have the most negative impact on your health. Which of them is the least? Indicate your gender, age and education, the conditions of communication, as well as whether you have heard “bad news” when communicating with members of the medical community.

As additional methods we used oral interviews and questionnaires for the method of psychological diagnosis of “The Methodology for the psychological diagnostics of coping mechanisms” by Heim (n. d.), which allows us to explore 26 situations to specify options...
for coping. These situations were divided into three main groups by
of mental activities of the person, such as cognitive, emotional and
behavioral groups, which, in turn, can be adaptive, relatively adaptive
and maladaptive. Statistical data processing was performed using the
statistical software package SPSS 21.0 (frequency analysis, Mann-
Whitney test for independent samples and correlation analysis by
Pearson’s test).

Participants

The participants of our research were: 344 respondents of
Cherkasy, Uman and Kyiv (Ukraine) and 236 respondents of Scotland
(England). All of them were with different levels of education and
professional activity. All these respondents fell ill with COVID-19.
So, we had respondents of three age groups. The first group included
students in the age from 17 to 30 years old from two educational
institutions in Cherkasy (Cherkasy National University named after
Bohdan Khmelnytskyi) and Uman (Uman State Pedagogical University
named after Pavel Tychyna) (Ukraine): 112 people (64 boys and
48 girls), more than 400 reactions were recorded. Also in this group
there were 52 students from The University of Dundee in Scotland, we
received more than 400 reactions.

The second, the adult group included respondents from 31
to 55 years old: 128 people from Ukraine (92 women and 36 men),
we received more than 560 reactions. Also in this group there were
91 Scotsmen (45 women and 46 men). In this case we received more
than 500 reactions.

We included Ukrainians and Scotsmen in age from 56 to 77 years
old to the eldest age group (the third one): 104 people from Ukraine
(62 women and 42 men), more than 300 reactions were received;
93 Scotsmen (49 women and 44 men), more than 360 reactions we
had had. Respondents from Ukraine, who are native speakers, had no
philological and/or medical education, and almost 100% of respondents
consider themselves bilingual, people, who are equally fluent both in
Ukrainian and Russian; 68.0% of respondents believe that they have
a sufficient level of English. Respondents from Scotland also had no
philological and/or medical education; 100% of respondents consider
themselves bilingual, people, who are equally fluent both in Scottish
and English; 63.0% of respondents underlined that they know well
English-Scottish language; and only 1.0% of Scotsmen said that they could speak Gaelic.

The research was organized during April – September, 2021. It should be noted that 100% of respondents who participated in our research at the time of the beginning of the research were once re-infected with COVID-19. At the same time, 35.0% of respondents had a fairly mild form of the disease (two weeks were treated at home, the symptoms of COVID-19 did not differ significantly from the symptoms of influenza or acute respiratory disease). 36.0% of respondents had a course of moderate disease, were treated at hospital, after the disease they had some complications of the heart and lungs. 29.0% of respondents had a very severe course of COVID-19 disease, were at hospitals under ventilators.

**Results**

The empirical results of our research of psycholinguistic paradigm of the Medical staff – Patients communicative interaction in the conditions of COVID-19 in Ukraine and Scotland were presented in the repository “Social Science Research Network (SSRN)” (Mykhalchuk, 2022).

At once we should note that all groups of respondents received the same results according to empirical methods, which do not allow to claim a statistically significant difference in the results of respondents from all groups who were ill with COVID-19. This allows us to draw a statistically significant conclusion that regardless of the course of the disease patients with COVID-19 are equally negative about any other illness. Cognitive, emotional and behavioral responses to the disease of all these respondents are equally significant by t-Student’s criterion at 5.0% level of confidence.

First of all, the results of the psycholinguistic experiment revealed the following associations of Ukrainians with the word “bad” (Table 1).

Ukrainian respondents chose the word “lousy” as the main association with the word “bad”, which is defined in the “Tlumachnyi slovnyk ukrainskoi movy (2021) as “sick with scabies”; “scabies” is the collective name of human mycoses (fungal diseases of the skin, hair and nails), in which the skin usually has a hard crust, such as
the definition of “lousy” contains a reference to the infectious disease, which is also visible to other people. Another association is relevant to the respondents by the word “lousy”, which is interpreted as “smeared”, filled some “dirtiness polluted”, “poor disgusting”. The word “lousy” also means “pollution, which is visible”, “pollution, which should be avoided”, and in case of appearance “it is hidden from others”.

Table 1
The Associations of Subjects of Different Ages with the Word “bad”

<table>
<thead>
<tr>
<th>Associations</th>
<th>17–30 years old</th>
<th>31–55 years old</th>
<th>56–77 years old</th>
<th>Totally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lousy</td>
<td>86 (76.78%)</td>
<td>89 (69.53%)</td>
<td>73 (70.19%)</td>
<td>248 (72.09%)</td>
</tr>
<tr>
<td>Cheesy</td>
<td>72 (64.29%)</td>
<td>76 (59.38%)</td>
<td>81 (77.88%)</td>
<td>229 (66.57%)</td>
</tr>
<tr>
<td>Nasty</td>
<td>64 (57.14%)</td>
<td>72 (56.25%)</td>
<td>58 (55.77%)</td>
<td>194 (56.39%)</td>
</tr>
<tr>
<td>Dying</td>
<td>46 (41.07%)</td>
<td>51 (39.84%)</td>
<td>42 (40.38%)</td>
<td>139 (40.41%)</td>
</tr>
<tr>
<td>Unhappy</td>
<td>71 (63.39%)</td>
<td>44 (34.38%)</td>
<td>23 (22.12%)</td>
<td>138 (40.12%)</td>
</tr>
<tr>
<td>Ill-favored</td>
<td>38 (33.93%)</td>
<td>37 (28.91%)</td>
<td>18 (17.31%)</td>
<td>93 (27.03%)</td>
</tr>
</tbody>
</table>

The word “ugly” has a similar definition, that is a subject that is “disgusting”, “ugly”. The key word in its meaning is “shame”, it must be felt by a very bad, ugly person. Much fewer respondents associate “bad” with “stupid”, often with “dangerous”. “Unhappy” is associated with something which “brings grief”, “misfortune”. “Ugly” is also perceived with “lousy”. “Ugly” and “infamous” refer to the defects of appearance, which should be hidden and which should be ashamed. Also we have to note that the youngest respondents often associate “bad” with “unhappy”, which “causes grief”, “unhappiness”, “destroys life plans”, while for the eldest respondents this association is not so relevant.

Another key lexical unit for our research of Ukrainian respondents is the word “news”. The results of the psycholinguistic experiment are given in Table 2.

Most often Ukrainian respondents associate the word “message” with news, notifications, provision of information orally or in a writing form. In interviews respondents noted that written notifications are usually best received, but when receiving “bad news” patients prefer oral communication, when it is possible to ask questions and get answers immediately. The negative meaning of “a message”, “a notification” as a warning of a threat or danger should also be emphasized. The word “information” for the respondents was more neutral, it is perceived
only as information about any events, someone’s activities. To inform patients about the state of their health involves the doctor to report only the facts, the current situations, without the wish to take into account the potential emotions of the respondents about the news having been heard. Similar to this it is the word “news” as news about someone or something, but in this case it is negatively defined by “the last event”, in general in the phrase “the last news” is a reference to the situation of uncertainty. We proved that for respondents it is better to get some news than not understanding what happens. The association “change” refers to the transition from one state to another, in a case of the transformation of something, in our case it is about the news, their deterioration or improvement of the situation and more broadly it emphasizes the person’s need to adapt to a new health situation.

Table 2
The Associations of Subjects of Different Ages with the Word “news”

<table>
<thead>
<tr>
<th>Associations</th>
<th>17–30 years old</th>
<th>31–55 years old</th>
<th>56–77 years old</th>
<th>Totally</th>
</tr>
</thead>
<tbody>
<tr>
<td>A message (a notification)</td>
<td>108 (96.43%)</td>
<td>113 (90.41%)</td>
<td>96 (92.31%)</td>
<td>317 (92.15%)</td>
</tr>
<tr>
<td>The information</td>
<td>92 (82.14%)</td>
<td>81 (63.28%)</td>
<td>75 (72.12%)</td>
<td>248 (72.09%)</td>
</tr>
<tr>
<td>The event</td>
<td>71 (63.39%)</td>
<td>63 (49.22%)</td>
<td>52 (50.0%)</td>
<td>186 (54.07%)</td>
</tr>
<tr>
<td>The latest news</td>
<td>58 (51.79%)</td>
<td>68 (53.13%)</td>
<td>46 (44.23%)</td>
<td>172 (50.0 %)</td>
</tr>
<tr>
<td>A change</td>
<td>34 (30.36%)</td>
<td>77 (60.16%)</td>
<td>32 (30.77%)</td>
<td>143 (41.55%)</td>
</tr>
</tbody>
</table>

Thus, analyzing separately the associations of respondents of different ages with the words “bad” and “news” we can conclude that they are perceived as “lousy, poor messages”. These associations negatively affect health, appearance and should be hidden from others, in order not to “blush with shame” because of their explication. As for the associations with the concept of “bad news” in the context of communicative interaction in the system “A Doctor – A patient”, the results of the psycholinguistic experiment there were presented by us on Fig. 1.

If in a case of some words the frequency distribution of associations in different age groups was statistically insignificant ($r = 0.2034$, $p<0.001$), then in this case there were significant differences between the results. Thus, for respondents in age from 17 to 30 years old, “bad news” heard from Medical Staff is associated primarily with
pain (94.64%), suffering (90.18%) and death (93.75%). Young people are afraid not a death, and stretched at the end of their life, accompanied by severe pain; in addition, young people are afraid of losing the ability to move (87.50%), they are frightened by the prospect of injury, which increases the feeling of hopelessness (86.61%) in the process of perception of “bad news”. The data obtained are proved by the results of conversations with participants in hostilities in the Eastern Ukraine (Melnik & Lukomska, 2019), who were ill for COVID-19, when they were young people who said they were afraid of being captured, tortured, and not quickly die on the battlefield. Similar results were found in a case of people in age from 31 to 55 years old, who in addition to the process of dying (92.19%) associated “bad news” with despair, loss of hope for their future (79.69%) and a great pain (76.56%). We’ve to note that young people have statistically significantly more associations with “bad news” than those patients in the age from 31 to 55 years old and from 56 to 77 years old (г = 0.4856, ρ<0.05). The eldest participants in our research associated “bad news” with suffering (92.31%) and illness (82.69%), they are less afraid of death (25.00%) and the process of dying (55.77%).

Figure 1
The results of a psycholinguistic experiment according to the concept of “bad news” (in %)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>75.29</td>
</tr>
<tr>
<td>Cancer</td>
<td>49.71</td>
</tr>
<tr>
<td>Suffering</td>
<td>81.69</td>
</tr>
<tr>
<td>Impossibility to move</td>
<td>60.17</td>
</tr>
<tr>
<td>Lack of oxygen</td>
<td>51.74</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>68.02</td>
</tr>
<tr>
<td>Disease</td>
<td>59.88</td>
</tr>
<tr>
<td>Loss of organ</td>
<td>45.64</td>
</tr>
<tr>
<td>Adynamia</td>
<td>35.17</td>
</tr>
<tr>
<td>Invalidity</td>
<td>35.47</td>
</tr>
<tr>
<td>Suicide</td>
<td>37.79</td>
</tr>
<tr>
<td>Disappointment</td>
<td>18.31</td>
</tr>
<tr>
<td>Euthanasia</td>
<td>12.79</td>
</tr>
</tbody>
</table>
Summarizing the results of the psycholinguistic experiment in Ukraine, we’ve to emphasize that for all respondents, regardless of their age, “bad news" in the interaction in the “Medical Staff – A patient” system is associated with the severe pain (physical suffering), slow death, and therefore they didn’t see perspectives for their future, to experience despair and a need to realize the finiteness of their existence. All these types of experiences are combined with feelings of sadness, resentment, pain. Almost all associations of respondents have a negative emotional color associated with a need to understand the meaning of “bad news” and their impact on later life, however, we noticed that many associations were not nouns or adjectives, but they were verbs, so we’d like to analyze their frequency in a case of respondents of different ages (Fig. 2).

**Figure 2**
*Verbs-Associations in the Communicative Interaction of Medical Staff and Patients in the Conditions of COVID-19 in Ukraine (in %)*

Among the main associations of Ukrainians we should note a lexical unit “to die”, which is the most frequent characteristics of the youngest respondents. In addition their behavior is also characterized by a reaction of “fear” – “to be scared”, “to fade” (relevant for people from 31 to 77 years old), “to complain”, “to suffer” (they are typical for
respondents of 31–55 years old). The analysis of the verb associations revealed two positively emotionally colored words – “to fight” and “to fight with the illness, a crisis”. In such a way the perception of “bad news” does not only negatively affect the person’s future life, but also activates its adaptive behavior (the preservation of self-control, cooperation, problems’ analysis). These data are received by us with the help of the results of correlation analysis provided by use of “The Methodology for the psychological diagnostics of coping mechanisms” of Heim (n. d.). In some a way respondents in the age from 17 to 30 years old actualized “bad news” with such adaptive cognitive coping as “preservation of self-control” \((r = 0.5207, \rho < 0.05)\), “problem analysis” \((r = 0.4621, \rho < 0.05)\), “positive emotional state” or “optimism” \((r = 0.5032, \rho < 0.05)\) and “behavioral problems” or “problems in cooperation” \((r = 0.8385, \rho < 0.01)\).

Instead of these results, respondents in the in the age from 31 to 55 years old underlined their “activation of adaptive cognitive and behavioral coping” or “the preservation of self-control” \((r = 0.4998, \rho < 0.05)\), “cooperation” \((r = 0.9325, \rho < 0.01)\) and “relatively adaptive behavior” or “the search for meaning in the action of people” \((r = 0.9042, \rho < 0.01)\), “constructive activity” \((r = 0.7739, \rho < 0.01)\), “distraction” \((r = 0.7099, \rho < 0.01)\). For the eldest group of subjects, the perception of “bad news” is mainly associated with “maladaptive emotional coping” or “self-blaming” \((r = 0.8523, \rho < 0.01)\), “humility” \((r = 0.4991, \rho < 0.05)\) and “relatively adaptive behavioral” or “distraction” \((r = 0.8066, \rho < 0.01)\), “compensation” \((r = 0.7043, \rho < 0.01)\). That is why, in the addition to negative associations and emotions caused by them the perception of “bad news” in the communication with medical staff leads to the actualization of adaptive resources of patients, the adaptation to life crises and search for new treatment options or current or future status.

So, the form and circumstances of reporting “bad news” by Ukrainian respondents who were ill on COVID-19, play a great, the most important role, such as the activation of adaptive behavior in the opinion of patients who were contributed to situations where “the doctor gives options for treatment and describes each of them in details” (94.77%), “the doctor reports the diagnosis and/or underlines features of treatment personally for the respondent, not by phone or e-mail” (89.83%), “the doctor who reports the diagnosis will continue to treat
or refer to a specialist in this field of practice” (organize the necessary contacts with doctors)” (85.47%), “the doctor has time to answer the patient’s questions” (82.27%).

Also during 2021 according to a scientific grant project “To modelate a system of psychological adaptation of young people to the conditions of interaction with the society during the pandemic COVID-19 and other pandemics” we organized the research at Western General Hospital in Edinburg (Scotland), where we also had three groups of patients (the age of respondents was the same one, as in a case of patients in Ukraine, and this fact allowed us to increase the reliability of our results significantly).

The results of respondents of all age groups were similar, we did not get a statistically significant difference in the results of respondents of all three groups by the Student’s t-criterion at the level of reliability \( p<0.01 \). Let’s analyze the lexical units connected with the lexical unit COVID-19 in the psycholinguistic paradigm, which is a great value for our research.

So, we’d like to say that the respondents who were treated at Western General Hospital in Edinburgh (Scotland) associated all their negative emotions, negative attitudes towards the disease with the concept of “fear”. The meaning of the word “fear” in the condition of the patient in a situation of disease on COVID-19, is associated with the Greek peira (‘peria) “the experience” and the Latin experiri “to try, trying” (Dictionary “Multitran”, 2021). However, due to the situation with COVID-19 disease, the structure of the emotional concept of “fear” has undergone accent shifts that have led to a rearrangement of some nuclear-peripheral elements of this lexical unit.

Thus, respondents of all age groups who were treated at Western General Hospital in Edinburgh (Scotland) recorded categorically different aspects of the unit “fear” by derivative word-forming units which explain:

(a) a personal state of the individual: synonymous adjectives “fearful” and “fearsome” – full of fear; frightened that COVID-19 might happen (full of fear; frightened by the fact that COVID-19 can occur with him/her) and the lexical unit “fearable” – “to be frightened of COVID-19” (or “to be frightened by COVID-19”); noun synonyms “fearsomeness” and “fearfulness” – denote the quality or a state of being
affected with fear because of COVID-19 (a state of fear as a result of COVID-19);

(b) *traits of the character of the person* (which in 96.69% of cases belonged to the Medical Staff, and only 1.54% of cases – to patients): the adjective fearless – not afraid of anything (without any fear) and the noun fearlessness (not to feel fear, feel fearlessness);

c) *negative assessment of the threat object*: “fearful” – extremely bad; very frightening of COVID-19 (very frightening because of there is epidemic of COVID-19); “fearsome” – very frightening; “fearable” – giving cause for fear and it is substantive synonyms of “fearfulness”, “fearsomeness” – a quality of being fearsome (denoting horror, terror, nightmare);

d) *a manner of the person’s behavior*: “fearfully” – in a way that shows you are afraid of COVID-19 (to act, to behave in a certain way, showing your fear of COVID-19) or “fearfully”, “fearsomely” – in a fearsome manner because of the situation with COVID-19 (threatening, by instilling fear as a result of the situation with COVID-19) (*negative labeling*) and “fearlessly” – in a way that shows you are not afraid of COVID-19 (to act, to behave himself/herself) in a certain way, without showing fear towards COVID-19 (*positive labeling*).

Consequently, in contemporary English categorically different aspects of lexical unit of “fear”, connected with the situation with COVID-19, are fixed by derivative word-building units, which explicate: the state of the person; features of the character of the person; negative evaluation of the object of the threat; the manner of the person’s behavior.

The semantic structure of units for the designation of emotions also contains axiological seven, as a result of the affected person’s assessment of a certain fragment of the surrounding world and the role of a particular emotion in the person’s life, in particular in some period of space-time. In the semantics of lexical units of the nominative space of the emotional concept of “fear”, in addition to denotative features, there are seven evaluative ones, which indicate the presence of the connotative aspect of fear-meaning. By connotation we mean a semantic entity that is constantly or occasionally included into the meaning of a language unit and expresses the evaluative and stylistically marked
attitude of the subject of speech to reality in a case of its designation in the utterance, which receives an expressive effect. The connotation in the form of a negative evaluation, fixed by the differential semes of unpleasant and painful (emotion/feeling) lexical units denoting fear, accompanying a large number of units of the lexical-semantic field “fear”, and this field is vaguely explicit (except of lexical units of far and marginal periphery). So, the psycholinguistic paradigm of the lexical-semantic field “fear” refers to conditionally neutral vocabulary. Vocabulary interpretations of the lexical unit “fear” and nominations of all other forms of emotions do not record its positive role as a signal of danger and they are given the need to eliminate or avoid it. Therefore, the positive evaluation scheme, which reflects the extreme importance of fear in a human life, is on the periphery of the emotional concept of “fear” and it is significantly exacerbated by the situation associated with COVID-19.

Thus, these generic and differential features inherent in the lexical unit “fear”, including evaluative components, are prototypes for understanding the emotion connected with “fear”. Therefore, this lexical unit denotes the central part of the conceptual-semantic structure of the emotional concept of “fear”, and, accordingly, it is the center of the lexical-semantic field “fear”, which groups of the lexical system of the language means of presenting the concept in English in the situation connected with COVID-19.

In establishing and describing the organizational relationships that characterize the nominatives of the nominative space of the emotional concept of “fear”, we assume that the basic nominees of emotions have the linguistic status of hyperonyms, while other nominees of emotions of one ontology appear as hyponyms. Thus, the relationships of synonymy between lexical units are as one or neighboring levels of the hierarchy. This position is based on the fact that in contrast to the objects of the world, which, due to their specificity, fit into the natural taxonomy of humanized consciousness, emotional states do not have a discrete nature and they are characterized by variability of their characteristics, transition to other states of the person, and hence the complexity of their awareness and denoting. Therefore, the abstractness of emotions, fixed by the semantics of emotional nominees, allows us to talk about other ways of placing such nominations in the lexical system of the English language.
Discussions

Theoretical and empirical research made us possible to clarify the basic concepts which revealed the essence of the interaction of Medical Staff and patients, as well as we understood the question of the traditional notion that any news was of interest to their recipients. From the point of view of Cognitive Psychological Theories, cognitive activity is a cognitive processing of perceiving the information by the person, during which the subject of the activity to some extent predicts its intermediate and final results (Miceli & Castelfranchi, 2019). In Psycholinguistics, this process is commonly referred to as “probabilistic prediction”. A great interest is arisen as a result of inconsistency of the individual's predictions about the perceived information and arouses a great desire to achieve its agreed understanding (Noordewier, Topolinski & Van Dijk, 2016). However, in the case of the perception of news about their health, patients are updated protective mechanisms and coping strategies with the aim of protecting the individual from potentially traumatic information.

Usually doctors are faced with the dilemma of “truth versus hope” when communicating with patients, because in everyday consciousness the doctor embodies the hope of recovery. So, a well-known proverb “better bitter truth than sweet lies” in this context is quite contradictory because of a high probability of imminent death, accompanied by severe pain and / or suffocation, which are always traumatic, and the patient in addition to the experience of loss of his/her health also receives psychological trauma, especially if “bad news” is reported incorrectly. Usually doctors solve this dilemma by “honestly ... though not directly”, which is linguistically expressed in the selective use of implicit lexical units, the meaning of which are made by the recipient himself / herself, and not directly indicated by the speaker. The significance of “bad news” for a patient may be quite different from their medical or personal significance for Medical Staff. Also the initial reactions of patients can be divided into three categories: basic psycho-physiological (fight-escape or save-retreat), cognitive and affective ones. These reactions vary considerably depending on the significance of the diagnosis for the person, the degree of imminent threat to life and previous experience of experiencing the disease.
Conclusions

Psycholinguistic analysis of the communicative interaction of Medical Staff with patients in the conditions of COVID-19 in Ukraine in the context of diagnosis and reporting of so-called “bad news”. We diagnosed that young people in the age from 17 to 30 years old described themselves as someone related to the process of dying from severe pain. In fact death as a cessation of life does not cause fear and it is only partially associated with “bad news”. Similar results were found for the age group of people of 31–55 years old, for which the key is also “death” (slow death), accompanied by pain and suffering. This “suffering” is the most important sign of “bad news” and if for young people and middle-aged respondents they are mainly physically (s somatically) conditioned, then for the subjects from 56 to 77 years old “bad news” are associated with loneliness, psychological experiences that exacerbate physical pain. In addition, the associations concerned the inability to move, loss of organ, helplessness and hopelessness.

We suggest that Ukrainian patients’ perception of “bad news” should be divided into two phases: the first one is existential. It is characterized by fear, despair, destruction of life plans. The second phase is mobilization, when personal resources are activated, including their adaptive and relatively adaptive coping, and “bad news” is a trigger for fight with the disease COVID-19. All subjects, regardless of their age, have adaptive emotional, cognitive and behavioral coping strategies that allow the patients to adapt to the “bad news” and focus their attention on improving their quality of life in general.

Thus, given the fact that respondents in Scotland (at Western General Hospital in Edinburgh) think that archilexem of “field” is a diffuse unit with many meanings, which indicate the denotative affiliation of the analyzed words. Also we state that lexical unit “fear of COVID-19” plays the role of hyperonym for all other synonyms and other lexical units which have the function of nominees of fear. We are talking about the conceptual structures of the meanings of synonyms that denote the forms of prototype emotion “a fear of getting sick with COVID-19”. Concentrating around fear, they differ in the intensity of experiences and the actual quality of the signs. These synonyms are of high level of abstraction, pointing to a rather complex and specific
object of study, play the role of equonyms – such units of the same class, which include the semantic meaning of the hyperonym and are opposed to each other by corresponding differential semes.

The informational structure of the emotional concept of “fear” in establishing and describing the organizational relationships that characterize its emotive relations of synonymy between units of one or adjacent levels of hierarchy. This position is based on the fact that in contrast to the objects of the world, which, due to their specificity, fit into the natural taxonomy of humanized consciousness, emotional states do not have a discrete nature, they are characterized by diffusion, variability of their characteristics, flow into other states and hence the complexity of their awareness and naming. Therefore, the abstractness of emotions, captured by the semantics of emotional nominees, makes us possible to talk about other ways of placing such nominations in the lexicon of the English language. These issues will be studied in detail in our further articles.

We also see the perspectives of our further researches in providing the medical discourse analysis, in particular in palliative care which is implicated by the concepts of “viability” and “personal growth” during and after serious illness, such as the disease COVID-19.

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**Adherence to Ethical Standards**

**Ethics declarations.** We’ve followed the ethical standards of the empirical research (we’ve obtained the informed consent of potential participants in the experiment to voluntarily participation in the research). Ethical principles were followed in the process of conducting the empirical research: the principle of voluntary consent; the principle of minimizing risks for participants; the principle of confidentiality; the principle of informing participants about the content of the research; the principle of mandatory documentation of the stages and the results of the research; the principle of reliability of methodical instruments of the research having been conducted; the principle of validity of research data processing.

The ethical examination of the conducted empirical research was carried out and it was approved by the Committee on Ethics of Scientific Researches of the Public Organization “National Academy of Sciences of Higher Education of Ukraine”. The study was conducted according to the guidelines of the Declaration of Helsinki (1964).

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Conflicts of Interest. The authors declare no conflict of interest.

Author contributions. Mykhalchuk N.: the idea, modeling of the theoretical concept and general design of the research, formulation of goals and objectives of the research, general organization of empirical research, writing abstracts to the article, reviewing and editing the article, preparation of the final version of the manuscript, submission of data to the international repository. Zlyvkov V.: preparation of the initial version of a manuscript, planning and managing the implementation of experimental activity, selection of stimulus material, drawing up a list of sources used in the APA style. Lukomska S.: organizing the experiment, the development of software, data collection and analysis, interpretation of data of the research, preparation of tables and figures in their original form. Nabochuk A.: preparation of documents and collection of informed consent from potential participants of the experiment, I’m responsible for compliance with ethical standards of the experiment, collection and analysis, interpretation of data of the research, finalization of tables and figures, mathematical and statistical processing of empirical data. Khrystych N.: planning and managing the implementation of experimental activity, selection of stimulus material; data collection and analysis, interpretation of data of the research.

All authors commented on previous versions of the manuscript. All authors have read and approved the final version of the manuscript.

References


Мета. Мета дослідження полягає в тому, щоб базуючись на результатах емпіричного дослідження, проведеного в лікарнях України і Шотландії, визначити психолінгвістичну парадигму комунікативної взаємодії медичних працівників з пацієнтом, зокрема в контексті сприймання емітуревих концептів.

Методи. Основним методом дослідження був психолінгвістичний експеримент, головним етапом якого поставав екземплярфікаційний експеримент — такий, що дозволяє скласти конкретне уявлення про поняття, результатом якого є виділення комплексу лексем, які репрезентують досліджуваний об’єкт.

У якості додаткових методів використано усне опитування та анкетування за “Методикою психологічної діагностики копінг-механізмів” Е. Хейма (2022).

Результати. Серед основних асоціацій українців слід виділити “вмирати”, що найбільшою мірою є властивою наймолодшим респондентам у віці від 17 до 30 років. Респондентам також є властивою реакція страху − “перелякатися”, “згасати” (актуальна для осіб від 31 до 77 років), “жалітися”, “страждати” (ці концепти є характерними для 31–55-річних респондентів). Респонденти всіх вікових груп, які лікувалися в Західній загальній лікарні в Единбурзі (Шотландія) категоріально різні аспекти одиниці “страх” фіксували похідними словотвірними...
одиницями, які експлікують: стан індивіда (синонімічні прикметники “страшний” та “страхітливий” – повний страху; риси характеру індивіда (які у 96.69% випадків відносилися до медичного персоналу, і лише у 1.54% випадків – до пацієнтів); негативну оцінку об’єкта загрози; манеру поведінки.


Ключові слова: психолінгвістична парадигма комунікативної взаємодії медичних працівників з пацієнтами, COVID-19, сприйняття пацієнтами “поганих новин”, архілексема поля “страх”, номінанти страху, прототипова емоція “страх захворіти на COVID-19”.