A COMPARATIVE STUDY OF HEALTH IN NEWSPAPER ARTICLES OF THE 1980S AND 2000S: A CORPUS BASED ANALYSIS

The notion of health is of vital importance for the society. The research analyses and compares the corpora processed with the help of Sketch Engine. The collocations with HEALTH taken from The Guardian 80 and modern as well as The Mirror 80 and modern are in the focus of corpus linguistics and critical discourse analysis. While the analysis such research methods were used as: discourse and critical analyses are used to study collocations with HEALTH in British broadsheets and tabloids; corpus analysis – to single out key words representing HEALTH in the corpus broadsheets and tabloids; contextual-interpretative analysis – to establish specifics features of discursive representation of the collocations with HEALTH in the media discourse and tabloids; quantitative analysis – to interpret and compare results obtained. The collocations chosen for this research are nouns modified by HEALTH. The n-grams show the differences and similarities as for the health collocations in The Guardian 80/The Mirror 80, The Guardian modern/The Mirror modern as well as The Guardian 80/The Guardian modern and The Mirror 80/The Mirror modern. The findings of the study show top health collocations, such as health care, health problem, health benefit, health issue, health expert, health support. The frequency of their being used in the newspaper discourse can vary in the broadsheet or the tabloid. Besides, newspaper discourse accentuates certain problems revealed in the life of the society either in the 80s or nowadays. The research reveals the health collocation differences between two different newspapers as well as between the newspapers with the same name at different times. The analysis shows that the newspaper discourse reflects the idea promoted by the societal health approaches.

Keywords: corpus linguistics, Sketch engine, corpora, The Guardian, The Mirror, HEALTH collocations.

Sivaieva Olga. Comparative analysis of the concept of health in newspaper articles of the 1980s and 2000s. The research analyzes and compares the corpora processed with the help of Sketch Engine. The collocations with HEALTH, which were extracted from the corpus of The Guardian 80 and modern as well as The Mirror 80 and modern, are in the focus of corpus linguistics and critical discourse analysis. While the analysis used such research methods as: discourse and critical analyses are used to study collocations with HEALTH in British broadsheets and tabloids; corpus analysis – to single out key words representing HEALTH in the corpus broadsheets and tabloids; contextual-interpretive analysis – to establish specific features of discursive representation of the collocations with HEALTH in the media discourse and tabloids; quantitative analysis – to interpret and compare results obtained. The collocations chosen for this research are nouns modified by HEALTH. The n-grams show the differences and similarities as for the health collocations in The Guardian 80/The Mirror 80, The Guardian modern/The Mirror modern as well as The Guardian 80/The Guardian modern and The Mirror 80/The Mirror modern. The findings of the study show top health collocations, such as health care, health problem, health benefit, health issue, health expert, health support. The frequency of their being used in the newspaper discourse can vary in the broadsheet or the tabloid. Besides, newspaper discourse accentuates certain problems revealed in the life of the society either in the 80s or nowadays. The research reveals the health collocation differences between two different newspapers as well as between the newspapers with the same name at different times. The analysis shows that the newspaper discourse reflects the idea promoted by the societal health approaches.

Keywords: corpus linguistics, Sketch engine, corpora, The Guardian, The Mirror, HEALTH collocations.
1. Introduction.
In modern linguistics media discourse research is of primary importance. Media
discourse can be defined as a public form of interaction. As reality can be represented
in different ways, the interactions are possible on spoken and written platforms: in
broadcast and printed media [O’Keeffe 2006]. It should be mentioned that newspaper
discourse is paid a lot of attention to in modern linguistics, different approaches used
for investigating it and a lot of various aspects considered. So studying newspaper
discourse allows linguists to establish the priorities the society appreciates, the ways
the media communicate with the society and it also enables us to analyse the linguistic
as well as socio-linguistic means used to influence the readers. While analysing
newspaper discourse, various factors can be considered: newspaper style, the audience
addressed, the topic covered or the collocations used to present a certain topic and the
intentions they are used with.

2. Aim and Objectives.
The aim of the article is to compare collocations with HEALTH based on
corpus analysis in British broadsheets and tabloids.

To do the research the four corpora were created and processed with the help of
modern ones. The corpora consist of the articles taken from The Guardian newspapers
of the 80s, The Guardian modern newspapers, The Mirror newspapers of the 80s and
The Mirror modern newspapers.

Doing the quantitative and the qualitative study of the newspaper discourse
involves corpus linguistics as a method of analysis and Critical Discourse analysis.
Besides, the comparative analysis is used to identify similarities and differences the
corpora reveal.

4. Theoretical Background.
Studying newspaper discourse modern linguists exploit corpus linguistics as a
unique method of getting the data expected. Corpus linguistics research helps to obtain
the data that are impossible to be received using any other ways. In fact, it enables the
understanding of how the languages work. Thus, it assists linguist in establishing the
distribution of linguistic forms and in calculating the frequency of using them.
Furthermore, corpora offer extensive information on various senses a lemma possesses
depending on different patterns possible. Besides, corpora help to analyse semantic
prosody [King Tong 2005].

To be more specific, I should accentuate the fact that corpus linguistics is
considered to be a methodology helping to get and analyse the quantitative and
qualitative language data. Likewise, a corpus-based analysis can assist you in studying
any language patterns, showing their frequency and revealing contextual factors which
can have an impact on the variability [Krieger 2003]. Furthermore, a corpus-based
research makes it possible to compare two or even more corpora of certain discourse
types, which enables us to establish their specific features as well as differences and
similarities.

In addition, the methods and the means necessary for the scrupulous
comparative study are actually presented by corpora [Partington 1998]. Special
attention should be paid to the fact that it is possible to investigate corpora using various tools, which enables the receiving of reliable data fast. On the one hand, the frequency data can be presented showing how often a certain lemma is used. On the other hand, the qualitative analysis is also possible.

Corpus-based research happens to be truly exemplary for researching newspapers. With the help of corpora, we can reveal similarities and differences even if the same newspapers are considered [McEnery & Hardie 2011, pp. 1–25]. Analysing corpora involves the necessity to show representativeness, to offer examples as well as getting working data [Fries 1994, pp. 229–249].

It should be mentioned that modern corpus linguistics is sure to deal with collocations. That is why in corpus linguistics collocations are of primary importance if it concerns the structure of the language as well as the meaning. There are a lot of various definitions of collocations. Thus, collocations are defined as «the habitual and recurrent juxtaposition of semantically related words» [Evert 2008, pp. 12]. Various collocations can reveal various structures, their constituents considered, and syntactic and semantic relations connecting their constituents. Besides, the notion of collocation can be even characterized as a combination of two words [Bartsch 2004, pp. 198–214].

As our research is devoted to the HEALTH notion in media discourse and to HEALTH collocations in the above mentioned discourse, we should pay special attention to the societal aspect of HEALTH concept in the modern world.

So HEALTH has always been one of the major concepts ever considered. «Health is one of the most fundamental conditions of life» [Kelleher & MacDougall 2016]. WHO study group has presented the operational definition of HEALTH as a «condition or quality of the human organism expressing the adequate functioning of the organism in a given condition, genetic or environmental» (HEALTH (а)).

In the modern society there are various approaches to understanding HEALTH as soon as different aspects are focused on.

Thus, the behavioural approach works on changing risk factors and improving lifestyle behaviours. Likewise, the determinants approach places social problems and health in the broader social, cultural and structural conditions of our society and assists public health and health promotion approaches. Whereas, the health promotion approach focuses on helping people to improve their health as well as keeping control over it. The public health approach deals with protecting people’s health and prevention measures [HEALTH (b)].

It should be mentioned that linguistics has got a lot to offer to health care [Demjén 2020]. Thus, the Tips From Former Smokers campaign encouraged 500,000 Americans to quit smoking, which was possible due to the perfect combination of powerful messages, high-frequency usage and an easy to understand call for action [Krisberg 2011].

So it must be considered that mass media is crucially important for educating people and providing certain information about the major events or the main changes happening in the society. Mass media can really influence people’s knowledge and their willingness to develop a healthy lifestyle. The prime target of health education is to encourage individuals and communities to change their behaviour by having an impact on their beliefs, attitudes and values systems [Sharma 2015, pp. 55–61].

5. Results.

The research is devoted to corpus analysis of the newspaper discourse. At the beginning of the research four corpora were created with the help of Sketch Engine program [Sketch Engine]: The Guardian 80 corpus, The Mirror 80 corpus, The Guardian modern, The Mirror Modern corpora. The study is focused on the
collocations with HEALTH taken from all the corpora mentioned above. From among a variety of collocation types given by the n-gram, we choose one certain type to be analysed carefully: Nouns modified by HEALTH. So we can see what collocates are used with HEALTH (HEALTH + Noun) in the broadsheet (The Guardian) and the tabloid (The Mirror) and what the usage frequency is. Furthermore, we can present the similarities and difference comparing the corpora: The Guardian 80 and The Mirror 80, then The Guardian modern and The Mirror modern. Finally, we can show and analyse diachronic data obtained through comparing The Guardian 80 / The Guardian modern and The Mirror 80 / The Mirror modern.

So the n-gram below shows the nouns most frequently modified by HEALTH (the lemma chosen) taken from The Guardian 80.

Fig.1. The n-gram of collocations with HEALTH (Nouns modified by HEALTH) in The Guardian 80

The table below demonstrates the nouns most frequently modified by HEALTH in The Guardian 80. As we see, the collocate occurring most often is ‘care’.

We anticipate that the current push toward universal network access for all Americans will provide vast new opportunities in health care as well as in other areas of commerce and industry.

<table>
<thead>
<tr>
<th>The Guardian 80</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>care</td>
<td>17</td>
</tr>
<tr>
<td>provider</td>
<td>9</td>
</tr>
<tr>
<td>problem</td>
<td>8</td>
</tr>
<tr>
<td>system</td>
<td>6</td>
</tr>
<tr>
<td>status</td>
<td>4</td>
</tr>
<tr>
<td>service</td>
<td>4</td>
</tr>
</tbody>
</table>

Tab 1. The nouns modified by HEALTH in The Guardian 80

Next, the n-gram below shows the nouns most frequently modified by HEALTH (the lemma chosen) taken from The Mirror 80.
The table below demonstrates the nouns which are most often modified by HEALTH in The Mirror 80. As we see, the most frequent collocate is spending. Another way to look at relative health spending is to look at how much of a country’s national income is spent on health care. What is interesting about this example is that here you can see two most frequent nouns modified by HEALTH identified in one sentence: spending and care.

<table>
<thead>
<tr>
<th>The Mirror 80</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>spending</td>
<td>29</td>
</tr>
<tr>
<td>care</td>
<td>27</td>
</tr>
<tr>
<td>system</td>
<td>17</td>
</tr>
<tr>
<td>performance</td>
<td>13</td>
</tr>
<tr>
<td>expenditure</td>
<td>11</td>
</tr>
<tr>
<td>outcome</td>
<td>9</td>
</tr>
<tr>
<td>professional</td>
<td>4</td>
</tr>
<tr>
<td>benefit</td>
<td>4</td>
</tr>
</tbody>
</table>

Tab 2. The nouns modified by HEALTH in The Mirror 80

Now we can compare the n-grams for The Guardian 80 and The Mirror 80 and do the quantitative and qualitative analysis of the collocations taken from the corpora mentioned above.

As we see, the noun care in the collocation with HEALTH is in position 1 for The Guardian 80 and in position 2 for The Mirror 80, which proves that the idea of health care is as important for the broadsheet as for the tabloid. On the other hand, the comparison shows that the health care collocation is identified in The Mirror 80 much more often, which reveals greater concern in the society. The collocation health spending is the most frequent for The Mirror 80 whereas it cannot be even found in The Guardian 80. The issue of health problem seems to be more important for The Guardian 80 while The Mirror 80 seems to be less concerned about that. The Guardian 80 and The Mirror 80 show no quantity differences when speaking about health service, though The Mirror 80 demonstrates more serious worries about health system. Besides, it should be mentioned that the number of collocates in The Mirror 80 is twice as big as the corresponding one in The Guardian 80.

Now we can analyse and compare the collocations with HEALTH taken from The Guardian modern and The Mirror modern.
The n-gram below shows the nouns most frequently modified by HEALTH taken from The Guardian modern corpus.

![n-gram visualization](image)

**Fig. 3. The n-gram of collocations with HEALTH (Nouns modified by HEALTH) in The Guardian modern**

The table below demonstrates the nouns most frequently modified by HEALTH in The Guardian modern. As we see, the noun occurring most often in the collocations with HEALTH is service.

_The health service will feel that it has been left out in the cold._

_So much knowledge of Down syndrome in the health service has been got through outdated anecdotes, false stereotypes and unwelcome assumptions on how lives are ‘valued’._

_Special attention should be paid to the collocations with secretary, worker, professional and minister as they are the agents actively influencing health service, health issues and health support._

_She yesterday urged health secretary Matt Hancock to «sort this crisis out». _

_We had lost count of the health professionals who had asked this very question._

<table>
<thead>
<tr>
<th>The Guardian modern</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>service</td>
<td>193</td>
</tr>
<tr>
<td>problem</td>
<td>120</td>
</tr>
<tr>
<td>secretary</td>
<td>72</td>
</tr>
<tr>
<td>condition</td>
<td>51</td>
</tr>
<tr>
<td>issue</td>
<td>43</td>
</tr>
<tr>
<td>worker</td>
<td>35</td>
</tr>
<tr>
<td>minister</td>
<td>34</td>
</tr>
<tr>
<td>crisis</td>
<td>30</td>
</tr>
<tr>
<td>support</td>
<td>29</td>
</tr>
<tr>
<td>professional</td>
<td>27</td>
</tr>
</tbody>
</table>

**Tab 3. The nouns modified by HEALTH in The Guardian modern**

Next, the n-gram below shows the nouns most frequently modified by HEALTH in The Mirror modern.
Fig. 4. The n-gram of collocations with HEALTH in The Mirror modern

The table below presents the nouns most frequently modified by HEALTH in The Mirror modern. As we see, the most frequent collocate is problem, which testifies to the tabloid being really worried about the health problems in the society. «Basing self-esteem on self-sufficiency and bravery translates into minimising health problems and failing to engage in preventive care, or in delaying care», Sanchez says.

At the same time The Mirror modern is concerned about health benefit as well. In theory, fruit juice and fizzy drinks do count towards your water intake, but some of them have lots of sugar and calories, which can reduce the health benefits of their extra fluid.

The examples of the collocations with health expert are the following: We asked a health expert to share their thoughts. «In life, there’s always a solution to a problem», says Professor Cary Cooper, an occupational health expert at the University of Lancaster.

<table>
<thead>
<tr>
<th>Tab 4. The nouns modified by HEALTH in The Mirror modern</th>
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<tbody>
<tr>
<td>The Mirror modern</td>
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<tr>
<td>problem</td>
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<tr>
<td>benefit</td>
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<tr>
<td>expert</td>
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<tr>
<td>issue</td>
</tr>
</tbody>
</table>

Now we can compare The Guardian modern and The Mirror modern and do the quantitative and qualitative analysis of the collocations taken from the corpora mentioned above. The comparative table given below illustrates the nouns most frequently used with the HEALTH modifier in The Guardian modern and The Mirror modern. As we see, the noun problem in the collocation with HEALTH is in top position for the broadsheet as well as for the tabloid, which proves that the awareness of health problem is of primary importance and concern for both newspapers. However, we can state that The Guardian modern is more anxious about the problems of health in the
society as its number of health problem collocations is five times as big as the corresponding one in The Mirror modern.

At the same time, we can point out a number of other similarities and differences established.

First, such collocations as health condition, health issue, health crisis and health professional are identified in both newspapers, though they are much more often used in The Guardian modern. It shows that The Mirror modern is less willing to write about the health matters worrying the society.

At the same time The Guardian modern focuses more on writing about health service and even health support which is not found in The Mirror modern. Besides, The Guardian modern, as different from The Mirror modern, pays a great attention to those people who are capable of solving health problems. They are health secretary, health worker, health minister and health professional.

Besides, it should be mentioned that the number of collocates in The Guardian modern is six times as big as the corresponding one in The Mirror modern.

<table>
<thead>
<tr>
<th>The Guardian modern</th>
<th>Frequency</th>
<th>The Mirror modern</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>problem</td>
<td>120</td>
<td>problem</td>
<td>25</td>
</tr>
<tr>
<td>condition</td>
<td>51</td>
<td>condition</td>
<td>7</td>
</tr>
<tr>
<td>issue</td>
<td>43</td>
<td>issue</td>
<td>11</td>
</tr>
<tr>
<td>crisis</td>
<td>30</td>
<td>crisis</td>
<td>4</td>
</tr>
<tr>
<td>professional</td>
<td>27</td>
<td>professional</td>
<td>5</td>
</tr>
<tr>
<td>service</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>secretary</td>
<td>72</td>
<td></td>
<td></td>
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<tr>
<td>worker</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>minister</td>
<td>34</td>
<td></td>
<td></td>
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<tr>
<td>support</td>
<td>29</td>
<td></td>
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</tbody>
</table>

Tab 5. The nouns modified by HEALTH in The Guardian modern and The Mirror modern compared

Now it should be mentioned that the HEALTH notion can be seen differently at different time periods. Besides, the attitude to health problems and the possibilities to solve them can change, a lot of factors considered. That is why we chose to compare the corpora diachronically: The Guardian 80 and The Guardian modern, on the one hand, and The Mirror 80 and The Mirror modern, on the other hand, analysing the collocations of nouns modified by HEALTH.

The comparative table given below presents the nouns used with the HEALTH modifier in The Guardian 80 and The Guardian modern.

First, it should be mentioned that the number of the nouns modified by HEALTH in The Guardian modern is 15 times as big as the corresponding number in The Guardian 80.

The data given in this table show that care, provider, problem, system and service are the collocates in common. We can see that the greatest attention nowadays, as different from the 80s, is paid to health service, which seems to be the most important issue for the society. The collocation next in importance nowadays is health problem. The number of such collocations in The Guardian modern is 15 times as big
as the corresponding one in The Guardian 80. Likewise, the modern society is even more concerned about health system than it used to in the 80s.

<table>
<thead>
<tr>
<th>The Guardian 80</th>
<th>Frequency</th>
<th>The Guardian modern</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>care</td>
<td>17</td>
<td>care</td>
<td>15</td>
</tr>
<tr>
<td>provider</td>
<td>9</td>
<td>provider</td>
<td>7</td>
</tr>
<tr>
<td>problem</td>
<td>8</td>
<td>problem</td>
<td>120</td>
</tr>
<tr>
<td>system</td>
<td>6</td>
<td>system</td>
<td>15</td>
</tr>
<tr>
<td>service</td>
<td>4</td>
<td>service</td>
<td>193</td>
</tr>
</tbody>
</table>

Tab 6. The nouns modified by HEALTH in The Guardian 80 and The Guardian modern compared

Now let me analyse the comparison of the HEALTH collocations used in The Mirror 80 and The Mirror modern.

First, the number of the collocates used with HEALTH in The Mirror modern is just slightly bigger than the corresponding one in The Mirror 80, which shows that health has always been paid a great attention to.

However, the newspapers mentioned show a greater concern as for health care in the 80s than in the modern world. On the other hand, the modern society worries about health problems much more than it used to in the 80s. Besides, the modern newspapers reveal less concern about health spending. Whereas, The Mirror modern writes quite a lot about health benefit as well as about health experts.

The notion of health is truly important for the society. Health can be seen and treated in different ways. That is why the society developed various approaches to HEALTH understanding depending on the aims in their focus.

This research demonstrates how discursive representation of health corresponds to the ideas of the societal approaches.

So, the examples given below demonstrate newspaper discourse projection of the public health approach aiming at protecting people’s health.

*Thus, we plan to build systems to support the health information needs of the consumers of health care rather than its providers* [The Guardian (a)].

This sentence reveals concern expressed by the health authorities and the promise to help a certain group of people. Besides, here we can see two collocations with HEALTH: health information and health care.

*We anticipate that the current push toward universal network access for all Americans will provide vast new opportunities in health care as well as in other areas of commerce and industry* [The Guardian (a)].

Here the authorities demonstrate the hope that all Americans will be supported in their needs and at the same time protected, too. One health collocation is found in this sentence, it is health care.

*Furthermore, the government plays a significant role in organizing and operating the delivery of health care* [The Mirror (b)].

In this sentence the newspaper accentuates the role of the government in improving the health system in order to support those who need help, the collocation of health care being used.

The determinants approach, focusing on solving health problems in a broader social and cultural context, can be seen in the following newspaper discourse examples; different HEALTH collocations identified:

*She yesterday urged health secretary Matt Hancock to «sort this crisis out»* [The Guardian (a)].
«In life, there’s always a solution to a problem», says Professor Cary Cooper, an occupational health expert at the University of Lancaster [The Mirror (b)].

This proposal brings together a moderately large, heterogeneous group of computer science researchers, physicians, and software developers to explore a new paradigm of using computing to improve health care [The Guardian (a)].

The behavioral approach, focusing on removing risk factors and improving people’s lifestyle behavior, can be presented in the following newspaper discourse examples; different HEALTH collocations used:

There is no doubt that the pandemic has been a health crisis, but also a financial crisis [16].

Layla Moran, the APPG’s chair, said: «Long Covid is the hidden health crisis of the pandemic, and it is likely to have an enormous impact on society for many years to come» [The Guardian (a)].

The health promotion approach, aiming at helping people to improve their health and to keep it under control, can be reflected in such newspaper discourse examples; different HEALTH collocations in use:

In addition, we believe that there are dramatic improvements to be gained in both the effectiveness and the efficiency of health care if we can empower the user to take a much more active role in monitoring his or her own health status and care, and to take greater responsibility for making informed and guided decisions concerning that care [The Guardian (a)].

Here are our tips from the health experts [The Mirror (b)].

6. Conclusions.

The notion of health is of primary importance for the newspaper discourse.

The idea of health care is equally important for the broadsheet as well as for the tabloid of the 80s. The Guardian modern is much more anxious about health problems than The Mirror modern. The diachronic study shows that the modern newspaper discourse pays more attention to health service as well as health system. The modern newspapers reveal great concern about health benefit and health experts. The newspaper discourse analysed clearly represents the ideas relevant for the societal health approaches.

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Подано до редакції 02.06.2021 року
Підписано до друку 06.10.2021 року