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INFORMATION AND MISINFORMATION IN TERMS OF THEIR IMPACT ON THE YOUNG GENERATION

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ARTICLE HISTORY

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ABSTRACT

The paper deals with the form of information, specifically misinformation, on our young generation. It describes how misinformation affects their attitudes and behavior in everyday life. The article highlights the role of information in today's world.
The paper presents the results of the research, the target group of which was the studying young generation over 19 years old. Data collection took place in 2022 using the method of questioning the survey with subsequent statistical evaluation. The main goal of this research is to find out the abilities of this target group in the area of verifying the truth of information. The research was aimed at obtaining an answer to the question of how the young generation orients itself in the media environment. An important part of the research was the determination of respondents' attitudes towards misinformation and their behavior when dealing with misinformation. Statistical analysis was performed using adequate mathematical and statistical procedures.

KEYWORDS

Disinformation, propaganda, misinformation, research.

INTRODUCTION

The increase in disinformation goes hand in hand with the increase in information. But how does today's young generation perceive misinformation? In the contribution, we present some research that we carried out in 2022. In our research, we focused on the analysis of the attitudes of the young generation towards disinformation, their knowledge and skills in working with disinformation, we were interested in the perception of education in the field of media literacy, as well as the attitudes of the young generation to the free dissemination of information.

1 INFORMATION AND DISINFORMATION

The amount and easy availability of information in today's society brings positives in the form of its efficient and quick use. On the other hand, the amount of available information makes it difficult to quickly navigate through the amount of information, the need for a quick search for relevant, valid and up-to-date information increases and thus limits the possibilities of its optimal use. This causes different approaches/reactions of people to information (Mleziva 2004, p. 12):

- with an overall reduced interest in information, caused precisely by its excessive amount and easy availability,
- with a general mistrust of information or, conversely, uncritical acceptance of information that is in line with the individual's opinions,
- with searching and receiving interesting or even sensational information, despite its low degree of probability
- not distinguishing the importance, function and meaning of individual information (Mleziva 2004, p. 12).

Consequently, there is a need to distinguish between true information and false information. The so-called quality information, i.e. information that expresses the actual verifiable state of affairs, is considered to be true information (Kuchaříková, 2019, p.16). Quality information can be described by the following attributes (Mleziva, 2004, p. 42-43):

- Validity – i.e. the degree of agreement in which the given information describes the fact to which it relates.
- Communicability – i.e. the potential of verbal description of reality, includes
  - *clarity,*
  - *accuracy of expression,*
  - *clarity,*
  - *logic*
  - *clarity with regard to the potential recipient.*
- Effectiveness – i.e. scope with respect to the purpose it is desired to achieve. An insufficient range reduces the informational value of the message, an excessive range reduces clarity.
- Timeliness – i.e. timeliness at the time of presenting the information premature presentation of information may lead to incompleteness and inaccuracy of the information, delayed communication of information can make the presented information unattractive (loss of its interest, i.e. its out-of-dateness, or falsity.
- Correctness – i.e. truthfulness, objectivity, agreement with reality.
- Verifiability of truth and validity.

Disinformation is defined as "*false, deceptive, false information that aims to influence the judgment and opinion of an individual, several persons or the entire society.*" Nutil (2018. p. 18). Disinformation is intentionally created information that is spread in connection with influencing public opinion. Disinformation is intentionally created information that is spread in connection with influencing public opinion(Wardle, 2017, online).

Misinformation refers to the dissemination of false information without intentional impact on the recipient (Wardle, 2017, online). The difference between disinformation and misinformation is that disinformation is false information spread intentionally, misinformation is false information spread without knowing that it is a lie. This is also confirmed by Definition of misinformation by the Ministry of the Interior of the Czech Republic: "*Misinformation is incorrect or misleading information that is neither systematically nor intentionally disseminated with the aim of influencing decision-making or the opinions of those who receive it*." (Ministry of the Interior of the Czech Republic, online).

The Ministry of the Interior of the Czech Republic points out the danger of disinformation in that "*disinformation content does not undermine the authority of, for example, one specific politician or political party, but often causes mistrust towards the media as such, towards the political system or democracy itself. Moreover, they inspire apathy, as they spread the idea that "nothing can be trusted" and "nothing can be done about it", because everything is in the hands of the all-powerful gray eminences*." (Ministry of the Interior of the Czech Republic, online).

Information, misinformation, disinformation belong to key concepts in media literacy education. Media literacy can be considered as "*one of the conditions for the successful socialization of an individual, which has a double form*". These are the components (Jirák, 2002, p. 72):

- acquiring knowledge that is important for obtaining the so-called critical distance - it is a defense against the effects of the media, which are not desirable, obtaining knowledge that will lead to maximum use of the potential of information received from the media.
- Media literacy has two dimensions (Jirák, 2002, p. 72):
- Knowledgeable - what an individual should master in order to be considered media literate (e.g. the role of the media in the social context, media history, etc.)
- Skilled - focused on the ability to analyze received messages (e.g. verifying information, evaluating credibility, comparing with other received messages).

Relatively well-known research focused on the field of disinformation in the Czech Republic includes the 2019 Survey of Public Opinion on the Issue of Disinformation conducted by the Center for Public Opinion Research of the Institute of Sociology of the Academy of Sciences of the Czech Republic for the Ministry of the Interior of the Czech Republic.

Another research study focused on the spread of misinformation is News in the Digital Age 2020, produced by the Independent Journalism Foundation with research agency Nielsen Atmosphere.

2 RESEARCH

The aim of the conducted research was to map the perception of disinformation among the young generation in the Czech Republic, in terms of attitudes towards disinformation, knowledge and skills in working with disinformation, in terms of the perception of education in the field of media literacy and in terms of attitudes towards the free dissemination of information. Questionnaire methods were used to collect data.

2.1 Research methodology

Research object: Disinformation.
Research subject: Perception of disinformation by the young generation.
Respondents: Men and women living in the Czech Republic aged between 20 and 34.
Research method: Questionnaire investigation, with subsequent mathematical-statistical evaluation.

2.2 Questionnaire

Based on a qualitative analysis of the professional literature, a non-standardized (original) questionnaire was designed. The questionnaire was created in a printed form, which was compiled and published through the university computer network. The questionnaire consisted of a total of 35 questions, 30 of which were closed.

The questionnaire was composed in three parts. The first part contained the identification features of the respondents (gender, age, number of years of experience). The second part of the questionnaire was made up of a table showing the way to fill in the questionnaire (four-point Likert scale; the respondent is required to express the degree of agreement or disagreement with various statements relating to a certain attitude. The answers are summarized in a defined manner and the result is proportional to the individual's knowledge of the reflected topic.

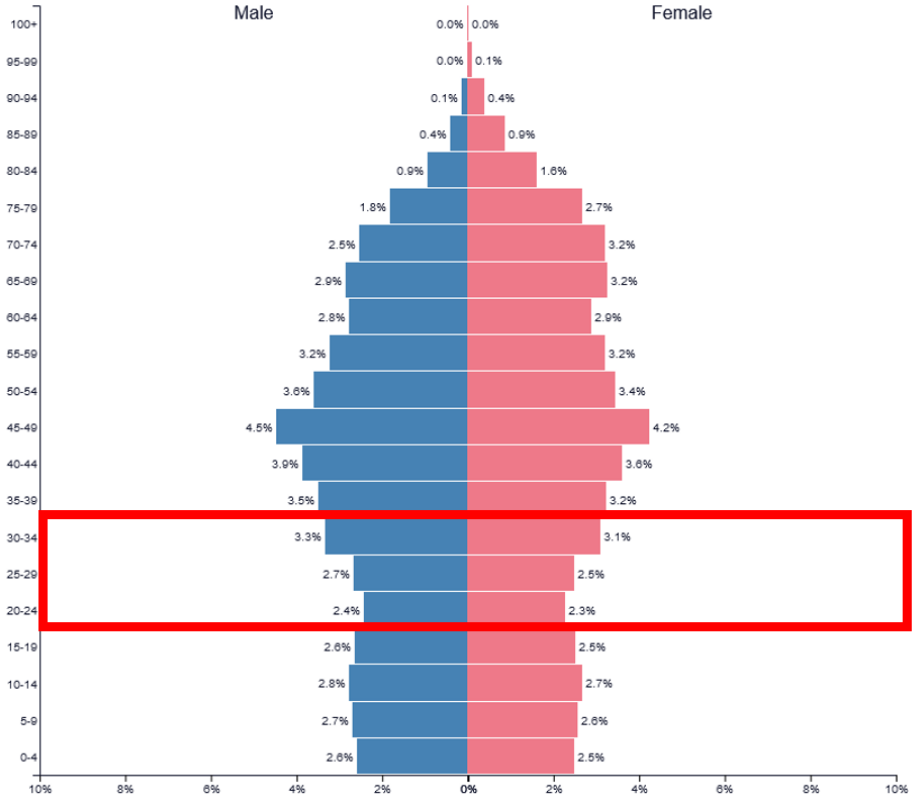
The third part of the questionnaire form represented the investigative part of the questionnaire investigation. The investigative part consisted of questions (statements) of the research investigation focused on correct knowledge of information security (the respondent expressed the degree of agreement or disagreement with the given statement).

2.3 Preliminary research (piloting)

Before the research itself, a small pilot probe was carried out, the purpose of which was to verify the comprehensibility of the questionnaire and to verify the statements for the part measuring the respondents' attitudes. As part of the pre-research, answers were obtained from 37 men and 24 women. The developed questionnaire was corrected in terms of validity (reformulation of some unclear questions, omission of questions in which all respondents only declared an agreeing or disagreeing position, etc.). Each participant's total score was calculated and each test item was subsequently correlated with this total score. Items that showed a low correlation were discarded from the test questions. The remaining questions were subsequently administered to the respondents as part of the research survey.

2.4 Respondents

In terms of methodology, a quota selection of respondents was used in terms of gender and age structure. The selection of respondents was based on public (Graph 1) data from the address (URL1, 2023). According to these available statistics, the population is divided by gender, with the indicated age categories after 5 years. For this reason, the population of the age range of 20-34 years was considered to be the young generation.



Graph 1 Population structure of the Czech Republic
Source: (URL, 2023)

2.5 Collection, processing and control of data

During the data collection of this period itself, 826 questionnaires were received. Subsequent computer processing resulted in the rejection of 63 questionnaires (7.7% of the total number of questionnaires received) due to incomplete completion. We therefore used a total of 763 questionnaires for statistical processing.

All questionnaires were subsequently recoded into the MS Excel 2010 program so that their statistical analysis was possible. A data matrix was created, which was imported into the Statistica v.10 software environment and subsequently analyzed in this environment. Adequate mathematical and statistical procedures, which are the content of this software environment, were used for data processing.

2.6 Achieved results

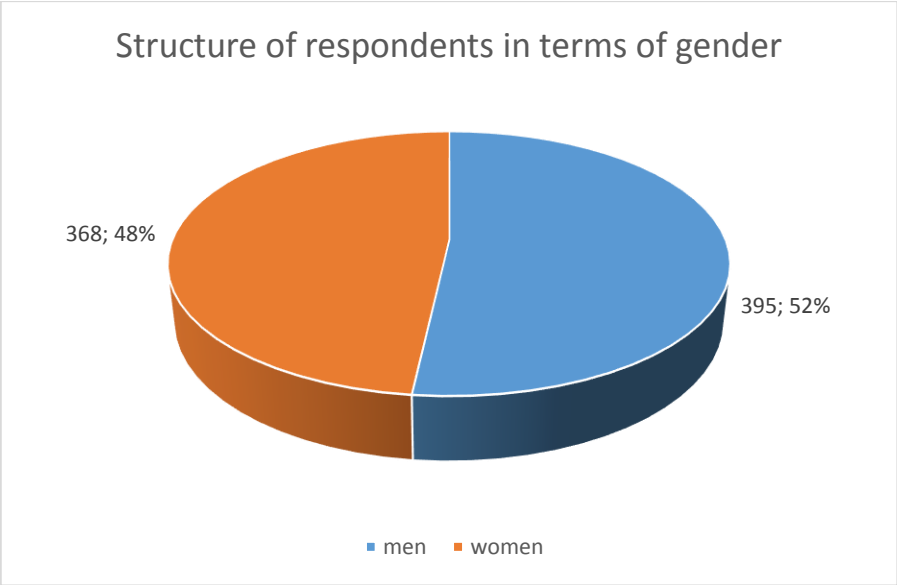
The representation of respondents in terms of age is shown in Graph 2 below, the basic statistical data of respondents is presented in Table 1.

Table 1 Basic statistical data of respondents

Age	
Mean	27,34600262
Stasndard error	0,170454788
Median	28
Modus	25
standard deviation	4,708379656
Sample variance	22,16883899
Kurtosis	-1,328109328
Skewness	-0,113884782
Range	14
Minimum	20
Maximum	34
Count	763

Source: own research

Out of the total sample of 763 respondents, men predominate, numbering 395 (52%) over women numbering 368 (48%). The structure of respondents in terms of age is shown in Graph 2.



Graph 2 Structure of respondents in terms of gender

Source: own research

In terms of gender, the group of women can be described using the following parameters (Table 2):

Table 2 Basic statistical data of women

Age	
Mean	27,18206522
Stasndard error	0,247017538
Median	26
Modus	25
standard deviation	4,738617979
Sample variance	22,45450036
Kurtosis	-1,400853629
Skewness	-0,014272466
Range	14
Minimum	20
Maximum	34
Count	368

Source: own research

In terms of gender, the group of men can be described using the following parameters (Table 3):

Table 3 Basic statistical data of men

Age	
Mean	27,49873418
Stasndard error	0,235520062
Median	28
Modus	34
standard deviation	4,680868657
Sample variance	21,91053139
Kurtosis	-1,23966204
Skewness	-0,20849438
Range	14
Minimum	20
Maximum	34
Count	395

Source: own research

The statistical analysis of the data was processed in categories:

- Attitudes towards misinformation
- Knowledge and skills in working with disinformation
- Media literacy education
- Attitudes towards the free dissemination of information

Attitudes towards disinformation were tested using five closed-ended questions that were assigned a value using the assigned scale. Subsequently, a summary value was determined from the obtained data, to which statistical tests were applied.

A research question was set for testing:

RQ1: Do attitudes toward disinformation differ by gender?

Research question RQ1 was tested using the working hypothesis (H01), with an alternative hypothesis (HA1) linked to it:

H01: *Attitudes towards disinformation do not differ depending on the gender of the respondents.*

HA1: *Attitudes towards disinformation differ by gender.*

In the collected research sample, the assumptions of the use of statistical methods were verified, especially normality (Table 4) and homoscedasticity (Table 5). In the case of multivariate random samples, the assumption that the data come from a multivariate normal distribution plays a major role. Testing for multivariate normality is a rather complicated task (Meloun, Militký, 2012, p. 49).

Table 4 Results of normality testing (own research)

Testing for normality (attitudes towards disinformation)			
Kolmogorov-Smirnov K-S test	d = 0,12051	p < 0,1	Normality **rejected**
Shapiro-Wilk´s W-test	w = 0,96787	p = 0,0000	Normality **rejected**

Source: own research

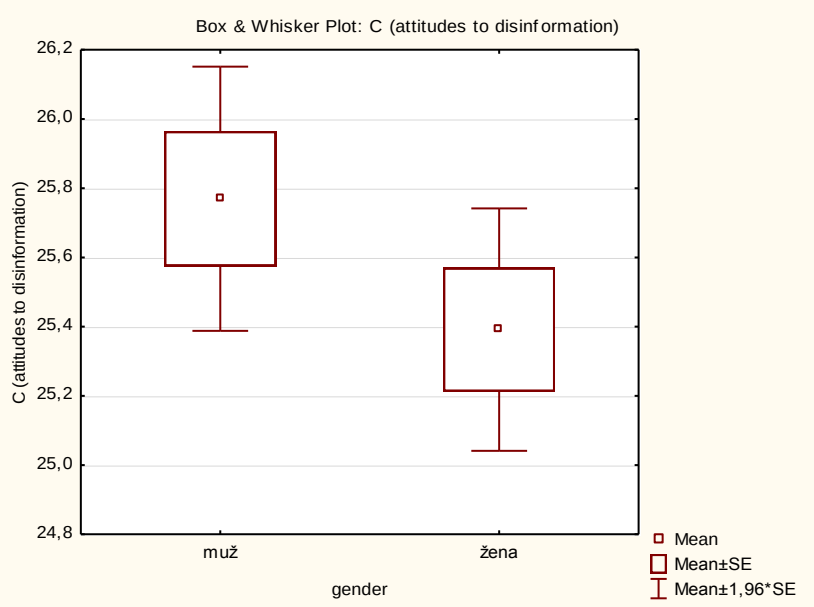
Table 5 Results of homoscedasticity testing (own research)

Testing for homoscedasticity (attitudes towards disinformation)			
F = 2,064773	p = 0,00000	gender	homoscedasticity **rejected**

Source: own research

Considering the received testing results, it can be stated that the conditions for the use of parametric mathematical-statistical methods are not met, therefore non-parametric tests were used in the data analysis. The Mann–Whitney U test was used to test the significance of two independent means.

For research question RQ1 (difference in perception of misinformation attitudes depending on gender), we depicted a box diagram in Graph 3.



Graph 3 Attitudes of men (left) and women (right) to misinformation

Source: own research

As can be seen from the graph (Graph 3), men incorporate working with disinformation into their lives more than women. To verify the statistical significance of this difference, we used the Mann-Whitney U test (Table 6).

Table 6 Results of testing differences depending on gender (own research)

Attitudes towards disinformation				
	U	Z	p	
attitudes towards disinformation	69883,5	0,919091	0,358	Hypothesis H01 **accepted**

Source: own research

From the received results, we state that at the 5 percent level of significance we accept the working hypothesis H01, i.e. there is no statistically significant difference in the attitudes of men and women towards disinformation.

Subsequently, we proceeded to test knowledge and skills in working with disinformation. This category was surveyed using 7 closed questions that were assigned a value using an assigned scale. Subsequently, a summary value was determined from the obtained data, to which statistical tests were applied.

A research question was set for testing:

RQ2: Do knowledge and skills in dealing with disinformation differ by gender?

The research question RQ2 was tested using the working hypothesis (H02), and an alternative hypothesis (HA2) is linked to it:

H02: *Knowledge and skills in dealing with disinformation do not differ depending on gender.*

HA2: *Knowledge and skills in dealing with disinformation differ by gender.*

In the collected research sample, the assumptions of the use of statistical methods were verified - normality (Table 7) and homoscedasticity (Table 8).

Table 7 Results of normality testing (own research)

Testing for normality (Knowledge and skills in working with disinformation)			
Kolmogorov-Smirnov K-S test	d = 0,11298	p < 0,1	Normality **rejected**
Shapiro-Wilk´s W-test	w = 0,97533	p = 0,0000	Normality **rejected**

Source: own research

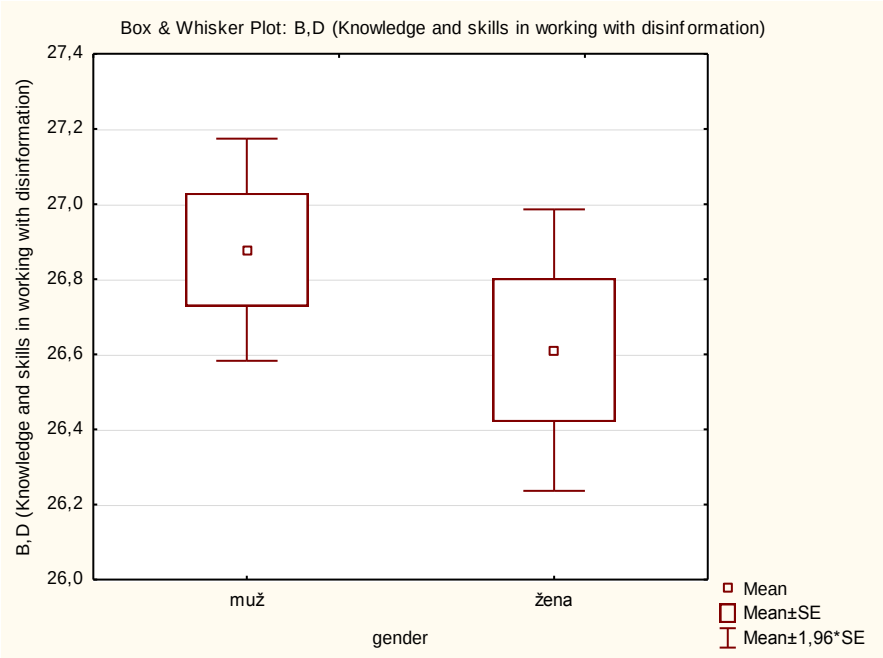
Table 8 Results of homoscedasticity testing (own research)

Testing for homoscedasticity (Knowledge and skills in working with disinformation)			
F = 2,214692	p = 0,00000	gender	homoscedasticity **rejected**

Source: own research

Considering the received testing results, it can be stated that the conditions for the use of parametric mathematical-statistical methods are not met, therefore non-parametric tests were used in the data analysis. The Mann–Whitney U test was used to test the significance of two independent means.

For research question RQ2 (difference in perception of knowledge and skills in dealing with disinformation depending on gender), we depicted a box diagram in Graph 4.



Graph 4 Knowledge and skills of men (left) and women (right) when working with disinformation

Source: own research

As can be seen from the graph (Graph 4), men achieve higher knowledge and skills when working with misinformation. To verify the statistical significance of this difference, we used the Mann-Whitney U test (Table 9).

Table 9 Results of testing differences depending on gender (own research)

Knowledge and skills in working with disinformation				
	U	Z	p	
Knowledge and skills in working with disinformation	68061,5	1,518013	0,129012	Hypothesis H02 **accepted**

Source: own research

From the received results, we state that at the 5 percent level of significance we accept the working hypothesis H01, i.e. there is no statistically significant difference in the assessment of knowledge and skills in working with disinformation depending on gender.

Media literacy education was tested using five closed-ended questions that were assigned a value using an assigned scale. Subsequently, a summary value was determined from the obtained data, to which statistical tests were applied.

A research question was set for testing

RQ3: Do attitudes toward media literacy education differ by gender?

Research question RQ3 was tested using the working hypothesis (H03), with an alternative hypothesis (HA3) linked to it:

H03: *attitudes towards media literacy education do not differ depending on the gender of the respondents.*

HA3: *respondents' attitudes towards media literacy education are different depending on gender.*

In the collected research sample, the assumptions of the use of statistical methods were verified - normality (Table 10) and homoscedasticity (Table 11).

Table 10 Results of normality testing (own research)

Testing for normality (attitudes towards media literacy education)			
Kolmogorov-Smirnov K-S test	d = 0,13259	p < 0,1	Normality **rejected**
Shapiro-Wilk´s W-test	w = 0,96405	p = 0,0000	Normality **rejected**

Source: own research

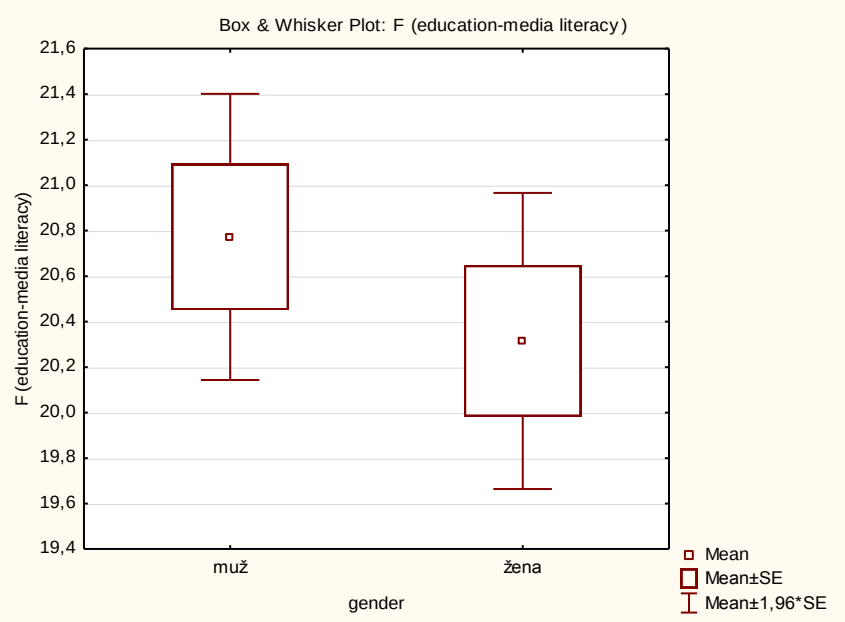
Table 11 Results of homoscedasticity testing (own research)

Testing for homoscedasticity (attitudes towards media literacy education)			
F = 1,464762	p = 0,00000	gender	homoscedasticity **rejected**

Source: own research

Considering the received testing results, it can be stated that the conditions for the use of parametric mathematical-statistical methods are not met, therefore non-parametric tests were used in the data analysis. The Mann–Whitney U test was used to test the significance of two independent means.

For research question RQ3 (difference in the perception of attitudes towards media literacy education depending on gender), we depicted a box diagram in Graph 5.



Graph 5 Evaluation of the education of men (left) and women (right) in the area of media literacy

Source: own research

As can be seen from the graph (Graph 5), men evaluate education in the field of media literacy better than women. To verify the statistical significance of this difference, we used the Mann-Whitney U test (Table 12).

Table 12 Results of testing differences depending on gender (own research)

attitudes towards media literacy education				
	U	Z	p	
attitudes towards media literacy education	69862	0,926159	0,354364	Hypothesis H03 **accepted**

Source: own research

From the received results, we state that at the 5 percent level of significance we accept the working hypothesis H01, i.e. there is no statistically significant difference in attitudes towards education in the field of media literacy depending on gender.

Attitudes towards the free dissemination of information were tested using four closed questions, which were assigned a value using an assigned scale. Subsequently, a summary value was determined from the obtained data, to which statistical tests were applied.

A research question was set for testing

RQ4: Do Attitudes to the free dissemination of information differ by gender?

Research question RQ4 was tested using the working hypothesis (H04), with an alternative hypothesis (HA4) linked to it:

H04: *Attitudes towards the free dissemination of information do not differ depending on the gender of the respondents.*

HA4: *Attitudes towards the free dissemination of information differ by gender.*

In the collected research sample, the assumptions of the use of statistical methods were verified - normality (Table 13) and homoscedasticity (Table 14).

Table 13 Results of normality testing (own research)

Testing for normality (Attitudes towards the free dissemination of information)			
Kolmogorov-Smirnov K-S test	d = 0,11420	p < 0,1	Normality **rejected**
Shapiro-Wilk´s W-test	w = 0,96097	p = 0,0000	Normality **rejected**

Source: own research

Table 14 Results of homoscedasticity testing (own research)

Testing for homoscedasticity (Attitudes towards the free dissemination of information)			
F = 1,464762	p = 0,00000	gender	homoscedasticity **rejected**

Source: own research

Considering the received testing results, it can be stated that the conditions for the use of parametric mathematical-statistical methods are not met, therefore non-parametric tests were used in the data analysis. The Mann–Whitney U test was used to test the significance of two independent means.

For research question RQ4 (difference in the perception of attitudes towards the free dissemination of information depending on gender), we depicted a box diagram in Graph 6.

Graph 6 Evaluation of the attitudes of men (left) and women (right) towards the free dissemination of information

Source: own research

As can be seen from the graph (Graph 6), men prefer greater freedom and openness to the dissemination of information than women. To verify the statistical significance of this difference, we used the Mann-Whitney U test (Table 15).

Table 15 Results of testing differences depending on gender (own research)

Attitudes towards the free dissemination of information				
	U	Z	p	
Attitudes towards the free dissemination of information	62543,50	3,331870	0,000863	Hypothesis H04 **rejected**

Source: own research

From the received results, we state that at the 5 percent level of significance we reject the working hypothesis H0 about the agreement of attitudes towards the free dissemination of information, depending on gender, and accept the alternative hypothesis HA4 - men prefer greater freedom and openness to the dissemination of information than women, statistically significantly (at the 5 percent level of significance).

CONCLUSION

In their contribution, the authors focused on the problem of how young people approach misinformation. We were interested in their attitudes and behavior towards various information in everyday life. The goal was to find out if they can distinguish what disinformation is, and how they deal with it. To obtain the documents, we carried out our own research at the Police Academy of the Czech Republic in Prague.

The respondents were students of combined and face-to-face teaching in bachelor's and master's study programs. Students of the combined form were professionally included in the security forces of the Czech Republic and also officials working in the state and public administration. Of the 826 completed questionnaires received, we subsequently had to discard 63 questionnaires due to incompleteness. For the evaluation, we worked with data from 763 respondents. The representation of men and women was almost equal, 395 women and 368 men.

In the paper, we present the results of four research questions (RQ1 – RQ4) and the hypotheses established for them. We further advanced the results for discussion, within the framework of information subjects taught at the Police Academy of the Czech Republic in Prague. Students were also allowed to work on this topic in their bachelor's and diploma theses in the future. They have the opportunity to use the data obtained from this research, or to follow up and expand on it.

The conclusion can be drawn from the conducted research that today's youth can distinguish information from misinformation. Differences in perception of misinformation between men and women noted. Recommendations from the conducted research: With regard to the constant increase of misinformation in the public space, it is necessary to offer various forms of educational activities in the field of media literacy and to further monitor the perception of misinformation on the young generation in order to establish trends in this area.

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