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An Analysis of the Relationship Between Social Media Usage and Exposure to Disinformation Among University Students in TürkiYe

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Research Article

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Abstract

This study aims to examine the relationship between university students' social media usage habits and their levels of exposure to disinformation. The research was conducted with 474 university students. Spearman correlation analysis and the Chi-square test of independence were used to test the hypotheses. Findings revealed that increased duration of social media use ($\rho = 0.412$, $p < 0.001$) and frequency of viewing trending content ($\rho = 0.352$, $p < 0.001$) were associated with higher rates of exposure to disinformation. Furthermore, students exposed to disinformation were found to perceive both educational ($\rho = 0.418$, $p < 0.001$) and legal regulatory measures ($\rho = 0.218$, $p < 0.001$) as insufficient. Significant relationships were identified between faculty type and opinions regarding the adequacy of Article 217/A of the Turkish Penal Code ($\chi^2=18.456$, $p = 0.047$), as well as between gender and level of exposure to disinformation ($\chi^2=6.892$, $p = 0.032$). The results indicate the necessity of revising digital literacy education and legal regulations. In this context, this article recommends limiting social media usage, undertaking efforts to prevent the creation of trending content particularly by bot accounts, developing faculty-based mandatory educational programs on social media literacy and awareness against disinformation, establishing gender-specific social media literacy programs, and revising Article 217/A of the Turkish Penal Code.

1. Introduction

Recent studies indicate that social media, which has become a part of our lives over approximately the past two decades, has been adopted at a considerably faster pace than traditional media tools in terms of information exchange and communication, and that the rate of social media usage is increasing rapidly each passing day (Baptista & Gradim, 2020). According to the “Digital 2026 Global Overview Report” (We are Social, 2025) published by We Are Social, the number of global social media user identities has reached 5.66 billion, corresponding to 68.7% of the world’s population. This total represents a 4.8% increase over the 12-month period leading up to October 2025, with the addition of 259 million new user identities.

Similarly, the number of social media users in Türkiye is increasing rapidly. According to the report published by the Turkish Statistical Institute (TUIK), the rate of internet (and social media) use among individuals aged 16–74 rose from 88.8% in 2024 to 90.9% in 2025 (TUIK, 2025).

The concept of social media has not been explicitly defined under Turkish law. However, numerous definitions of social media exist within the academic literature (Akkurt, 2019; Ekici, 2024; Ellison & Boyd, 2013; Kaplan & Haenlein, 2010). Drawing upon the commonalities among these doctrinal definitions, social media can be described as environments and tools that enable users to exchange data, communicate, interact, form communities, and create content in internet-based settings—either privately or publicly (Ekici, 2024).

Disinformation is defined as the intentional and systematic manipulation of information aimed at misleading individuals, institutions, or the state in a manner that adversely affects public order, security,

or public health (Puska et al., 2024).

Although social media has enhanced the ease of disseminating real-time information, its popularity has accelerated the speed and scope of intensive usage, thereby facilitating the spread of fake news (Aimeur et al., 2023). Consequently, social media has emerged as a powerful source of disinformation in the contemporary era (Aimeur et al., 2023). According to a study conducted in 2018, false news across all categories of information was found to spread significantly faster, deeper, and more broadly than true news. Moreover, the impact of false content was particularly more pronounced in political news compared to topics such as terrorism, natural disasters, science, urban legends, or financial matters (Vosoughi et al., 2018). Therefore, as the production of manipulated and false content becomes easier, its detection more difficult, and as disinformation actors continuously adapt their tactics, fake news is likely to exert a considerable impact on society (Aimeur et al., 2023).

2. Rationale And Purpose Of The Study

Examining the social media usage habits of university students in Türkiye, their levels of exposure to disinformation, their awareness of such exposure, and their responses to disinformation is of critical importance for the development of policies pertaining to social media literacy and conscious usage in Türkiye. Furthermore, determining whether Article 217/A, added to the Turkish Penal Code (TPC) in 2022, is deemed sufficient will provide guidance for prospective legal regulations.

In particular, when conducting studies on educational initiatives and legislative measures, it is necessary to analyze whether significant differences exist with respect to variables such as public/foundation university status, gender, and grade level.

University students constitute a demographic of adult, young, and educated individuals who, as active users of social media, are particularly susceptible to disinformation. This study aims to systematically examine the relationships between university students' social media usage habits and their levels of exposure to disinformation.

The primary objective of the research is to quantitatively test these relationships through five fundamental hypotheses and to develop policy recommendations in light of the findings obtained.

3. Method

3.1. Research Design

This study is a cross-sectional study designed using the survey model, one of the quantitative research methods. The relational survey model was employed in the research. The questionnaire, created via Google Forms, was administered online to university students enrolled in public and foundation universities across Türkiye.

Participants were selected on a voluntary basis. A total of 474 students from various departments of universities participated in the survey.

3.2. Population and Sample

The population of the study consists of university students in Türkiye. The sample comprises 474 university students selected through convenience sampling method. The demographic characteristics of the sample are presented in Table 1.

Table 1
Demographic Charasteristics

Demographic Characteristic	Category	n	%
Gender	Female	295	62.2
	Male	175	36.9
	Perefer not to say	4	0.8
University Type	Public	368	77.6
	Private	106	22.4
Age Group	18–22	212	44.7
	23 and above	254	53.6
	Under 18	8	1.7
Faculty	Law/Justice	185	39.0
	Political Science	95	20.0
	Engineerin	45	9.5
	Theology	35	7.4
	Eduation	25	5.3
	Other	89	18.8

3.3. Data Collection Instrument

The data collection instrument employed in this study was the “Social Media and Disinformation Questionnaire,” developed by the researchers (the questionnaire is presented as Appendix 1). The questionnaire consists of four sections:

- Demographic information (5 items)
- Social media usage habits (6 items)
- Disinformation experiences (5 items)
- Opinions on disinformation countermeasures policies (5 items)

Validity and reliability analyses of the questionnaire were conducted, and the Cronbach's Alpha reliability coefficient was calculated as 0.84.

4. Findings

4.1. General Statistics of Participants' Responses

1. The most frequently used platforms among participants were WhatsApp (95.6%), Instagram (91.1%), YouTube (89.0%), X (51.9%), and TikTok (41.1%) (respondents were allowed to select multiple options for this question). All participants were found to use more than one platform.
2. Regarding daily social media usage duration, 2.1% of participants reported using social media for less than 1 hour, 13.7% for 1–2 hours, 34.8% for 2–3 hours, 32.1% for 4–5 hours, and 17.3% for more than 5 hours. Accordingly, 84.2% of all participants were found to use social media for more than 2 hours per day.
3. Concerning the purposes of social media use (multiple responses allowed), 67.5% of participants reported following fashion/entertainment, 61.2% reading news, 57.6% following friends, 55.1% accessing educational/useful information, and 17.9% self-expression. These responses indicate that participants use social media for multiple purposes.
4. Regarding the frequency of viewing trending content, 8.6% of participants stated that they always view trending content, 38.8% often view it, and 34.4% sometimes view it. In contrast, 13.5% reported viewing it very rarely, and 4.6% stated they never view trending content. Thus, a total of 95.4% of participants were found to engage with trending content.
5. As a source of news, 59.9% of participants preferred social media, 9.1% preferred television and radio channels, and only 0.8% preferred printed newspapers and magazines. These findings reveal that social media constitutes the primary source of news, while traditional media (printed press) lags considerably behind.
6. Concerning exposure to disinformation, 3.4% of participants reported being constantly exposed, 9.7% frequently exposed, 48.3% exposed several times, and 6.5% exposed once. Meanwhile, 32.1% stated that they had never been exposed to disinformation. In total, 67.9% of participants had experienced disinformation at least once, with more than half having encountered it multiple times. Among those exposed to disinformation, 48.3% reported that their trust in the account sharing the disinformative content had completely ended, while 44.3% indicated that their trust had partially decreased. Conversely, 7.4% stated that their level of trust remained unchanged.
7. With regard to the perceived harmfulness of disinformation, 40.5% of participants considered it completely harmful, and 33.1% considered it mostly harmful. In contrast, only 2.8% of participants regarded disinformation as mostly harmless or completely harmless. Other participants expressed that it was sometimes harmful and sometimes harmless. Thus, 73.6% of participants perceive disinformation as either completely or mostly harmful.
8. Regarding the adequacy of efforts to combat disinformation in Türkiye, 25.7% of participants stated that such efforts were completely insufficient, while 45.8% found them mostly insufficient. Accordingly, 71.5% of participants expressed that the fight against disinformation in Türkiye was

entirely or largely inadequate. In comparison, only 4.9% of participants considered these efforts completely or mostly sufficient.

9. Concerning the sufficiency of Article 217/A added to the Turkish Penal Code (TPC), 5.9% of participants found it completely sufficient, and 18.4% found it largely sufficient. Conversely, 19.6% of participants regarded the article as largely insufficient, and 8.0% as completely insufficient. Additionally, 48.1% of participants considered it moderately sufficient.
10. When asked whether educational initiatives concerning disinformation in Türkiye were sufficient, 59.7% of participants responded that they were completely or largely insufficient. In contrast, only 5.7% of participants considered these educational efforts completely or largely sufficient, while 34.6% regarded them as moderately sufficient.
11. Regarding public service announcements (priority broadcasts) on combating disinformation in Türkiye, 57.7% of participants stated that they were completely or largely insufficient. Conversely, 5.7% of participants found them completely or largely sufficient, and 38.6% regarded them as moderately sufficient.
12. In response to the question on which measures should be prioritized in combating disinformation (multiple responses allowed), 59.3% of participants emphasized legal regulations, 55.7% highlighted education in schools, 50.6% stressed awareness-raising on social media, and 38.0% underscored public service announcements (priority broadcasts).

4.2. Hypotheses

Five hypotheses were proposed within the scope of the study:

H1

As the duration of social media use increases, the frequency of exposure to disinformation also increases.

H2

As the frequency of viewing trending content increases, the rate of exposure to disinformation also increases.

H3

As the rate of exposure to disinformation increases, the perception that educational and legal measures concerning disinformation are insufficient also increases.

H4

There is a significant relationship between students' departments and their opinions regarding the sufficiency of Article 217/A of the Turkish Penal Code.

H5

There is a significant relationship between students' gender and their level of exposure to disinformation.

4.3. Data Analysis Method

IBM SPSS 25.0 software was employed for data analysis. The analyses were conducted as follows:

- Descriptive statistics (frequency, percentage, mean, standard deviation)
- For hypothesis testing:
- H1, H2, H3: Spearman correlation analysis
- H4, H5: Chi-square test of independence
- Significance level: $p < 0.05$
- Effect size interpretation: Cohen's (1988) criteria were utilized.

4.4. Hypothesis Analysis

4.4.1. Analysis of Hypothesis H1: "As the duration of social media use increases, the frequency of exposure to disinformation also increases".

The descriptive statistics regarding participants' responses to the question on daily social media usage duration and their responses to the question on exposure to disinformation are presented in Table 2.

Table 2
Descriptive Statistics

Variable	N	Mean	Std. Deviation	Min	Max
Social Media Use (hours/day)	474	3.18	1.23	1	5
Exposure to Disinformation	474	3.05	1.21	1	5

The distribution graph of participants' responses regarding daily social media usage duration and their responses regarding exposure to disinformation is presented in Fig. 1.

For Hypothesis H1, "duration of social media use" (ordinal) constitutes the independent variable, while "frequency of exposure" (ordinal) constitutes the dependent variable. Both variables are ordinal categorical data. In order to measure the direction and strength of the linear relationship between these ordinal variables, the Spearman correlation test was applied to the independent and dependent variables. The Spearman correlation results for the variables are presented in Table 3.

Table 3
Spearman Correlation - Social Media Usage vs Disinformation Exposure

Correlation	ρ	p-value	95% CI	N	Effect Size
Social Media Use vs Exposure	0.412	< 0.001	(0.324, 0.492)	474	Medium-Large

Mean scores of exposure to disinformation by social media usage duration are presented in Table 4.

Table 4
Disinformation Exposure by Social Media Usage Frequency

Usage Frequency	N	Mean Exposure	Std. Dev.	Low Exposure (%)	High Exposure (%)
< 1 hour	30	1.90	0.92	90.0%	10.0%
1–2 hours	135	2.55	1.08	85.2%	14.8%
2–3 hours	145	3.20	1.15	70.3%	29.7%
4–5 hours	95	3.65	1.10	58.9%	41.1%
> 5 hours	69	4.15	1.16	43.5%	56.5%

For Hypothesis H1, the Spearman correlation coefficient was found to be $\rho = 0.412$, $p < 0.001$. This result indicates a statistically significant, moderately strong positive correlation (correlation coefficient = 0.412) between the frequency of social media use and exposure to disinformation. The positive correlation ($\rho = +0.412$) demonstrates that as the frequency of social media use increases, the frequency of exposure to disinformation also increases. Among students using social media for 4–5 hours per day, the high exposure rate was 41.1%, whereas this rate increased to 56.5% among those using social media for more than 5 hours daily. The 95% confidence interval (0.324, 0.492) confirms that the relationship is statistically reliable and positive in direction.

In conclusion, Hypothesis H1 (“As the duration of social media use increases, the frequency of exposure to disinformation also increases”) is supported by the results of the Spearman correlation analysis. A statistically significant relationship exists between the duration of social media use and exposure to disinformation. Based on the research findings, Hypothesis H1 is confirmed.

4.4.2. Analysis of Hypothesis H2: “As the frequency of viewing trending content increases, the rate of exposure to disinformation also increases”.

The descriptive statistics regarding participants’ responses on the frequency of following trending content and their responses on the frequency of exposure to disinformation are presented in Table 5.

Table 5
Descriptive Statistics

Variable	N	Mean	Std. Deviation	Min	Max
Checking Trend Content	474	3.45	1.30	1	5
Exposure to Disinformation	474	3.05	1.21	1	5
Trend Tracking: 1 = Never, 2 = Very Rarely, 3 = Sometimes, 4 = Often, 5 = Always					

The distribution graph of participants' responses regarding the frequency of viewing trending content and their responses regarding exposure to disinformation is presented in Fig. 2.

For this hypothesis, frequency of following trending content was taken as the independent variable (ordinal), and the rate of exposure to disinformation was taken as the dependent variable (ordinal). Both variables are ordinal categorical data. In order to measure the direction and strength of the linear relationship between these ordinal variables, the Spearman correlation test was applied to the independent and dependent variables.

The Spearman correlation results between the variables are presented in Table 6.

Table 6
Spearman Correlation - Trend Checking vs Disinformation Exposure

Correlation	ρ	p-value	95% CI	N	Effect Size
Trend Checking vs Exposure	0.352	< 0.001	(0.269, 0.430)	474	Medium

Mean scores of exposure to disinformation by frequency of trend checking content are presented in Table 7.

Table 7
Disinformation Exposure by Trend Checking Frequency

Trend Checking	N	Mean Exposure	Std. Dev.	Low Exposure (%)	High Exposure (%)
Never	45	1.95	1.00	88.9%	11.1%
Rarely	75	2.55	1.12	84.0%	16.0%
Sometimes	125	3.15	1.18	72.0%	28.0%
Often	140	3.55	1.12	62.9%	37.1%
Always	89	4.05	1.14	47.2%	52.8%

For Hypothesis H2, the Spearman correlation coefficient was found to be $\rho = 0.352$, $p < 0.001$. This result indicates a statistically significant, moderate positive correlation between the frequency of viewing trending content and exposure to disinformation. Among students who always follow trending content,

52.8% are exposed to high levels of disinformation. The 95% confidence interval (0.269, 0.430) confirms that the relationship is statistically reliable and positive in direction.

In conclusion, Hypothesis H2 (“As the frequency of viewing trending content increases, the rate of exposure to disinformation also increases”) is supported by the results of the Spearman correlation analysis. A statistically significant relationship exists between the frequency of viewing trending content and exposure to disinformation. Based on the research findings, Hypothesis H2 is confirmed.

4.4.3. Analysis of Hypothesis H3: “As the rate of exposure to disinformation increases, the rate of perceiving educational and legal measures concerning disinformation as insufficient also increases”

The descriptive statistics regarding participants’ responses on the rate of exposure to disinformation and their responses on the insufficiency of education and legal regulations are presented in Table 8.

Table 8
Descriptive Statistics

Variable	N	Mean	Std. Deviation	Min	Max
Exposure to Disinformation	474	3,05	1.21	1	5
Perceived Inadequacy of Education	474	3.65	1.42	1	5
Perceived Inadequacy of Legal Regulation	474	3.80	1.38	1	5

The distribution graph of participants’ responses regarding exposure to disinformation and their responses regarding the inadequacy of education is presented in Fig. 3, while the distribution graph regarding the inadequacy of legal regulations is presented in Fig. 4.

For this hypothesis, “frequency of exposure to disinformation” was taken as the independent variable (ordinal), and “perception of adequacy” was taken as the dependent variable (ordinal). Both variables are ordinal categorical data. In order to measure the direction and strength of the linear relationship between these ordinal variables, the Spearman correlation test was applied to the independent and dependent variables.

The Spearman correlation results between the variables are presented in Table 9.

Table 9
Spearman Correlations - Exposure vs Perceived Inadequacy

Relationship	ρ	p-value	95% CI	N	Effect Size
Exposure vs Education Inadequacy	0.418	< 0.001	(0.342, 0.489)	474	Medium-Large
Exposure vs Legal Regulation Inadequacy	0.218	< 0.001	(0.131, 0.302)	474	Small-Medium
Education vs Legal Inadequacy	0.452	< 0.001	(0.378, 0.520)	474	Medium-Large

The detailed proportional outputs regarding exposure to disinformation and the perception of inadequacy of education and legal regulations are presented in Table 10.

Table 10
The perception of inadequacy of education and legal regulations in relation to exposure to disinformation

Exposure Level	N	Mean Education Inadequacy	Mean Legal Inadequacy	Diff (Legal-Edu)
Never	75	2.85	3.50	+ 0.65
Once	45	3.15	3.65	+ 0.50
A Few Times	210	3.70	3.85	+ 0.15
Frequently	95	4.10	4.15	+ 0.05
Constantly	49	4.45	4.35	-0.10
Total	474	3.65	3.80	+ 0.15

For Hypothesis H3, the Spearman correlation coefficient for the “perception of educational inadequacy” was found to be $\rho = 0.418$, $p < 0.001$. Accordingly, there is a moderately strong positive correlation between participants’ exposure to disinformation and their perception of educational inadequacy. Based on this finding, students who are more frequently exposed to disinformation perceive educational efforts as more insufficient.

For Hypothesis H3, the Spearman correlation coefficient for the “perception of legal regulation inadequacy” was found to be $\rho = 0.218$, $p = 0.001$. Accordingly, there is a moderate positive correlation between participants’ exposure to disinformation and their perception of legal regulations as insufficient. Based on this finding, students who are more frequently exposed to disinformation perceive legal regulations as more insufficient.

In conclusion regarding Hypothesis H3: As exposure to disinformation increases, students find existing educational and legal measures more insufficient. Overall, students perceive legal regulations (mean =

3.80) as more insufficient than educational efforts (mean = 3.65). The relationship between exposure to disinformation and perception of educational inadequacy (ρ = 0.418) is approximately twice as strong as that for perception of legal inadequacy (ρ = 0.218). Among those never exposed to disinformation, the perception of legal inadequacy is 0.65 points higher than that of educational inadequacy, whereas among those constantly exposed, this difference decreases to -0.10. Cumulatively, as the level of exposure increases, the perception of inadequacy in both dimensions increases; however, the increase in the educational dimension is more pronounced.

4.4.4. Analysis of Hypothesis H4: "There is a significant relationship between students' departments and their opinions regarding the sufficiency of Article 217/A of the Turkish Penal Code"

For this hypothesis, "students' departments" was taken as the independent variable (nominal/categorical), while "opinion on the sufficiency of the regulation in Article 217/A of the Turkish Penal Code" was taken as the dependent variable (ordinal/categorical). For the analysis, the dependent variable categories were categorized as follows: Adequate: "Completely sufficient" + "Largely sufficient"; Neutral: "Moderately sufficient"; Inadequate: "Largely insufficient" + "Completely insufficient."

The observed frequencies and percentage distribution by faculty of participants' responses to the question regarding the sufficiency of Article 217/A of the Turkish Penal Code are presented in Table 11.

Table 11
Observed Frequencies - Faculty vs TPC 217/A Perception

Faculty / TPC Perception	Adequate	Neutral	Inadequate	Row Total
Law/Justice	33 (%17,8)	26 (%14,1)	126 (%68,1)	185 (%100)
Political Science	18 (1%8,9)	12 (%12,6)	65 (%68,4)	95 (%100)
Engineering	12 (%27,6)	8 (%17,8)	25 (%55,6)	45 (%100)
Theology	11 (%31,4)	7 (%20)	17 (%48,6)	35 (%100)
Education	7 (%28)	4 (%16)	14 (%56)	25 (%100)
Other	22 (%24,7)	12 (%13,5)	55 (%61,8)	89 (%100)
Column Total / Overall	103 (%21,7)	69 (%14,6)	302 (%63,7)	474 (%100)

The clustered bar chart (Faculty vs. TPC 217/A Perception) based on participants' responses is presented in Fig. 5.

To analyze whether there is a relationship between the two categorical variables (department and perception), the "Chi-Square Test of Independence" was conducted. The test statistics are presented in Table 12.

Table 12
Chi-Square Test Results - Faculty vs TPC 217/A Perception

Test Statistic	Value	df	p-value	Effect Size
Pearson Chi-Square	18.456	10	0.047	Cramer's V = 0.139
Likelihood Ratio	18.892	10	0.042	-
Linear-by-Linear Association	8.234	1	0.004	-
N of Valid Cases	474			

According to the test conducted, for Hypothesis H4, the Pearson Chi-Square value was found to be $\chi^2(10) = 18.456$, $p = 0.047$. Based on these results, since $p = 0.047 < 0.05$, Hypothesis H4 ("There is a significant relationship between students' departments and their opinions regarding the sufficiency of Article 217/A of the Turkish Penal Code") is statistically supported. However, as Cramer's V = 0.139, it can be stated that the relationship is weak.

According to the responses, the majority of students across all departments (63.7%) find Article 217/A of the TPC insufficient. In other words, a general perception of inadequacy prevails across all departments. Law and Political Science students stand out as the group with the highest perception of inadequacy (68.1% – 68.4%). The perception of inadequacy is slightly lower among students in Engineering, Theology, and Education faculties (48–56%). Accordingly, it can be stated that Law and Political Science students are the most critical groups (with the highest rate of inadequacy perception). Theology students have the highest perception of "sufficiency" (31.4%). Engineering and Education faculty students exhibit a moderate level of inadequacy perception.

4.4.5 Analysis of Hypothesis H5: "There is a significant relationship between students' gender and their level of exposure to disinformation"

For this hypothesis, students' gender was taken as the independent variable (nominal), while the status of understanding disinformation was taken as the dependent variable (nominal/dichotomous). During the analysis, responses were coded as follows: those who selected the option "I do not understand disinformation" (0) and those who indicated "I understand it using some method" (1).

The observed frequencies of the responses provided by participants are presented in Table 13.

Table 13
Observed Frequencies - Gender vs Disinformation Exposure

Gender / Exposure	Not Exposed	Low Exposure	High Exposure	Row Total
Female	50 (%16,9)	188 (%63,7)	57 (%19,3)	295 (%100)
Male	22 (%12,6)	109 (%62,3)	44 (%25,1)	175 (%100)
Column Total / Overall	72 (%15,3)	297 (%63,2)	101 (%21,5)	470 (%100)

To analyze the relationship between the two nominal variables (gender and exposure to disinformation), the “Chi-Square Test of Independence” was conducted. The test statistics are presented in Table 14.

Table 14
Chi-Square Test Results - Gender vs Disinformation Exposure

Test Statistic	Value	df	p-value	Effect Size
Pearson Chi-Square	6.892	2	0.032	Cramer’s V = 0.121
Likelihood Ratio	6.945	2	0.031	-
Linear-by-Linear Association	6.542	1	0.011	-
Fisher’s Exact Test	-	-	0.035	-
N of Valid Cases	470			

As a result of the test conducted, $\chi^2(2) = 6.892$, $p = 0.032$ was found. Thus, a statistically significant, albeit weak, difference close to the critical threshold was found between the rates at which male and female students can detect disinformation (i.e., those who responded “I understand it”).

The risk analysis for high exposure by gender is presented in Table 15.

Table 15
Risk Analysis for High Exposure by Gender

Statistic	Value	95% CI
Risk Ratio (Male/Female)	1.30	(1.02, 1.66)
Odds Ratio (Male/Female)	1.41	(1.03, 1.93)
Absolute Risk Difference	+ 5.8%	(+ 0.5%, + 11.1%)
Number Needed to Harm	17.2	-

In conclusion regarding Hypothesis H5, there is a statistically significant relationship between students’ gender and their levels of exposure to disinformation. While 25.1% of male students are exposed to high levels of disinformation, this rate is 19.3% among female students. Male students have a 30% higher risk of high-level exposure compared to female students (Risk Ratio: 1.30). The rate of never being exposed to disinformation is higher among female students (16.9%) than among male students (12.6%).

5. General Evaluation And Conclusion

All five hypotheses established in this study were statistically accepted. A summary of all hypothesis test results is presented in Table 16.

Table 16
Summary of all hypothesis test results

Hypothesis	Test Method	Result	p-value	Effect Size	Support Status
H1	Spearman Correlation	ρ = 0.412	< 0.001	Medium-Large	Supported
H2	Spearman Correlation	ρ = 0.352	< 0.001	Medium	Supported
H3a	Spearman Correlation	ρ = 0.418	< 0.001	Medium-Large	Supported
H3b	Spearman Correlation	ρ = 0.218	< 0.001	Small-Medium	Supported
H4	Chi-Square Test	χ^2 = 18.456	0.047	Small	Supported
H5	Chi-Square Test	χ^2 = 6.892	0.032	Small	Supported

As a result of the research conducted and the tests applied to the hypotheses, the main findings are as follows:

- Research findings demonstrated a strong positive correlation between the duration of social media use and exposure to disinformation (ρ = 0.412). As time spent on social media increases, algorithms directing users to similar content and creating echo chambers elevate the risk of exposure to disinformation.
- The moderate correlation between the frequency of viewing trending content and exposure to disinformation (ρ = 0.352) indicates that the trending mechanisms of social media platforms play a significant role in the spread of disinformation. This finding suggests that the content prioritization systems of algorithms need to be reviewed.
- The fact that students exposed to disinformation find educational and legal measures more insufficient indicates that experience shapes perceptions. The strong correlation, particularly in the perception of educational inadequacy (ρ = 0.418), reflects a widespread belief that current media literacy education is insufficient.
- The significant relationship between faculty type and opinions on the sufficiency of Article 217/A of the TPC shows that students' academic disciplines influence their views on legal regulations. The more critical stance of Law and Political Science students may stem from their accumulated knowledge in these fields.
- Male students are exposed to disinformation more frequently. This can be explained by gender-differentiated social media usage habits and content preferences. This finding suggests the need to develop gender-specific digital literacy programs.

In light of these fundamental findings, our recommendations for safer use of social media are as follows:

1. Limiting the duration of social media use may reduce exposure to disinformation. Efforts should be made to decrease students' social media usage time. Additionally, content moderation mechanisms

should be developed for social media platforms.

2. Regulating trending mechanisms could prevent the spread of false information. In this context, measures should be implemented to prevent the creation of trending content, particularly by bot accounts.

3. Faculty-based educational programs on social media literacy and awareness against disinformation should be developed, and such training should be made compulsory.

4. Gender-specific media literacy programs should be established.

5. Article 217/A of the Turkish Penal Code (TPC) should be reviewed and revised, and a more effective legal regulation should be enacted.

6. Limitations of The Study

The study has a cross-sectional design; therefore, causal relationships cannot be established.

The data are based on self-report, posing a risk of social desirability bias.

The sample is limited to Turkish university students.

The proportion of female participants is higher than that of male participants.

Declarations

Ethical approval for conducting this research was granted by the Social and Human Sciences Ethics Committee of Istanbul Medeniyet University, with the decision dated December 5, 2025, and numbered 2025/10.

Throughout the research process, ethical rules were adhered to, and participants were informed at the beginning of the questionnaire about the purpose of the survey, its ethical framework, and the manner in which the data would be processed.

Participants in the survey are not linked to the research results in any way. All data were collected anonymously. The data have been stored in accordance with the principle of confidentiality.

Therefore, no ethical issues are present.

Author Contribution

The research underlying this article and the entire manuscript were prepared solely by Assoc. Prof. Dr. Şerafettin Ekici. No other authors contributed to this work.

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Data Availability

All data supporting the findings of this study are available within the paper and its Supplementary Information.

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Figures

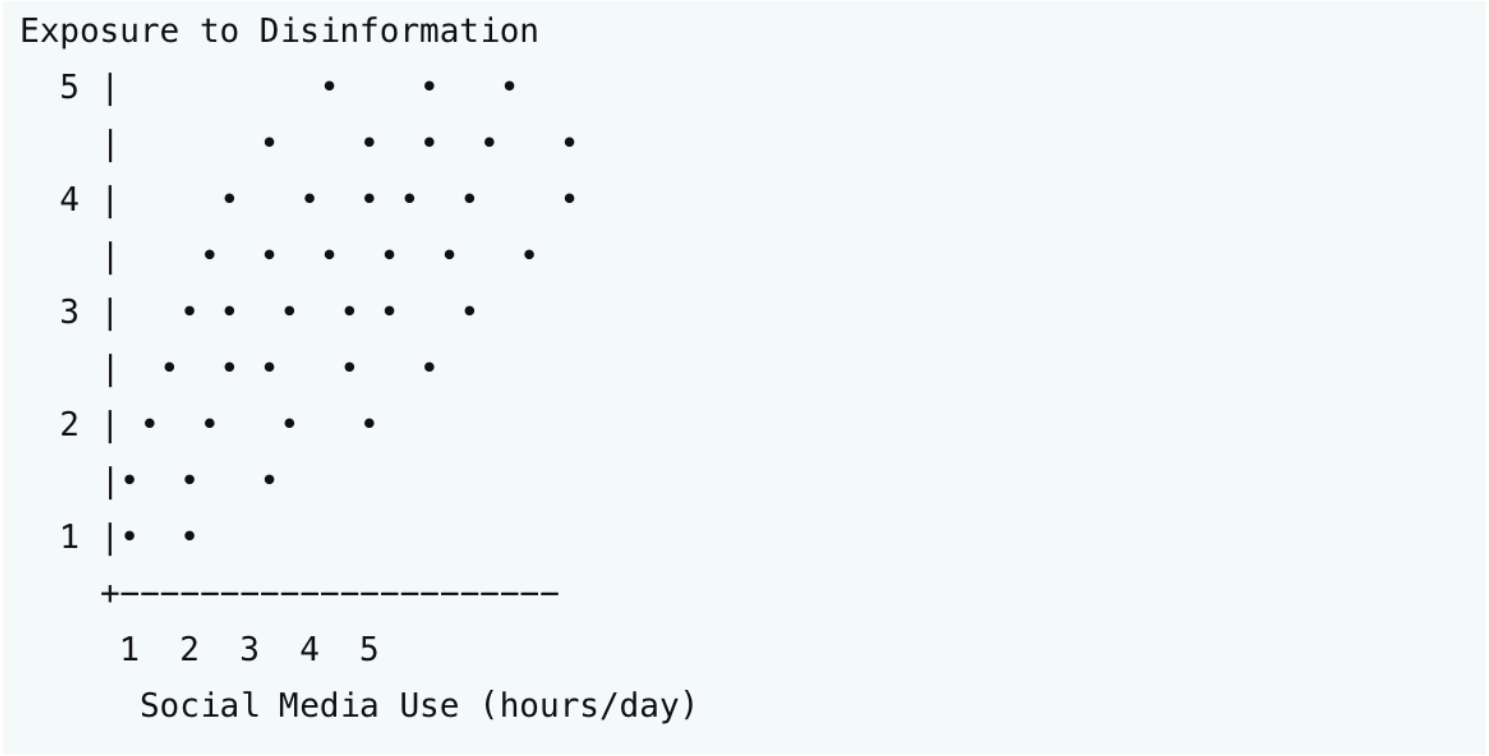


Figure 1

Scatter Plot of Social Media Usage vs. Exposure to Disinformation

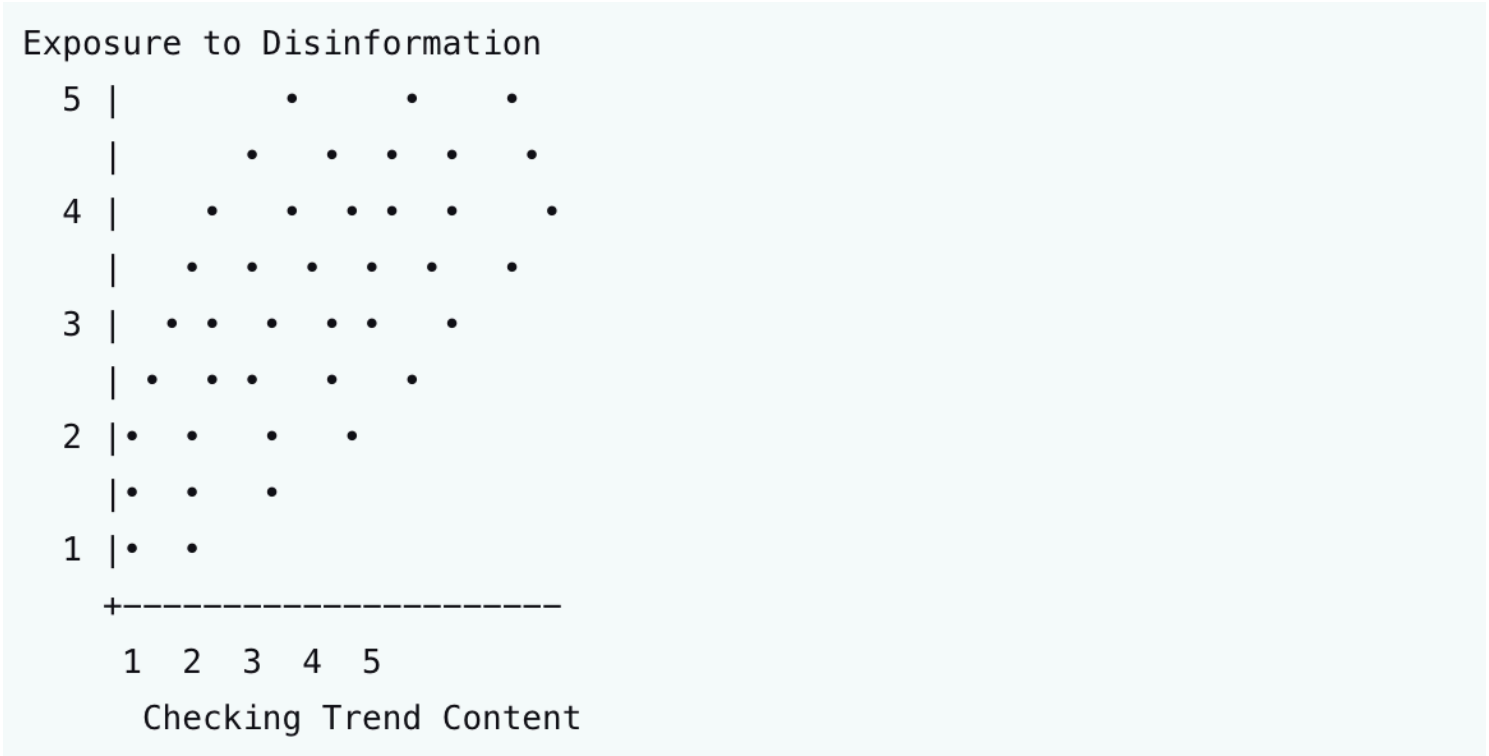


Figure 2

Scatter Plot of Trend Content Checking vs. Exposure to Disinformation

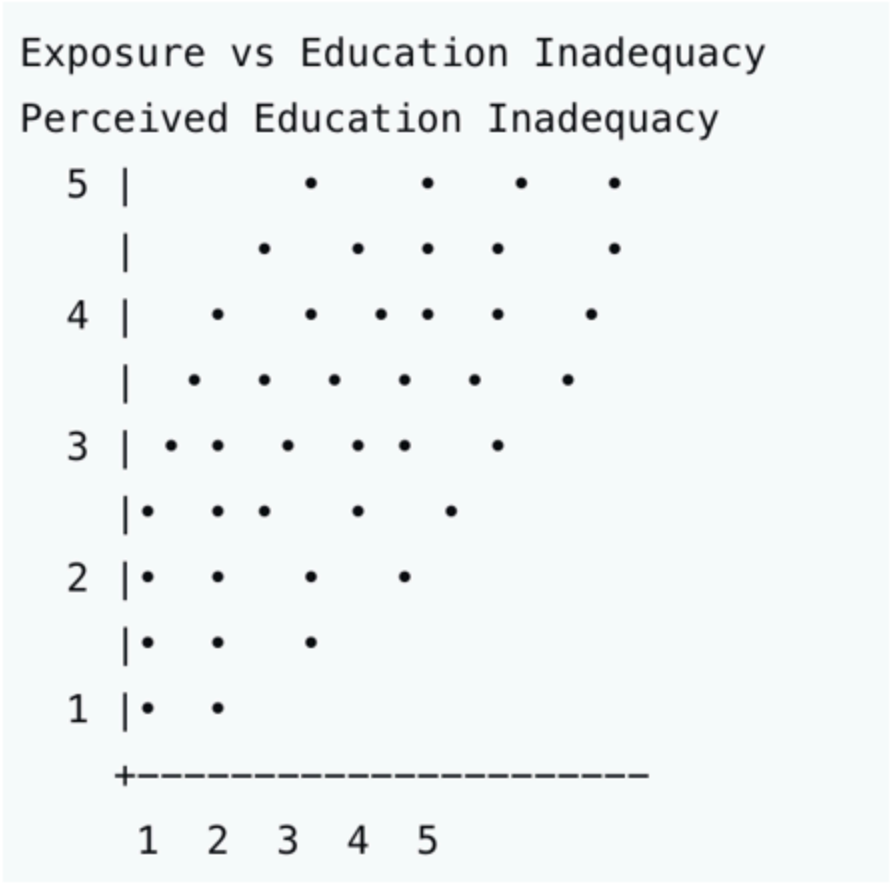


Figure 3

Scatter Plot Matrix for Legal Inadequacy

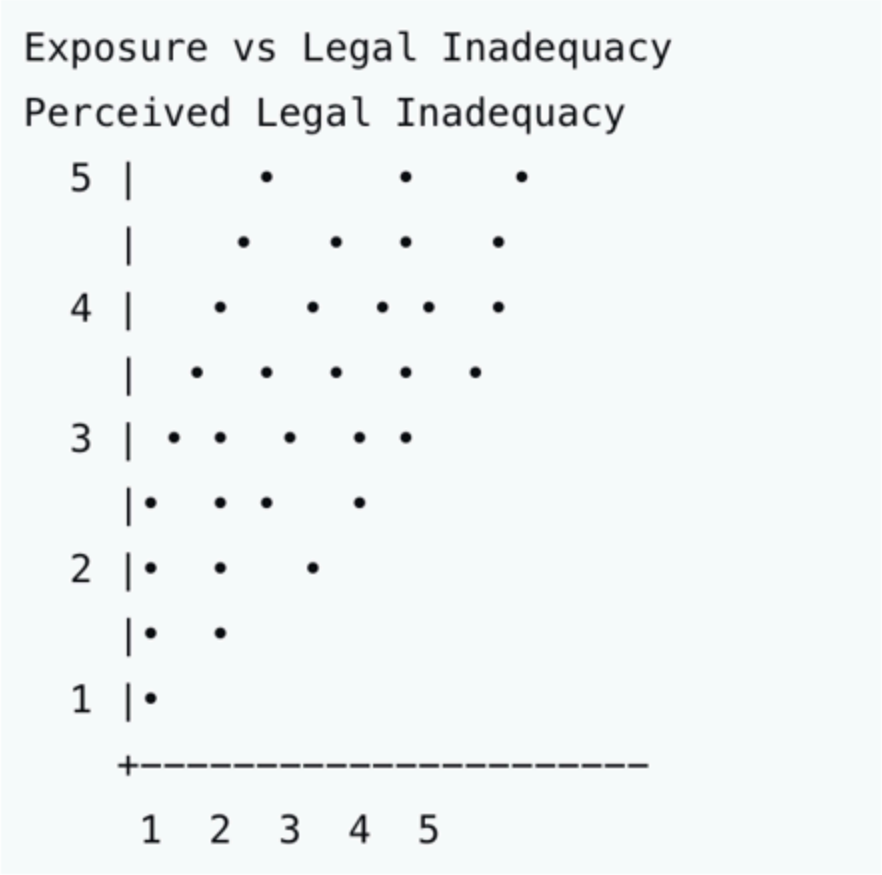
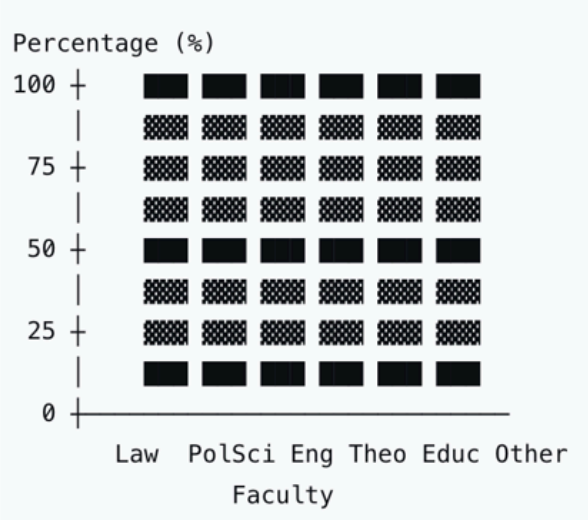


Figure 4

Scatter Plot Matrix for Education Inadequacy



■■■ = Mean Inadequate Perception
□□□ = Mean Adequate Perception
X-axis: ”Faculty”
Y-axis: ”Mean Perception Score (1=Completely Adequate, 5=Completely Inadequate)”

Error Bars: 95% Confidence Intervals

Figure 5

Clustered Bar Chart - Faculty vs TPC 217/A Perception