

# The relationship between russian propaganda and certain criminogenic processes in Ukraine

## Vadym Kudinov\*

PhD in Physical and Mathematical Sciences, Associate Professor  
National Academy of Internal Affairs  
03035, 1 Solomianska Sq., Kyiv, Ukraine  
<https://orcid.org/0000-0002-5299-0590>

## Oleksandr Pakrysh

PhD in Technical Sciences, Associate Professor  
National Academy of Internal Affairs  
03035, 1 Solomianska Sq., Kyiv, Ukraine  
<https://orcid.org/0000-0002-6420-5246>

## Yuliia Panimash

PhD in Pedagogical Sciences  
Cherkasy Institute of Fire Safety named after the Heroes  
of Chernobyl of the National University of Civil Defense of Ukraine  
18034, 8 Onopriyenko St., Cherkasy, Ukraine  
<https://orcid.org/0000-0002-5337-6613>

## Abstract

The article examined the influence of russian information and psychological operations on the public consciousness of Ukrainians with the aim of provoking criminal offences. russian narratives were analysed on their intensity using the number of occurrences of the selected russian language words in the propaganda materials. The number of specific crimes was based on the statistics of the Office of the Prosecutor General of Ukraine. The study revealed that from 2013 to 2025, there were statistically significant co-movements in the number of propaganda materials devoted to certain russian information and political psychological operations and certain types of registered crimes in Ukraine. On the basis of the correlation analysis, assumptions were made regarding the influence of particular propaganda narratives on statistics for selected categories of criminal offences. The exploratory factor analysis revealed the existence of three distinct factors of informational and criminogenic influence, which combine the dynamics of russian propaganda narratives with the dynamics of indicators of criminal offences against the foundations of Ukraine's national security, statehood, defence capability and territorial integrity between 2013 and 2025. Establishing the presence of an influence exerted by russian propaganda on criminal offence statistics, as well as the factors determining

## Article's History:

Received: 10.02.2026  
Revised: 05.05.2026  
Accepted: 26.05.2026  
Published: 08.07.2026

## Suggest Citation:

Kudinov, V., Pakrysh, O. & Panimash Yu. (2026). The relationship between russian propaganda and certain criminogenic processes in Ukraine. *Law Journal of the National Academy of Internal Affairs*, 16(2), 31-41. doi: 10.63341/naia-chasopis/2.2026.31.

\*Corresponding author ([kudinov\\_va@ukr.net](mailto:kudinov_va@ukr.net))



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

this influence, will make it possible to develop future strategies aimed at reducing the effectiveness of russian propaganda and lowering the crime rate

### Keywords:

information and psychological operations; information narratives; criminal offences; crime situation; rank correlation; factor analysis

### Introduction

As of 2026, five main domains of warfare are commonly distinguished: land, sea, air, space and the information environment, including cyberspace. In the information environment, information and psychological operations, hereinafter referred to as PSYOPs, are traditionally conducted during war in order to influence or mislead military opponents or the civilian population. russian PSYOPs justify and support the armed aggression and annexation of territories that the russian federation has carried out against Ukraine since 2014 and that escalated into a full-scale war in February 2022.

Many publications have examined the impact of russian information narratives on the public consciousness of Ukrainians, addressing a broad range of issues. In the study by O. Sviderska (2022), four levels are identified at which information warfare operates in Ukrainian realities, while the concept of information warfare is equated with deliberate criminal acts aimed at misinforming and demoralising the population and creating its "silent submission". The influence of russian propaganda on young people in the temporarily occupied territories of Ukraine is examined by S. Sidchenko *et al.* (2024). The impact of russian propaganda on social processes and state stability in Ukraine is considered by Y. Minenko (2023). N. Chaban *et al.* (2023) analyse the mechanisms through which russian narratives about Ukraine are constructed, as well as the factors that make them persuasive. The role of bots in spreading pro-russian messages on social media in order to form false public perceptions is examined by D. Geissler *et al.* (2023). The mechanisms of dissemination of russian narratives and their influence on the information environment during the war, together with the counter-narratives of pro-Ukrainian actors based on the use of social media platforms, are studied by R. Marigliano *et al.* (2024).

The analysis of social survey data presented by V. Kudinov *et al.* (2025), as well as the results of surveys of the Ukrainian population concerning perceptions of disinformation and information manipulation during the war presented by L. Alonso-Martín-Romo *et al.* (2023), show that russian propaganda generally fails to achieve its aim of influencing the public consciousness of Ukraine's population and its readiness for national resistance against russian aggression. Given that social surveys are conducted among broad sections of the population, whereas russian PSYOPs directly affect

certain limited categories of citizens, survey data may be insensitive to the negative manifestations of russian propaganda's influence. At the same time, prolonged armed aggression leads to psychological fatigue among the population, a decline in social optimism and a loss of belief in the prospect of a better future for Ukraine, which "contributes to a lower level of critical thinking, the normalisation of the russian federation's aggressive policy and the perception of political concessions as inevitable" (Rudnieva & Malovana, 2026).

International experience of military conflicts shows that propaganda can dehumanise certain groups of the civilian population and lower psychological barriers to the commission of violent crimes (Rawnak, 2025). Military hostilities, reinforced by aggressive russian propaganda, have become powerful factors in the spread of numerous acts of unlawful conduct among certain sections of Ukraine's population. Such acts often undermine the foundations of Ukraine's national security and defence capability and fall under specific articles of the Criminal Code of Ukraine<sup>1</sup>. Criminal offences related to the armed aggression against Ukraine have been analysed in scholarly publications, including collaboration activities (Katorkin, 2024), aiding the aggressor state (Kuksiuk, 2026), justification of the russian federation's armed aggression against Ukraine and the glorification of its participants (Kopcha, 2025), as well as unauthorised absence from a military unit and desertion.

The above-mentioned scholarly studies repeatedly noted the existence of links between russian PSYOPs and manifestations of unlawful acts committed by individual citizens. They also analysed and generalised the characteristics of citizens who commit certain types of crimes provoked by military hostilities. However, no quantitative assessment of the strength of these links has been carried out. This study aimed to identify indicators of consistency between changes in the number of russian-language propaganda materials related to specific russian information and psychological operations and changes in the number of particular types of registered crimes in Ukraine from 2013 onwards. The statistical relationship between changes in the number of registered offences under a particular Article of the Criminal Code of Ukraine and changes in the number of russian-language anti-Ukrainian propaganda materials in russian media was formulated as the following statistical hypothesis:

<sup>1</sup> Criminal Code of Ukraine. (2001, April). Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2341-14>.

■ null hypothesis ( $H_0$ ): changes in the number of registered crimes are not related to changes in the number of russian-language propaganda materials;

■ alternative hypothesis ( $H_1$ ): changes in the number of registered crimes are statistically significantly related to changes in the number of russian-language propaganda materials.

## Materials and Methods

The study examined the relationships between six quantitative indicators of russian narratives and 14 types of criminal offences. This gave rise to the assumption that hidden structural links exist between the dynamics of the dissemination of particular propaganda narratives and the dynamics of specific types of crime, and that these links can be represented through a system of common latent factors. This assumption can be formulated as another research hypothesis: indicators of the intensity of dissemination of particular russian propaganda narratives and indicators of specific types of crime share a common latent structure, which is manifested through a limited number of factors and reflects systemic relationships between information influence and criminogenic processes. To test this research hypothesis, the study analysed the main factors that determine the consistency of these changes. Establishing the presence of such factors will make it possible in future to identify targeted preventive measures aimed at reducing the effectiveness of russian propaganda and lowering the crime rate.

The dynamics of the intensity with which particular russian propaganda narratives were used were assessed through content analysis of the frequency with which selected russian-language terms and phrases appeared in the content of russian information and political television over specific time intervals, namely one-year periods, between 2013 and 2025. This methodological

choice is explained by the fact that the dynamics of such frequencies fairly accurately reflect the relative intensity with which russian narratives were transmitted to particular groups of Ukraine's population. Strengthened state control over the russian information space contributed to a high degree of consistency between the narratives of state television, pro-Kremlin online media and a substantial part of the russian segment of Telegram. Studies indicate intensive content exchange between russian television, russian media and Telegram channels, as a result of which key Kremlin narratives are reproduced across all communication environments (Hanley & Durumeric, 2024). The methodological basis is also supported by statistical studies showing that approximately 11% of Ukraine's population consumed russian media with some regularity in 2024, while russian television enjoyed the highest level of trust among consumers, at 25% (Internews Network, 2024). At the same time, it is evident that estimates of the intensity with which russian narratives are transmitted, when determined solely on the basis of television, are fairly approximate and relative in nature. They indicate the direction of change, namely whether use increased or decreased, but they do not allow a precise assessment of the extent to which the use of a particular term in a russian propaganda narrative increased or decreased. This should be taken into account when selecting methods for the statistical analysis of these data.

The frequency with which selected terms and phrases appeared was determined using the online resource War of Words (2026). The terms and phrases selected for analysis identify some of the main narratives of russian PSYOPs (Zalkin *et al.*, 2025). The search results for selected russian-language terms from propaganda narratives, beginning in 2013 and broken down by annual periods, are presented in Table 1.

**Table 1.** Search results for selected russian-language terms from the narratives

Year	Bandera*	TCR	Denazification	Demilitarisation	Capitulation	Novorossiia
2013	9	0	0	1	16	1
2014	290	0	0	17	81	552
2015	218	0	3	64	102	305
2016	196	0	3	14	74	107
2017	439	0	11	28	135	156
2018	486	0	4	49	187	113
2019	857	0	21	54	685	180
2020	345	0	9	28	262	54
2021	522	0	15	29	342	139
2022	1245	3	482	1486	1004	419
2023	827	49	152	541	705	517
2024	384	711	84	357	623	609
2025	363	854	110	543	1,005	379

**Note:** the term "Bandera\*" makes it possible to cover the words "Bandera", "Banderite", "Banderites" and "Banderism"

**Source:** developed by the authors based on data from War of Words (2026)

The crime situation for the period from 2013 to 2025, broken down by year for selected articles of

the Criminal Code of Ukraine and selected categories of crimes, was determined on the basis of the uni-

fied annual report on criminal offences published on the website of the Office of the Prosecutor General of Ukraine (2026). The following 14 types of crimes were selected for the study, some of which were grouped under several articles of the Criminal Code of Ukraine (Table 2). The numerical indicators used were the number of recorded criminal offences in the reporting period. These numbers represent the number of registered proceedings, not convictions, nor the number of persons involved. A single individual can appear multiple times in multiple cases. Indicators of crimes under Articles 335, 336 and 337 were merged into one, No. 11 in Table 2. These are all related to evasion of military duty. Criminal offences against the established procedure for military service, under Articles 402-435, are also presented as a single aggregated item, No. 13 in Table 2. More than 95% of this category consists of crimes under Articles 407

and 408. It should be noted that, beginning in 2022, Table 1.20 from the annual reporting of the Office of the Prosecutor General, entitled "Criminal offences against the established procedure for military service (military criminal offences)", was removed from the general reporting files, as of 2026. However, for 2022-2024, information on this category of crimes is available in publicly accessible archive files, links to which are provided in the study by D. Hladchenko (2025). The total number of registered crimes in this category for 2025 and the first quarter of 2026 can be easily calculated from the general reporting files published on the website of the Office of the Prosecutor General of Ukraine (2026). This made it possible to produce forecast estimates for crimes under Articles 407 and 408 of the Criminal Code of Ukraine for the relevant time intervals, which correlate with the data for the first ten months of 2025 (Tatarenko, 2026).

**Table 2.** Types of crimes analysed in the study

No.	Articles of the Criminal Code of Ukraine <sup>1</sup>	Type of crime
1	109	Actions aimed at the violent change or overthrow of the constitutional order or the seizure of state power
2	110	Encroachment on the territorial integrity and inviolability of Ukraine
3	110-2	Financing actions committed to violently change or overthrow the constitutional order, seizing state power, or changing the borders of the territory or state border of Ukraine
4	111	High treason
5	111-1	Collaboration activities
6	111-2	Aiding the aggressor state
7	113	Sabotage
8	114	Espionage
9	114-1	Obstruction of the lawful activities of the Armed Forces of Ukraine and other military formations
10	332	Illegal transportation of persons across the state border of Ukraine
11	335, 336, 337	Evasion of conscription for compulsory military service or military service by conscription of officers (335) Evasion of conscription during mobilisation (336) Evasion of military registration or special training assemblies (337)
12	338	Desecration of state symbols
13	402-435	Criminal offences against the established procedure for military service, including: Unauthorised absence from a military unit or place of service (407) Desertion (408)
14	436-2	Justification, recognition as lawful or denial of the armed aggression of the russian federation against Ukraine, and glorification of its participants

**Source:** developed by the authors

Thus, the analysis included six dynamic interval series for the period from 2013 to 2025, with a one-year interval, containing the frequencies with which selected terms characteristic of russian narratives appeared, and 14 dynamic interval series for the same period, corresponding to changes in statistical indicators for particular types of criminal offences. In total, 20 dynamic interval series were obtained, each containing values for the relevant features, namely terms or crimes, over 13 annual periods. An intercorrelation matrix of 20 by 20 was calculated for these series, with each cell containing Spearman's rank correlation coefficient. On the basis of the resulting

intercorrelation matrix, factor analysis was conducted using Principal Axis Factoring (PAF) with Varimax rotation. The number of factors was determined according to the Kaiser criterion, with eigenvalues greater than 1 selected. The statistical calculations for the individual elements of the intercorrelation matrix and the exploratory factor analysis were performed using ChatGPT (OpenAI, GPT-5.5, May 2026 version); all results obtained from the artificial intelligence were subsequently verified.

Although classical factor analysis involves the use of Pearson correlations, Spearman rank correlations are an acceptable robust non-parametric alternative

<sup>1</sup> Criminal Code of Ukraine. (2001, April). Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2341-14>.

when the data are not normally distributed (Goretzko & Bühner, 2022). In this context, the use of PAF is recommended (Qiu *et al.*, 2025), since it does not require multivariate normality, unlike methods based on Maximum Likelihood, which are sensitive to violations of normality.

## Results

A fragment of the resulting intercorrelation matrix between changes in the frequency with which certain

terms appeared and changes in criminal offences under specific articles is presented in Table 3. The obtained coefficient values indicate a noticeable rank correlation between many of the features under study. Since the number of annual periods from 2013 to 2025 is 13, the significance threshold for Spearman's rank correlation coefficient is 0.553 at a significance level of  $\alpha = 0.5$  and 0.684 at a significance level of  $\alpha = 0.1$ .

**Table 3.** Rank correlation coefficients between the frequencies of occurrence of selected terms and statistical indicators for particular types of criminal offences

Articles of the Criminal Code of Ukraine	Bandera	TCR	Denazification	Demilitarisation	Capitulation	Novorossiya
109	0.6041	0.4616	0.5837	0.5304	0.64	0.5545
110	0.4451	0.7583	0.6336	<b>0.8226</b>	0.6758	<b>0.8022</b>
110-2	<b>0.8116</b>	<b>0.7527</b>	<b>0.9683</b>	<b>0.8402</b>	<b>0.9188</b>	0.5062
111	0.6374	<b>0.7516</b>	<b>0.8815</b>	<b>0.7538</b>	<b>0.8297</b>	0.4011
111-1	0.4765	<b>0.918</b>	<b>0.8143</b>	<b>0.7997</b>	<b>0.7382</b>	0.6577
111-2	0.4228	<b>0.9426</b>	<b>0.7873</b>	<b>0.7661</b>	<b>0.7114</b>	0.6845
113	0.1492	<b>0.7288</b>	0.4515	0.6777	0.5193	<b>0.7956</b>
114	<b>0.811</b>	<b>0.7547</b>	<b>0.8963</b>	<b>0.8232</b>	<b>0.8993</b>	0.6869
114-1	0.1568	<b>0.8199</b>	0.5738	<b>0.7149</b>	0.5915	<b>0.7895</b>
332	0.544	<b>0.812</b>	<b>0.7961</b>	0.674	<b>0.7967</b>	0.3462
335, 336, 337	0.3901	<b>0.765</b>	0.6198	<b>0.8446</b>	0.6319	<b>0.8297</b>
338	0.0607	0.2359	0.0553	0.3964	0.1297	0.5986
402-435	0.1923	<b>0.8187</b>	0.5813	<b>0.7428</b>	0.5769	<b>0.7527</b>
436-2	0.4765	<b>0.918</b>	<b>0.8143</b>	<b>0.7997</b>	<b>0.7382</b>	0.6577

**Source:** developed by the authors

Thus, in many cases, changes in the number of registered crimes under particular articles of the Criminal Code of Ukraine strongly correlate with changes in the intensity with which selected terms characteristic of certain Russian narratives appeared. This may support the alternative hypothesis ( $H_1$ ) formulated in the Introduction to this study. An analytical review of selected rows in Table 3 makes it possible to interpret the results of the rank correlation analysis as follows:

■ Article 109 of the Criminal Code of Ukraine: actions aimed at the violent change or overthrow of the constitutional order. Moderate and high correlations were identified with all the terms examined ( $\rho = 0.46$ - $0.64$ ), with the highest values recorded for "Novorossiya" ( $\rho = 0.64$ ), "Bandera" ( $\rho = 0.60$ ) and "Demilitarisation" ( $\rho = 0.58$ ). This may indicate that the dissemination of narratives concerning the supposedly artificial nature of Ukrainian statehood, the need for its "demilitarisation" and the creation of alternative political entities, such as "Novorossiya", may potentially contribute to the formation of anti-state attitudes associated with an increase in the number of offences under Article 109 of the Criminal Code of Ukraine.

■ Article 110 of the Criminal Code of Ukraine: encroachment on the territorial integrity and inviolability of Ukraine. High correlations were observed

with the terms "Capitulation" ( $\rho = 0.82$ ), "Novorossiya" ( $\rho = 0.80$ ), "Demilitarisation" ( $\rho = 0.76$ ) and "Denazification" ( $\rho = 0.63$ ). This result may indicate a link between the intensification of narratives concerning changes to Ukraine's state borders, the need for concessions to the aggressor, the legitimisation of Russian territorial claims, and the dynamics of offences against the territorial integrity of the state.

■ Article 110-2 of the Criminal Code of Ukraine: financing actions aimed at changing the boundaries of the territory or state border. Very high correlations were observed for most terms, especially "Denazification" ( $\rho = 0.97$ ), "Novorossiya" ( $\rho = 0.92$ ), "Capitulation" ( $\rho = 0.84$ ) and "Demilitarisation" ( $\rho = 0.75$ ). The results may indicate that the intensive dissemination of narratives aimed at justifying aggression and changing Ukraine's territorial order may be accompanied by increased activity among persons involved in financing such unlawful actions.

■ Article 111 of the Criminal Code of Ukraine: high treason. The highest coefficients were observed for the terms "Denazification" ( $\rho = 0.88$ ), "Novorossiya" ( $\rho = 0.83$ ), "Demilitarisation" ( $\rho = 0.75$ ) and "TCR" ( $\rho = 0.75$ ). This may indicate that the dissemination of narratives which delegitimise the Ukrainian state and justify the actions of the aggressor state may potentially

create an information environment conducive to acts committed to the detriment of Ukraine's sovereignty and security.

■ Article 111-1 of the Criminal Code of Ukraine: collaboration activities. Very high correlations were established with the terms "TCR" ( $\rho = 0.92$ ), "Denazification" ( $\rho = 0.81$ ), "Demilitarisation" ( $\rho = 0.80$ ) and "Capitulation" ( $\rho = 0.74$ ). This may indicate that the discrediting of Ukrainian institutions of government and defence, together with the dissemination of ideas concerning the need for concessions to the aggressor, may contribute to the formation of a tolerant attitude towards cooperation with representatives of the aggressor state.

■ Article 111-2 of the Criminal Code of Ukraine: aiding the aggressor state. The correlation structure is similar to that for the previous article: the highest values were observed for "TCR" ( $\rho = 0.94$ ), "Denazification" ( $\rho = 0.79$ ), "Demilitarisation" ( $\rho = 0.77$ ) and "Capitulation" ( $\rho = 0.71$ ). This may indicate a possible link between the dissemination of narratives aimed at undermining trust in the Ukrainian state and the intensification of actions carried out in the interests of the aggressor state.

■ Article 113 of the Criminal Code of Ukraine: sabotage. The highest coefficients were obtained for the terms "Capitulation" ( $\rho = 0.80$ ), "TCR" ( $\rho = 0.73$ ) and "Novorossiya" ( $\rho = 0.68$ ). It may be assumed that the dissemination of narratives about the futility of resistance, the need for concessions and the legitimacy of russian geopolitical objectives may create an informational basis for sabotage activities.

■ Article 114 of the Criminal Code of Ukraine: espionage. Very high correlation coefficients were observed for all the main terms ( $\rho = 0.69-0.90$ ), with the highest values recorded for "Denazification" ( $\rho = 0.90$ ), "Novorossiya" ( $\rho = 0.90$ ), "Demilitarisation" ( $\rho = 0.82$ ) and "Bandera" ( $\rho = 0.81$ ). This may indicate that the active dissemination of propaganda narratives justifying russia's actions against Ukraine is associated with the dynamics of crimes aimed at collecting and transmitting information in favour of a foreign party.

■ Article 114-1 of the Criminal Code of Ukraine: obstruction of the lawful activities of the Armed Forces of Ukraine and other military formations. The highest correlations were identified for the terms "TCR" ( $\rho = 0.82$ ), "Capitulation" ( $\rho = 0.79$ ) and "Demilitarisation" ( $\rho = 0.71$ ). This may indicate that narratives aimed at discrediting mobilisation and the state's defence measures may be associated with an increase in cases of obstruction of the activities of the defence forces.

■ Article 332 of the Criminal Code of Ukraine: illegal transportation of persons across the state border. High correlations were observed with the terms "TCR" ( $\rho = 0.81$ ), "Denazification" ( $\rho = 0.80$ ), "Novorossiya" ( $\rho = 0.80$ ) and "Demilitarisation" ( $\rho = 0.67$ ). One possible explanation is that campaigns aimed at discrediting mobilisation measures may encourage evasion of

military duty and related attempts to cross the state border illegally.

■ Articles 335-337 of the Criminal Code of Ukraine: evasion of conscription, military registration and training assemblies. The highest coefficients were obtained for the terms "Capitulation" ( $\rho = 0.83$ ), "TCR" ( $\rho = 0.77$ ), "Novorossiya" ( $\rho = 0.84$ ) and "Demilitarisation" ( $\rho = 0.84$ ). The results may indicate that the dissemination of narratives directed against mobilisation and the continuation of armed resistance potentially affects the increase in offences related to evasion of military duty.

■ Article 338 of the Criminal Code of Ukraine: desecration of state symbols. For most terms, the correlation is weak or very weak ( $\rho = 0.06-0.40$ ). A relatively moderate association is observed only for the term "Capitulation" ( $\rho = 0.60$ ). This may indicate that the propaganda narratives examined have only a limited connection with the dynamics of this type of offence, and that its commission is probably determined by other factors.

■ Articles 402-435 of the Criminal Code of Ukraine: military criminal offences. High correlations were identified with the terms "TCR" ( $\rho = 0.82$ ), "Capitulation" ( $\rho = 0.75$ ), "Demilitarisation" ( $\rho = 0.74$ ) and "Novorossiya" ( $\rho = 0.75$ ). This may indicate the possible influence of narratives that undermine motivation to serve, encourage unauthorised absence from the place of service and desertion, discredit military command, and call into question the expediency of continuing the defence of the state.

■ Article 436-2 of the Criminal Code of Ukraine: justification, recognition as lawful or denial of the armed aggression of the russian federation against Ukraine. The highest coefficients were observed for the terms "TCR" ( $\rho = 0.92$ ), "Denazification" ( $\rho = 0.81$ ), "Demilitarisation" ( $\rho = 0.80$ ) and "Capitulation" ( $\rho = 0.74$ ). This is an expected result, since these terms belong to the key propaganda constructs used to justify aggression against Ukraine. High correlations may indicate a close relationship between the intensity with which such narratives are disseminated and the dynamics of offences under Article 436-2 of the Criminal Code of Ukraine.

The correlation analysis showed that the most stable predictors among the terms examined were "TCR", "Denazification", "Demilitarisation", "Capitulation" and "Novorossiya", which demonstrate high correlations with several groups of offences at once, including offences related to state security, collaboration activities, military criminal offences and the justification of the russian federation's aggression. This may be regarded as indirect confirmation of the criminogenic potential of the relevant russian information narratives. A strong correlation also exists between the frequencies of occurrence of the individual terms considered in this study, since they often appear simultaneously in the same russian information narratives. Similarly, a strong correlation is observed between the statistics for particular types of crimes. Taken together, these findings

suggest the existence of latent, or hidden, factors that simultaneously affect different types of criminal offences and the frequencies of occurrence of particular terms characteristic of Russian narratives.

In view of the above, an exploratory factor analysis was conducted. It effectively demonstrated the existence of statistically linked latent factors between the dynamics of Russian propaganda narratives and the dynamics of particular categories of criminal offences in

Ukraine in 2013-2025. The exploratory factor analysis showed that the Russian Federation's information and propaganda campaigns, crimes against the foundations of Ukraine's national security, military criminal offences and mobilisation-related offences are not processes independent of Russian information narratives. Rather, together with them, they form three stable latent factors, provisionally designated as F1, F2 and F3 and presented in Table 4.

**Table 4.** Factor loading matrix with Varimax rotation

No.	Terms/Articles of the Criminal Code of Ukraine <sup>1</sup>	F1	F2	F3
1	Bandera*	-0.0157	-0.0848	-0.9550
2	TCR	0.8844	-0.2993	-0.3237
3	Denazification	0.5327	-0.1045	-0.8040
4	Demilitarisation	0.5170	-0.4446	-0.5989
5	Capitulation	0.4571	-0.1991	-0.7920
6	Novorossiya	0.3939	-0.7458	-0.2496
7	Actions aimed at the violent change or overthrow of the constitutional order or the seizure of state power, Article 109	0.1492	-0.4553	-0.6186
8	Encroachment on the territorial integrity and inviolability of Ukraine, Article 110	0.4446	-0.7487	-0.4380
9	Financing actions committed to violently change or overthrow the constitutional order, or seizing state power, or changing the boundaries of the territory or state border of Ukraine, Article 110-2	0.5074	-0.1406	-0.8410
10	High treason, Article 111	0.5660	-0.1345	-0.7104
11	Collaboration activities, Article 111-1	0.7683	-0.3124	-0.4750
12	Aiding the aggressor state, Article 111-2	0.8398	-0.2755	-0.4137
13	Sabotage, Article 113	0.4972	-0.7640	-0.1682
14	Espionage, Article 114	0.4223	-0.3427	-0.8196
15	Obstruction of the lawful activities of the Armed Forces of Ukraine and other military formations, Article 114-1	0.6612	-0.6239	-0.1602
16	Illegal transportation of persons across the state border of Ukraine, Article 332	0.6361	0.0142	-0.6235
17	Various forms of evasion of military registration and conscription, Articles 335, 336 and 337	0.5831	-0.5551	-0.2848
18	Desecration of state symbols, Article 338	-0.0466	-0.8901	0.0075
19	Criminal offences against the established procedure for military service, Articles 402-435	0.6434	-0.6228	-0.1590
20	Justification, recognition as lawful or denial of the armed aggression of the Russian Federation against Ukraine, and glorification of its participants, Article 436-2	0.7683	-0.3124	-0.4750

**Source:** developed by the authors

The characteristics of factors F1, F2 and F3 are presented in Table 5. Table 5 suggests that the set of 20 features is, in effect, described by three latent

dimensions, or factors, which have eigenvalues greater than one and together explain 86.52% of the total variance in the indicators under study.

**Table 5.** Characteristics of factors F1, F2 and F3

	Factor eigenvalue	Sum of squared factor loadings	Share of total variance explained by a particular factor	Cumulative explained variance
F1	13.8019	6.4046	0.3202	0.3202
F2	2.6136	4.5571	0.2279	0.5481
F3	1.3052	6.3415	0.3171	0.8652

**Source:** developed by the authors

The factor loading matrix presented confirms the research hypothesis concerning the existence of systemic relationships between the information influence of Russian propaganda and criminal activity in the sphere of Ukraine's national security and defence capability. The first factor, F1, may be interpreted as a collaboration and destabilisation factor. The following features have the highest loadings on F1:

- No. 2 – “TCR”;
- No. 11 – Article 111-1, collaboration activities;
- No. 12 – Article 111-2, aiding the aggressor state;
- No. 15 – Article 114-1, obstruction of the lawful activities of the Armed Forces of Ukraine;
- No. 16 – Article 332, illegal transportation of persons across the state border;
- No. 17 – evasion of military service, Articles 335-337<sup>2</sup>;

<sup>1</sup> Criminal Code of Ukraine. (2001, April). Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2341-14>.

<sup>2</sup> Ibidem, 2001.

- No. 19 – offences against the procedure for military service, Articles 402-435;

- No. 20 – Article 436-2, justification of the russian federation’s aggression.

This factor reflects a single complex of phenomena associated with the undermining of defence capability and evasion of mobilisation, the discrediting of military institutions, collaborationism and anti-state behaviour. It is particularly indicative that, among the propaganda terms, “TCR” has the highest loading on this factor, No. 2 = 0.884. This shows that campaigns aimed at discrediting the Armed Forces of Ukraine and, in particular, the TCR are statistically synchronised with collaboration activities, aiding the aggressor, offences against the procedure for military service and evasion of mobilisation. In criminological terms, this may point to the operation of a coordinated information influence aimed at weakening the state’s mobilisation potential.

The second factor, F2, may be interpreted as a separatist and sabotage factor. The following features have the highest loadings on F2:

- No. 6 – “Novorossiya”;
- No. 8 – Article 110, encroachment on territorial integrity;
- No. 13 – Article 113, sabotage;
- No. 15 – Article 114-1, obstruction of the activities of the Armed Forces of Ukraine;
- No. 18 – Article 338, desecration of state symbols;
- No. 19 – offences against the procedure for military service, Articles 402-435.

This factor primarily demonstrates a strong association between the term “Novorossiya” and Articles 110, 113 and 114-1<sup>1</sup>. In other words, it links separatist narratives with aggression against state symbols, acts of sabotage and encroachments on Ukraine’s territorial integrity. This is consistent with the actual structure

of russian hybrid aggression after 2014, in which the concept of “Novorossiya” was a central element in legitimising separatism, delegitimising Ukrainian statehood and stimulating sabotage activity. Thus, factor F2 can be regarded as a statistical manifestation of the separatist and sabotage-oriented strand of hybrid warfare.

The third factor, F3, may be interpreted as an ideological, repressive and occupation-related factor. The following features have the highest loadings on F3:

- No. 1 – “Bandera\*”;
- No. 3 – “Denazification”;
- No. 4 – “Demilitarisation”;
- No. 5 – “Capitulation”;
- No. 7 – Article 109, violent change of the constitutional order;
- No. 9 – Article 110-2, financing actions against Ukraine;
- No. 14 – Article 114, espionage;
- No. 10 – Article 111, high treason;
- No. 16 – Article 332, illegal transportation of persons across the border.

This factor reflects the ideological justification of the russian federation’s aggression, the propagandistic construction of the image of “Nazi Ukraine”, narratives of coerced disarmament and capitulation, and the destruction of Ukrainian statehood. The most important terms here, as they have the highest loadings, are “Bandera\*”, “Denazification” and “Capitulation”. These were key elements of russia’s information support for the full-scale invasion of 2022. The factor association with the financing of anti-state activity, espionage and high treason indicates that this information cluster is statistically associated with more deep-seated forms of subversive activity. Overall, the identified latent factors of informational and criminogenic influence are shown in Table 6.

**Table 6.** Identified latent factors of informational and criminogenic influence

Factor	Probable content
F1	Collaborationism, mobilisation-related destabilisation and the undermining of defence capability
F2	Separatism, sabotage and anti-state symbolism
F3	Ideological justification of aggression and the undermining of statehood

**Source:** developed by the authors

The exploratory factor analysis showed the presence of common dynamics and synchronicity of changes between the number of propaganda materials related to specific russian information narratives and the statistics for particular types of registered criminal offences in Ukraine from 2013 onwards, as well as the existence of latent structures of interconnection. This supports the view that certain types of russian propaganda narratives are statistically interrelated with particular criminogenic processes in Ukraine.

## Discussion

The method proposed in this study for identifying statistical links between media narratives and registered crimes is not entirely new in the international literature. Several research areas can serve as a methodological basis for the proposed approach and may be used in further studies on this topic. In particular, R. Marigliano *et al.* (2024) analyse large datasets from social media and apply cluster analysis, network analysis and statistical models to identify russian propaganda narratives and measure their intensity

<sup>1</sup> Criminal Code of Ukraine. (2001, April). Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2341-14>.

over time. Their study demonstrates that propaganda narratives can be represented as quantitative time series suitable for subsequent correlation or regression analysis. A. Biswas *et al.* (2023) use network analysis, clustering and narrative evolution analysis to construct time series of political messages. Although criminal statistics are not analysed in that study, the Article in effect proposes a method for transforming information campaigns into quantitative indicators.

M. Bozhidarova *et al.* (2023) propose using the correlation coefficient to assess the strength of statistical links between the spread of destructive narratives on social media and the dynamics of hate crimes. Although the study is not concerned with war, it provides a methodological basis for examining the influence of propaganda on criminal behaviour. C. Arcila Calderón *et al.* (2024) construct time series for the intensity of media content and official criminal statistics, calculate correlations, analyse lagged dependencies and build predictive models. This study convincingly demonstrates that media narratives may be statistically associated with registered crimes.

At the same time, there remains a gap in the literature concerning studies that directly establish a statistical relationship between the intensity of russian propaganda and officially registered criminal offences committed by citizens of Ukraine, such as collaboration activities, sabotage and high treason. Most of the studies considered analyse the relationship between propaganda, including disinformation, hate speech and incitement, and participation in violence, such as hate crimes, war crimes and genocide. In this study, the starting premise was that russian information narratives cause changes in social attitudes and emotional states among a certain proportion of Ukrainian citizens, contributing to their radicalisation, demoralisation and dehumanisation. This, in turn, provokes these citizens to commit unlawful acts that are reflected in statistically recorded categories of criminal offences. Such offences usually do not fall within the category of hate crimes, war crimes or genocide.

## Conclusions

This study advanced a statistical hypothesis concerning the existence of consistency between changes in the number of registered offences under specific articles of the Criminal Code of Ukraine and changes in the number of russian-language anti-Ukrainian propaganda materials in russian media. It also advanced a research hypothesis concerning the existence of a certain latent structure linking indicators of the intensity of dissemination of particular russian propaganda narratives with indicators of the prevalence of specific types of criminal offences. Understanding the factor structure of the relationships between information and propaganda influence and criminogenic processes is a necessary precondition for developing strategies to counter the russian federation's information aggression and, accordingly, to reduce manifestations of certain types of criminal offences.

The rank correlation analysis identified statistically significant consistency between changes in the number of registered offences under specific articles of the Criminal Code of Ukraine and changes in the number of russian-language anti-Ukrainian propaganda materials on russian information and political television. It also produced quantitative indicators of the strength of the relationships between these dynamics (Table 3). The results of the rank correlation analysis confirmed the statistical hypothesis concerning the existence of relationships between changes in the number of registered offences under specific articles of the Criminal Code of Ukraine and changes in the number of russian-language anti-Ukrainian propaganda materials in russian media.

The study identified three distinct factors of informational and criminogenic influence. These factors combine the dynamics of russian propaganda narratives with the dynamics of indicators of criminal offences against the foundations of Ukraine's national security, statehood, defence capability and territorial integrity between 2013 and 2025. The factor structures obtained as a result of the analysis support the research hypothesis concerning the existence of a certain latent structure that determines the relationship between the intensity of russian propaganda information narratives transmitted to the civilian population of Ukraine and manifestations of criminal offences in the sphere of Ukraine's national security, statehood, defence capability and territorial integrity.

However, this study has limitations. In particular, the dynamics of the intensity with which particular russian propaganda narratives were used were assessed solely on the basis of russian-language content from russian information and political television, which provides only approximate indicators. Moreover, as the indicators of narrative intensity and criminal activity were presented on a yearly basis, this does not allow for taking into account time lags or guaranteeing the stability of the factor structure in factor analysis.

Further research is needed to extend the range of media outlets, as well as to take measurements of the russian propaganda intensity, on a monthly basis instead of yearly, to obtain more accurate estimates and to increase stability of the factor analysis. It would also be advisable to apply modern time series analysis methods, such as lag analysis, Granger causality and VAR models. In the cases where more detailed time-series data is available, these techniques may provide more informative results compared to correlation or factor analysis.

## Acknowledgements

None.

## Funding

None.

## Conflict of Interest

None.

## References

- [1] Alonso-Martín-Romo, L., Oliveros-Mediavilla, M., & Vaquerizo-Domínguez, E. (2023). Perception and opinion of the Ukrainian population regarding information manipulation: A field study on disinformation in the Ukrainian war. *El Profesional de la Información*, 32(4). doi: [10.3145/epi.2023.jul.05](https://doi.org/10.3145/epi.2023.jul.05).
- [2] Arcila Calderón, C., Sánchez Holgado, P., Gómez, J., Barbosa, M., Qi, H., Matilla, A., Amado, P., Guzmán, A., López-Matías, D., & Fernández-Villazala, T. (2024). From online hate speech to offline hate crime: The role of inflammatory language in forecasting violence against migrant and LGBT communities. *Humanities and Social Sciences Communications*, 11, article number 1369. doi: [10.1057/s41599-024-03899-1](https://doi.org/10.1057/s41599-024-03899-1).
- [3] Biswas, A., Niven, T., & Lin, Y.-R. (2023). The dynamics of political narratives during the Russian invasion of Ukraine. *arXiv*. doi: [10.1007/978-3-031-43129-6\\_4](https://doi.org/10.1007/978-3-031-43129-6_4).
- [4] Bozhidarova, M., Chang, J., Ale-Rasool, A., Liu, Y., Ma, C., Bertozzi, A.L., Brantingham, P.J., Lin, J., & Krishnagopal, S. (2023). Hate speech and hate crimes: A data-driven study of evolving discourse around marginalized groups. *arXiv*. doi: [10.48550/arXiv.2311.11163](https://doi.org/10.48550/arXiv.2311.11163).
- [5] Chaban, N., Zhabotynska, S., & Knodt, M. (2023). What makes strategic narrative efficient: Ukraine on Russian e-news platforms. *Cooperation and Conflict*, 58(4), 419-440. doi: [10.1177/00108367231161272](https://doi.org/10.1177/00108367231161272).
- [6] Geissler, D., Bär, D., Pröllochs, N., & Feuerriegel, S. (2023). Russian propaganda on social media during the 2022 invasion of Ukraine. *EPJ Data Science*, 12(35). doi: [10.1140/epjds/s13688-023-00414-5](https://doi.org/10.1140/epjds/s13688-023-00414-5).
- [7] Goretzko, D., & Bühner, M. (2022). Robustness of factor solutions in exploratory factor analysis. *Behaviormetrika*, 49, 131-148. doi: [10.1007/s41237-021-00152-w](https://doi.org/10.1007/s41237-021-00152-w).
- [8] Hanley, H.W.A., & Durumeric, Z. (2024). Partial mobilization: Tracking multilingual information flows amongst russian media outlets and Telegram. *Proceedings of the International AAAI Conference on Web and Social Media*, 18(1), 528-541. doi: [10.1609/icwsm.v18i1.31332](https://doi.org/10.1609/icwsm.v18i1.31332).
- [9] Hladchenko, D. (2025). Analysis of the current criminal situation under articles 407 and 408 of the criminal code of Ukraine and the overview of the criminal law policy to counteract to these military criminal offences under martial law. *Current Problems of Domestic Jurisprudence*, 2, 110-118. doi: [10.32782/2408-9257-2025-2-18](https://doi.org/10.32782/2408-9257-2025-2-18).
- [10] Internews Network. (2024). *Ukrainian media, attitudes, and trust 2024*. Retrieved from <https://sur.li/cnwfim>.
- [11] Katorkin, R. (2024). Determinants of collaboration activities. *Scientific Bulletin of the Dnipro State University of Internal Affairs*, 1, 44-51. doi: [10.31733/2078-3566-2024-1-44-51](https://doi.org/10.31733/2078-3566-2024-1-44-51).
- [12] Kopcha, V. (2025). Glorifier of russian aggression: Criminological characteristics of a person who commits a criminal offense under Article 436<sup>2</sup> of the Criminal Code of Ukraine. *Scientific Bulletin of Uzhhorod National University. Law Series*, 91(4), 95-99. doi: [10.24144/2307-3322.2025.91.4.11](https://doi.org/10.24144/2307-3322.2025.91.4.11).
- [13] Kudinov, V., Korneiko, O., & Pakrysh, O. (2025). Russia's information aggression against Ukraine: Dynamics and impact on the civilian population. *Juridical Scientific and Electronic Journal*, 8, 372-378. doi: [10.32782/2524-0374/2025-8/76](https://doi.org/10.32782/2524-0374/2025-8/76).
- [14] Kuksiuk, A. (2026). Criminological characteristics of an accomplice to an aggressor state. *Irpın Legal Chroniclles*, 4(21), 163-172. doi: [10.33244/2617-4154-4\(21\)-2025-163-172](https://doi.org/10.33244/2617-4154-4(21)-2025-163-172).
- [15] Marigliano, R., Ng, L.H.X., & Carley, K.M. (2024). Analyzing digital propaganda and conflict rhetoric: A study on Russia's bot-driven campaigns and counter-narratives during the Ukraine crisis. *Social Network Analysis and Mining*, 14, article number 170. doi: [10.1007/s13278-024-01322-w](https://doi.org/10.1007/s13278-024-01322-w).
- [16] Minenko, Y. (2023). The impact of Russian propaganda on the social and state stability of Ukraine: Analysis of methods and consequences. *Scientific works of Interregional Academy of Personnel Management Political Sciences and Public Management*, 3(69), 47-51. doi: [10.32689/2523-4625-2023-3\(69\)-6](https://doi.org/10.32689/2523-4625-2023-3(69)-6).
- [17] Office of the Prosecutor General of Ukraine. (2026). *On registered criminal offenses and the results of their pre-trial investigation*. Retrieved from <https://gp.gov.ua/ua/posts/pro-zareyestrovani-kriminalni-pravoporushennya-ta-rezultati-yih-dosudovogo-rozsliduvannya-2>.
- [18] Qiu, J., Li, Z., & Yao, J. (2025). Robust estimation for number of factors in high dimensional factor modeling via Spearman Correlation Matrix. *Journal of the American Statistical Association*, 120(550), 1139-1151. doi: [10.1080/01621459.2024.2402565](https://doi.org/10.1080/01621459.2024.2402565).
- [19] Rawnak. (2025). The role of hate speech in inciting genocide: A case study of Radio Television Libre des Mille Collines in Rwanda. *Contemporary Challenges: The Global Crime, Justice and Security Journal*, 5. doi: [10.2218/ccj.v5.10257](https://doi.org/10.2218/ccj.v5.10257).
- [20] Rudnieva, A., & Malovana, Y. (2026). The russian federation's information war against Ukraine in 2025: Analysis of key narratives and psychological mechanisms of influence. *Newsletter of Precarpathian University. Politology*, 22, 18-25. doi: [10.32782/2312-1815/2025-22-35](https://doi.org/10.32782/2312-1815/2025-22-35).
- [21] Sidchenko, S., Zalkin, S., Khudarkovskyi, K., & Bielimov, V. (2024). Informational (psychological) impact of Russian propaganda on young people in the russian federation and on the temporarily occupied territories of Ukraine. *Collection of Scientific Papers of the Kharkiv National Air Force University*, 1(79), 113-118. doi: [10.30748/zhups.2024.79.17](https://doi.org/10.30748/zhups.2024.79.17).
- [22] Sviderska, O. (2022). Digital propaganda and risks of information security in the context of the Russian-Ukrainian war. *Politicus: Scientific Journal*, 2, 60-65. doi: [10.24195/2414-9616.2022-2.10](https://doi.org/10.24195/2414-9616.2022-2.10).

- [23] Tatarenko, H. (2026). History of the formation and transformation of the specialized prosecutor's office in the field of defence of Ukraine (1991-2025): Problems and prospects. *Topical Issues of Law: Theory and Practice*, 1(51), 236-248. doi: [10.33216/2218-5461/2026-51-1-236-248](https://doi.org/10.33216/2218-5461/2026-51-1-236-248).
- [24] War of Words. (2026). *The service for analyzing Russian information-political TV and RuTube*. Retrieved from <https://warofwords.info/>.
- [25] Zalkin, S., Sidchenko, S., Khudarkovskyi, K., Revin, O., Bielimov, V., & Svystunov, D. (2025). Systematic analysis of narratives of the russian federation's information war against Ukraine according to NATO standards. *Collection of scientific papers of the Kharkiv National Air Force University*, 3(85), 93-102. doi: [10.30748/zhups.2025.85.12](https://doi.org/10.30748/zhups.2025.85.12).

## Взаємозв'язок російської пропаганди та певних криміногенних процесів в Україні

### Вадим Кудінов

Кандидат фізико-математичних наук, доцент  
Національна академія внутрішніх справ  
03035, пл. Солом'янська, 1, м. Київ, Україна  
<https://orcid.org/0000-0002-5299-0590>

### Олександр Пакриш

Кандидат технічних наук, доцент  
Національна академія внутрішніх справ  
03035, пл. Солом'янська, 1, м. Київ, Україна  
<https://orcid.org/0000-0002-6420-5246>

### Юлія Панімаш

Кандидат педагогічних наук  
Черкаський інститут пожежної безпеки імені Героїв Чорнобиля Національного університету цивільного захисту  
18034, вул. Онопрієнка, 8, м. Черкаси, Україна  
<https://orcid.org/0000-0002-5337-6613>

### Анотація

У статті досліджено вплив російських інформаційно-психологічних операцій на суспільну свідомість українців з метою провокування кримінальних правопорушень. Інтенсивність російських наративів оцінено шляхом контент-аналізу частоти появи окремих російськомовних термінів у пропагандистських матеріалах. Кількість окремих видів кримінальних правопорушень визначено на основі статистичної звітності Офісу Генерального прокурора. Дослідження виявило статистично значущу узгодженість динаміки змін кількості пропагандистських матеріалів з окремих російських інформаційно-психологічних операцій та динаміки змін окремих видів зареєстрованих злочинів в Україні за період з 2013 до 2025 року. На основі здійсненого кореляційного аналізу сформовано припущення щодо впливу певних пропагандистських наративів на статистичні дані з окремих видів кримінальних правопорушень. За результатами факторного аналізу виявлено наявність трьох окремих чинників інформаційно-криміногенного впливу, які об'єднують динаміку російських пропагандистських наративів і показників кримінальних правопорушень проти основ національної безпеки, державності, обороноздатності й територіальної цілісності України за період з 2013 до 2025 року. Встановлення наявності впливу російської пропаганди на статистику кримінальних правопорушень і факторів, що зумовлюють цей вплив, дасть змогу визначати стратегії щодо зниження ефективності російської пропаганди та рівня злочинності

### Ключові слова:

інформаційно-психологічні операції; інформаційні наративи; кримінальні правопорушення; рівень злочинності; рангова кореляція; факторний аналіз