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Polygraph testing: 10 years of practical application*

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Abstract

The article analyzes the evolution and effectiveness of polygraph testing in the Republic of Moldova over a decade of institutional application (2014–2023) within the Forensic and Judicial Expertise Center of the General Police Inspectorate. Relevant quantitative data are presented concerning the frequency of polygraph tests and the types of requests received, highlighting a high degree of accuracy and significant practical applicability. In order to assess the actual impact of the method, the test results were compared with court rulings, and the use of polygraph was examined from multiple perspectives. The article also addresses the current status and implementation of polygraph testing in the Republic of Moldova, United States of America, Romania, and Ukraine. Based on the gathered experience, it can be concluded that polygraph testing effectively contributes to the clarification of complex cases and, in certain situations, enables the retrieval of additional relevant information.

The conclusions emphasize the relevance of the polygraph as a complementary investigative tool, while also underscoring the need for continuous development of the field through advanced professional training, regulatory harmonization, and the expansion of its application under scientifically rigorous and ethically responsible conditions.

Key words: polygraph, polygraph testing, simulated behavior detector, criminal investigation, personnel selection, judicial decisions, Forensic and Judicial Expertise Center

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Introduction

Throughout history, people have faced the need to investigate crimes, and unsanctioned offenses have had a negative impact on the perception of security and public trust in the justice system. In this context, polygraph testing has proven to be an effective tool not only in combating crime but also in preventing it, playing a significant role in obtaining relevant information for establishing the truth.

Methods for assessing human truthfulness have deep historical roots, grounded in practices and techniques developed over time to identify deceptive behavior and to safeguard the integrity of decision-making processes. In this regard, polygraph testing represents a standardized, technologically advanced method for analyzing physiological responses associated with the veracity of statements.

The use of polygraph testing in the Republic of Moldova is not limited to the activity of the Forensic and Judicial Expertise Center (FJEC) of the General Police Inspectorate (GPI) under the Ministry of Internal Affairs (MIA), but also involves the contribution of other public institutions. However, the present article focuses exclusively on the experience accumulated within the FJEC, highlighting the most relevant aspects of its polygraph-related activity. To better understand the development and institutional consolidation of polygraph use, it is necessary to outline several key chronological milestones:

1. In the 1990s, a polygraph testing laboratory was established within the Forensic Department. Its primary objective was to support law enforcement bodies in solving crimes and establishing the truth, with demonstrably positive results in investigative practice.

2. In 2008, Law No. 269 on the application of simulated behavior detection testing (polygraph) was adopted, regulating the essential aspects of polygraph-based examinations [1].

3. In 2012, the Law on Special Investigative Activities was amended, removing "interviews using simulated behavior detectors" from the list of operative investigation measures [2]. This legislative change marked a shift in the legal treatment of the polygraph, excluding it from the category of operational tools.

4. Subsequently, in 2014, Government Decision No. 475 was issued, establishing the State Commission for Polygraph Testing (SCPT). The Commission developed regulations defining the status, competencies, and responsibilities of polygraph examiners and their assistants [3].

5. Starting in 2017, polygraph testing was also extended to personnel selection procedures, such as employment and internal transfer.

6. In 2018, the Constitutional Court ruled that requiring a positive polygraph test result as a mandatory condition in personnel selection processes constitutes a disproportionate measure. At the same time, the Court acknowledged that no less intrusive and more effective alternatives to polygraph testing were available [4]. As a result, during the period 2019– 2021, the legal basis for initiating such tests in selection procedures was repealed at the initiative of the National Integrity Authority (NIA), the Superior Council of Prosecutors, and the Superior Council of Magistracy (SCM) [5].

7. In April 2023, the Polygraph Testing Section was created within the Forensic and Judicial Expertise Center of the General Police Inspectorate under the MIA.

8. In 2024, the right to conduct polygraph testing was extended to additional institutions, such as the State Protection and Guard Service and, subsequently, the Ministry of Defense, based on governmental decisions adopted toward the end of the year.

Despite challenges such as legislative changes and legal or operational obstacles, the application of polygraph testing continues to expand across various public institutions.

Methodology

To carry out this study, a mixed methodological approach was adopted, combining both quantitative and qualitative analysis of the data available within CTCEJ. The methods used include logical reasoning, comparative analysis, systemic analysis, description, and deduction. The quantitative analysis focused on data from CTCEJ's internal registers and official statistics available on the portal statistica.md. Additionally, a comparative analysis was conducted between polygraph test results and final court rulings, accessed via the platform instante.justice.md.

The research integrated both theoretical and practical perspectives, utilizing official and scientific sources and applying standardized techniques to provide a clear overview of the effectiveness and applicability of the polygraph in the Republic of Moldova.

List of abbreviations

APA – American Polygraph Association
EPA – European Polygraph Association
FJEC – Forensic and Judicial Expertise Center
GPI – General Police Inspectorate
MIA – Ministry of Internal Affairs
NIA – National Integrity Authority
SCM – Superior Council of Magistracy
SCPT – State Commission for Polygraph Testing
USA – United States of America

Results and discussions

Summarizing the carried out activity, we begin with an analysis of the dynamics in the number of requests received for polygraph testing during the 2014–2023 period (over 10 years of practice), submitted by various authorities legally empowered to initiate such examinations (Table 1).

Table 1. Number of requests for polygraph testing

	General Police Inspectorate	Prosecutors Office	Superior Council of Magistracy	Ministry of Internal Affairs	Customs Service	National Integrity Agency	National anticorruption center	Other	Total
2014	185	9	-	7	-	-	-	17	218
2015	127	4	-	3	1	-	-	12	147
2016	154	16	-	5	2	-	1	20	198
2017	100	18	-	1	-	-	3	1	122
2018	86	34	-	2	3	-	-	-	125
2019	61	5	65	-	2	-	-	-	133
2020	120	13	40	3	-	1	-	-	177
2021	125	17	-	2	2	8	-	-	154
2022	106	55	-	1	5	-	-	-	167
2023	104	15	-	7	-	-	-	-	126
Total	1168	186	105	31	15	9	4	50	1568

All requests were processed, and the examinations were conducted using validated testing techniques, selected in accordance with the specific objectives of each case. The GPI was the authority with the highest number of requests throughout the entire period, totaling 1,168, which represents approximately 74.5% of all submissions. Over the years, the Forensic and Judicial Expertise Center has collaborated with nearly all institutions authorized to initiate polygraph testing. Overall, the following conclusions can be drawn:

1. The average number of requests is approximately 150 per year, indicating a consistent volume of activity in the field of polygraph examinations.

2. The years 2014 and 2016 recorded the highest number of requests — 218 and 198 respectively — due to the fact that, despite legislative changes, investigative officers who had previously experienced the benefits of polygraph testing continued to use it to clarify the circumstances of the information provided by individuals involved in criminal cases. This practice highlights the significant role of the polygraph as a complementary tool in the process of investigation and in obtaining crucial information for solving crimes.

3. The years 2017 and 2018 marked a decline in the number of requests, with 122 and 125 respectively. No direct or objective cause was identified; however, it became evident that the main initiator of such examinations—GPI—began to make less frequent use of polygraph testing. If personnel selection-related requests are excluded, a comparative analysis of all recorded criminal offenses by year versus the use of polygraph testing can be conducted (see Table 2) [6].

Table 2. Statistics of all registered crimes in the period 2014–2023

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total crimes	41783	40302	41921	35581	32035	31657	26342	27159	26833	24001
Polygraph requests	218	147	198	108	113	65	125	143	139	115
Polygraph aplication	0,52%	0,36%	0,47%	0,30%	0,35%	0,21%	0,47%	0,53%	0,52%	0,48%

The correlation between the use of polygraph testing and the total number of registered criminal offenses in the Republic of Moldova provides an indicator of the method's relevance in investigative practice. Between 2014 and 2023, out of more than 327,000 reported crimes, polygraph testing was requested in 1,371 cases, corresponding to an average frequency of 0.42%—or approximately 4 tests per 1,000 cases.

The most common types of cases for which polygraph testing was requested are:

- Theft – 442 requests;
- Personnel selection – 196 requests;
- Murder – 190 requests;
- Hooliganism – 111 requests;
- Rape – 97 requests.

The statistical data shows that the largest number of requests for testing comes from theft cases – 28.2%, personnel selection and murder investigations – 12% each, hooliganism – 7%, and rape – 6%. However, when examining all recorded offenses during the period 2014–2023, it becomes evident which types of cases most frequently involve the use of polygraph testing (see Table 3) [6].

Table 3. The Percentage of Polygraph use for crime detection (2014–2023)

	Total recorded	Polygraph application	%
Murder	1617	190	11,75%
Rape	2913	97	3,33%
Hooliganism	13195	111	0,84%
Theft	110393	442	0,40%

Although theft accounts for the highest absolute number of requests, the relative use of polygraph testing is significantly more intensive in homicide cases, where 190 tests were conducted out of a total of 1,617 cases (11.75%). This indicator highlights the strategic value of the polygraph in complex investigations. Given the gravity of such crimes and the increased need for their swift resolution, the polygraph becomes an effective tool for confirming or refuting investigative leads. Therefore, the high frequency of polygraph use in homicide cases is justified by the necessity to expedite investigations and by the support it provides in the process of establishing the truth.

The practical importance of polygraph testing is further demonstrated by the fact that, between 2019 and 2023, out of 693 examinations conducted, in 62 cases (8.9%) confessions of guilt or essential information for case resolution were obtained:

- 41 confessions were obtained during testing;
- 21 confessions were obtained after the testing, either following the presentation of the results by the criminal investigation officers or in court.

The use of the polygraph is an inherently humane, ethical, and non-violent method that does not infringe upon a person's honor, liberty, or dignity [7]. In addition to the fact that the Constitutional Court has ruled in favor of the continued use of polygraph testing, it is worth emphasizing that this method represents a balance between the rights of the individual being examined and the need to employ such tools in the pursuit of justice and the protection of public interest [4]. It is more than a "lie detector"; it is a "truth detector." For instance, as shown in Table 4, results confirming the truthfulness of statements are twice as frequent as those indicating deception. When properly applied, the polygraph enhances the accuracy of statement evaluation by helping identify inconsistencies or verify the credibility of declarations. In this regard, the polygraph becomes an essential complementary tool in the investigative process, supporting both the efficiency and fairness of judicial proceedings.

Table 4. Results of Polygraph Tests

		Total	%
1	NDI	678	43,3%
2	DI	350	22,3%
3	Was absent	343	21,9%
4	The person refused	73	4,7%
5	The necessity disappeared	54	3,4%
6	Impossibility of testing	51	3,3%

Out of a total of 1,568 requests, 1,047 polygraph examinations were actually conducted. Approximately 21.9% of individuals for whom testing was ordered did not appear, while in 4.7% of cases, individuals presented themselves but refused to undergo testing. In about 3.4% of cases, the need for testing became irrelevant, as the investigative bodies clarified the situation through other means before the materials reached the examination stage. Another 3% of cases involved situations where testing was deemed impossible due to contraindications identified prior to or during the examination, which prevented its continuation, in accordance with Law No. 269/2008 (e.g., health issues, pregnancy, age under 18, advanced age, medical contraindications, etc.) [1].

The accuracy of the polygraph is further confirmed by a comparative analysis with court rulings, as verified through the National Judicial Portal [8]. A total of 164 cases were identified in which polygraph testing had been used and a final court

decision had been issued. According to the collected statistics, polygraph results aligned with court conclusions in 84.8% of cases (see Table 5).

Table 5. Polygraph Tests in Relation to Court Decisions for the Same Case

Year	Court decision	Matches	Does not match	Reference to polygraph
2014	18	18	0	8
2015	8	4	4	0
2016	28	24	4	16
2017	7	7	0	6
2018	11	8	3	7
2019	10	6	4	6
2020	25	23	2	17
2021	26	19	7	12
2022	17	16	1	12
2023	14	14	0	6
Total	164	139	25	90
		84,8%	15,2%	54,9%

A reference to the polygraph indicates how often the court, in its rulings, mentioned that a polygraph examination had been conducted or explicitly referred to its results.

In 84.8% of cases, the results of polygraph testing were consistent with the court decisions, demonstrating the effectiveness and reliability of this tool. This high degree of correlation between polygraph results and judicial conclusions highlights the polygraph's capacity to contribute to a more equitable justice process by providing additional relevant information in the evaluation of evidence and the establishment of the truth in the examined cases. This can be considered a strong result, especially when compared to the findings of a 2003 meta-analysis conducted by the U.S. National Research Council, which reported that the median accuracy rate of validated polygraph tests ranged between 80% and 90% depending on the type of test used [9]. Another important factor should also be taken into account: each examinee has the right to request a retest. If the average probability of error, according to existing research, is 15%, then in the case of two independent tests, the probability of obtaining a correct and accurate result increases, and the probability of error decreases to $0.15 \times 0.15 = 0.0225$, resulting in an average accuracy of 97.75%.

The results of polygraph testing during the analyzed period highlight not only its consistent and sustained applicability but also its high degree of reliability, relevance, and effectiveness in supporting both criminal and administrative proceedings.

An analysis conducted in 2013 by the Center for Analysis and Prevention of Corruption emphasized that polygraph testing is an ethical and non-violent method, applied in over 75 countries across various fields, offering both benefits and certain limitations [7]. In Romania, polygraph testing is officially recognized as a form of judicial technical expertise, and psychologists authorized to perform it must meet strict requirements established by the Ministry of Justice. Obtaining the status of judicial technical expert in this specialization involves a rigorous process of professional training, culminating in an examination before an evaluation commission organized by the Ministry. According to the National Register of Psychologists with the right to independent practice, managed by the Romanian College of Psychologists, 159 certifications were issued between 2005 and 2025 for specialists authorized to conduct polygraph testing [10]. Currently, approximately 120 psychologists hold active licenses for this specific activity.

According to the Ministry of Justice's Guide on Judicial Expertise, polygraph testing falls under the category of "Psychology and Behavioral Sciences," specialization 74 – Psychology, with the subspecialization "Applied Psychology in the Field of National Security" [11]. This subspecialization permits expert evaluations within the domain of "judicial psychology," in which polygraph testing is recognized as a method for assessing simulated behavior. Thus, in Romania, psychophysiological polygraph testing is fully integrated into the judicial system as an accredited form of expert evaluation.

In Ukraine, the field of polygraph testing has experienced accelerated development in recent years, having been officially regulated in 2015, when this activity was included in the list of admissible judicial expert examinations [12]. Currently, more than 500 active polygraph examiners are registered with the National Association of Polygraphologists of Ukraine, which maintains branches in all regions of the country [13]. The status of certified polygraph examiner is granted upon completion of specialized training courses and the attainment of a state-recognized certification. Furthermore, the equipment used in Ukraine must comply with the technical requirements established by the national standard DSTU 8692:2016 (Ukrainian State Standard), which governs the methodological and procedural aspects of polygraph examinations. This national standard shares

multiple conceptual and operational similarities with the ASTM standard series developed in the United States (American Society for Testing and Materials), which are dedicated to research in the field of psychophysiological detection of deceptive behavior. Although each system reflects the specificities of its respective legal framework, there is a demonstrable methodological foundation common to both, centered on scientific validity and adherence to standardized examination protocols.

In the United States, the fundamental standards for professional practice have been developed by the American Polygraph Association (APA), which establishes internationally applicable methodological and ethical norms. Currently, over 2,700 accredited polygraph examiners are active in the U.S., employing scientifically validated techniques and standardized protocols to maximize the accuracy and reproducibility of test results. At the European level, these principles are reflected in the work of the European Polygraph Association (EPA), an organization that brings together members from 35 countries. Both APA and EPA promote methodological convergence and the harmonization of professional standards to enhance operational effectiveness and ensure ethical safeguards throughout the examination process [14].

In the Republic of Moldova, the field of polygraph testing remains in an early stage of development. At present, only 7 certified polygraph examiners and 2 assistants are active within authorized institutions. According to Law No. 269/2008 on the application of simulated behavior detection testing (polygraph), nine public institutions are authorized to initiate such examinations. Given the multiple purposes for which this method is employed—such as pre-employment screening, internal investigations, or criminal inquiries—it is estimated that each institution would require between 3 and 5 specialists, depending on workload. Consequently, polygraph testing in the Republic of Moldova represents an important area for development, with considerable potential for expansion.

Conclusions

Polygraph testing represents a promising direction for strengthening the capacity of state institutions to prevent and investigate crime, substantially contributing to the establishment of truth. A significant advantage for the Republic of Moldova lies in the existence of a clear legislative framework and procedural regulations that grant legitimacy to the application of this tool.

Data analyzed over the course of a decade demonstrates the consistent and effective applicability of polygraph testing, particularly in complex cases. The statistics reveal a significant concordance between polygraph results and court rulings, attesting to the high reliability and relevance of this method in the truth-seeking process.

It is important to emphasize that when used in accordance with international standards and national regulations, the polygraph operates within an ethical framework, as a non-violent method that respects human dignity. Moreover, polygraph examinations can facilitate the acquisition of valuable additional information during investigations, thanks to the structured interaction during the pre-test and post-test phases, which allow for the identification of relevant details through communication with the examinee.

An upward trend is observed in the integration of polygraph specialists within state institutions, indicating a positive shift in attitude toward this investigative tool. Drawing inspiration from international best practices and the experience accumulated at the Forensic and Judicial Expertise Center, it can be concluded that polygraph testing offers a concrete and sustainable operational advantage.

Therefore, the polygraph is not merely a technical verification tool but a valuable complementary instrument in criminal investigations, personnel selection, and the clarification of sensitive cases. Its use contributes both to increasing the efficiency of investigations and to strengthening public confidence and the perception of security within the justice system of the Republic of Moldova.

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