Internal Communication Changes in the Croatian Police in the Decade of Intensive Democratization – A Comparison between 2010 and 2020

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This paper aims to determine changes to the internal communication in the police organization in Croatia over a ten-year period. The research is based on a survey conducted on a convenient sample of respondents – 2010 (n = 1,250) and 2020 (n = 1,296). The respondents, i.e. police officers, filled in a questionnaire that measures eight dimensions of satisfaction with internal communication. The results of discriminant analysis reveal that there is a difference in satisfaction with internal communication in the two waves of research. Statistically significant are the differences between respondents in 2010 and 2020 for all dimensions. The contribution of the paper is its monitoring of changes in the satisfaction of police officers in Croatia with internal communication. The investigation of changes in communication is extremely important because police organizations, especially in transition countries, have changed frequently.

Keywords: changes, Croatian police, internal communication, police officers

UDC: 351.741(497.5)

1 Introduction

It is impossible not to communicate because every activity or inactivity, words or silence, all have a message value. Communication is a "conditio sine qua non" of human life and social order (Watzlawick et al., 1967). Without communication, organized action is not possible (Kunczik & Zipfel, 1998). The positive impact of internal communication on the effectiveness of an organization was first confirmed by the Hawthorne Studies, conducted in the USA between the two world wars (1924-1932) (Berger, 2021). For decades, many authors have been confirming this positive contribution of successful communication to the success of an organization (Brooks et al., 1979, Kalla, 2005; Quinn & Hargie, 2004; Robson & Tourish, 2005; Ruck & Welch, 2012; Snyder & Morris, 1984; Starc et al., 2019; Tkalac Verčič, 2021; Tkalac Verčič et al., 2009; Welch, 2012), while the World Health Organization placed quality communication on its list as one of five skills essential for a healthy and happy life (Mihalinčić, 2018). Internal communication should be high on the list of priorities of all organizations due to its many beneficial ef-

fects on the individual and the organization. In particular, this applies to police organizations because most police activities are related to interpersonal communication, which is an integral part of internal communication (Mishra et al., 2014). Namely, five of the six most common actions taken by officers consisted entirely of talking and listening: interviewing, interrogating, lecturing, cautioning, providing information, and providing reassurance. Police officers primarily use communication to determine what is happening in any given situation, and it is primarily through communication that an amicable solution is reached (Novak et al., 2017). Many authors emphasize the importance of internal communication of police officers (Bakić-Tomić, 2003; Borovec & Balgač, 2017; Borovec et al., 2011; Cajner Mraović et al., 2003; Faber & Cajner Mraović, 2003; Woods, 2000) or external communication toward citizens (Borovec, 2011; Kalem, 2014; Vukosav & Glavač-Glišić, 2007). Due to all the positive effects it has on an organization, internal communication is also important for the functioning of the police, and in Croatia, only one such study was conducted, in 2010. Bearing in mind the value of research of this kind in Croatia, and the fact that, in the previous decade, the Croatian police continued intensive reforms, as is the case in most former transition countries (socialist countries of Central and Southeast Europe), this research focuses on differences in the internal communication of the Croatian police over a ten-year period.

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2 Internal communication and its importance for police organizations

For police officers, communication is the main means of work because, in addition to communicating with citizens, formally and informally, they also communicate with each other – horizontally and vertically, in the police system, but also with other institutions, in writing and orally (Patterson, 1992; Vukosav & Glavač-Glišić, 2009). Internal communication is the cornerstone of the police organization (Hoffmann 2012), just like in any other organization.

Different authors (Douglas et al., 2000; Gray & Laidlaw, 2004; Greenbaum et al., 1988; Quinn & Hargie, 2004; Zwijze-Koning & de Jong, 2007) have somewhat different approaches to defining and operationalizing the concept of internal communication. For the purpose of this study, the concept of internal communication was used that consists of the following eight dimensions: satisfaction with communication in meetings, satisfaction with horizontal communication, satisfaction with the quality of communication media, satisfaction with the communication climate, satisfaction with informal communication, satisfaction with communication with a superior, satisfaction with corporate communication and satisfaction with feedback (Tkalac Verčič et al., 2009).

Horizontal communication is a type of informal interpersonal and socioemotional interaction between different individuals on the same organizational level (Beigi & Mozayani, 2016; Postmes et al., 2001). In contrast, vertical communication refers to work-related communications and travels top-down and bottom-up within an organization's hierarchy, and may range from information about an organization's strategy to the ability to give bottom-up feedback and advice to management (Bartels et al., 2010; Postmes et al., 2001). Studies across the world (Karthika, 2021; Meijer, 2008; Saruhan, 2014; Simpson, 1959; Tkalac Verčič et al., 2012; Wang, 2011; Zhang et al., 2022) reveal its connection with job satisfaction (Borovec & Balgač, 2017), greater work efficiency and engagement (Hee et al., 2019), and commitment to the organization (Postmes et al., 2001; Tkalac Verčič & Men, 2023).

Feedback as a component of internal communication (Baker et al., 2013; Tourish & Robson, 2006) can include various forms of feedback on tasks performed, ranging from the quality to the complexity and manner of the task performed. Such information is necessary in every profession, including the police, because it enables employees to recognize and correct errors or to persist in desirable manners of conducting their tasks, and also fosters commitment to an organization (Guo & Sanchez, 2005; Johnson, 2015; McDermott & Hulse-Killacky, 2012). Therefore, the importance of police officer

satisfaction with feedback is understandable for the purpose of this paper.

Corporate information is a component of internal communication (Clampitt & Girard, 1993; Mueller & Lee, 2002; Tong et al., 2013), which refers to information on the success and work of an organization, as well as regulations, procedures and rules related to an organization (Borovec et al., 2011; Tkalac Verčič et al., 2009).

This is related to the communication climate, which promotes organizational values and goals, as well as information making the individual feel like an important part of the organization, so as to identify himself or herself with the organization (Borovec et al., 2011; Neill et al., 2020).

Most authors dealing with internal communication consider that internal communication includes informal communication, quality of communication media and communication in meetings (Men, 2014; Tkalac Verčič et al., 2009). Communication in meetings can significantly affect the motivation of employees, but also the overall productivity of an organization, because meetings that are too long, too frequently held and that do not have satisfactory outcomes can have a negative effect on efficiency (Lehmann-Willenbrock et al., 2013). Although the COVID-19 pandemic, at its peak, moved a large part of business communications into virtual space (Standaert et al., 2022), we cannot say that such forms of communication did not exist before the pandemic (Anderson et al., 2007).

Moreover, studies of internal communication show the importance of opportunities, quality and criteria for the selection of communication media in work organizations for effective communication (Tkalac Verčič & Špoljarić 2020; Wood, 1999).

We must be aware that internal communication in organizations consists not only of formal forms of business communication but also includes informal communication (Koch & Denner, 2022; Saleem & Perveen, 2017), which is quite understandable if we take into account the sociological knowledge that talking about other people is the most common social activity (Dores Cruz et al., 2021a, 2021b). In terms of efficiency, it does matter how much time employees spend in informal communication, and especially important can be the content and consequences of this information such as workplace deviance (Baboselac-Marić & Zadro Omrčen, 2019) or workplace gossip (Dores Cruz et al., 2021a, 2021b).

Police organizations have many different stakeholders, and have always faced challenges when communicating with

internal and external circles (Borovec, 2011; Kovačič Čelofiga & Plenković, 2020; Stephens et al., 2011). Hoffman (2012) argues that better internal communication directly improves the image of the police, which may improve its functioning in society, and he takes this is a step further, stating that, without adequate communication in its various resources, the police force is no longer useful. In Croatia, this area is regulated by the Code of Ethics of Police Officers ("Etički kodeks policijskih službenika", 2012), which stipulates that relationships among police officers are based on mutual respect, mutual solidarity and assistance, collegiality, tolerance, honesty, mutual trust and dignity, well-intended criticism and good communication. Internal communication is vital, especially during changes in the police organization (Giacomazzi et al., 2004; Quinn & Hargie, 2004). In addition, internal communication is essential for the police because the police build their success and image on the success of the police officer, and all essential information must be communicated to the officers in good time and consistently (Borovec et al., 2011; Hoffman, 2012). Internal communication has a strategic purpose because, through it, two-way relationships of trust are built with employees to improve the efficiency of the police (Borovec & Balgač, 2017).

3 Reform changes in the Croatian police 2010–2020

The period from 2010 to 2020 saw the continuation of the processes of democratization of the Croatian police, which began in the early 1990s, when the police underwent a major transformation and transition, from the traditional policing model to the community policing model (Cajner Mraović et al., 2003; Kovčo Vukadin et al., 2013; Vitez & Balgač, 2016). This is the period, consisting of the last three decades, when other Central and Eastern European police forces underwent reforms to better fulfil their role in a democratic society, to serve and protect citizens as a public service to citizens (Meško et al., 2013).

The democratization of the police means a change in priorities and responsibilities of the police towards the law and citizens (Bayley, 2006; Meško et al., 2013). This is a citizen-oriented police, which, in its role, not only has control over and protection of citizens, but also partnership with the community and its citizens, and which focuses on professionalism, impartiality and fairness (procedural justice), as well as the legitimacy of the police. In addition to community-oriented work, for the last ten years the Croatian police have also introduced a business model of police management that has been operationalized through intelligence-led policing. This is a model based on the collection and analysis of a wide range of

data based on which priorities are determined, resources allocated and tasks assigned (Vitez & Balgač, 2016). This model of police work is characterized by a team approach in which communication among team members plays a key role, which is characteristic of the approach to work in the third millennium.

Due to such changes in the modalities of performing police tasks, during the previous decade, the emphasis of police reform was on improving police communication, as a necessary prerequisite for its democratization (Grant et al., 2006). Greater success was achieved in external than internal police communication (Cajner Mraović & Faber, 2016), which is the result of such a reform orientation in circumstances that limited the full momentum of the reform. In 2010, a strong network of public relations services was established in all police administrations. This network aimed to better inform police officers about all important issues involved in the life and work of the police, to develop internal communication, with an active contribution of all to the development and use of internal communication tools (Borovec, 2011). However, the decade (2010-2020) suffered the consequences of the economic crisis, which had an adverse effect on the police budget and caused a reduction of salaries and other rights of police officers. The police had to meet higher expectations from the public in terms of human rights protection and better service for citizens, new work processes for the police were introduced and there was, generally, more work for the police (Balgač, 2014; Koprić, 2016). Koprić (2016) states that there are difficulties in internal communication and that insufficient attention and time are devoted to discussing, considering and harmonizing the way of interpreting regulations and other legal standards, agreeing on standards and indicators of work performance, etc. Given all of the above between 2010 and 2020, democratization has been more reflected in the relationship with citizens in the form of cooperation and partnership than in relations within the police organization, which is an additional problem for police officers (Cajner Mraović & Faber, 2016; Kovčo Vukadin et al., 2013).

4 Methodology

4.1 Research design

This quantitative study aims to answer the following research question: Did the internal communication in the Croatian police change in the period between 2010 and 2020, and if yes, what are the content, direction and intensity of those changes in relation to the eight dimensions of internal communication? The study used the data collected in 2010 and 2020 on the same target population, with the same instrument and in the same manner. The research

question was verified using discriminant analysis in order to determine the linear combination of internal communication dimensions that best distinguish between the two time periods. Given the large number of variables in the questionnaire, prior to the discriminant analysis, a factor analysis was conducted to summarize data and obtain the latent structure of the questionnaire, whereby further processing was conducted at the level of eight latent dimensions. In both the 2010 and 2020 research waves, the same data collection methodology was used.

4.2 Sample

The participants in the studies in 2010 (n = 1,250) and 2020 (n = 1,296) were police officers from police stations in all 20 police administrations in Croatia. In the second wave of research, a total of 1,384 questionnaires were distributed. Two individuals refused to take part in the study. In the first wave of research, 75 respondents who did not answer all questions were excluded from the data processing and the same applies to 86 respondents from the second wave. This data is not available for the first wave of research.

In both waves of research, the sample is a convenient one that reflects well the basic characteristics of the target population, i.e. all police officers in Croatia. According to the data available for 2010 (Borovec et al., 2011), it can be stated that the sample of the first wave of research represents well the police unit type to which the research participants belong: the relative share of members of the criminal investigation police (17%) is identical to the relative share of criminal investigation officers in that sample (17.4%), and the same applies to community police officers, who, in 2010, made up 4% in the total population (Borovec et al., 2011), and 4.3% of the research sample. The only deviation refers to members of uniformed police, of whom there are relatively more in the 2010 sample (53%) than in the total population of police officers (42%) (Borovec et al., 2011). In the second wave of research in 2020, according to data obtained by direct insight into the data of the Human Resources Administration of the Ministry of the Interior of the Republic of Croatia, the sample represents the characteristics of the police officers population in Croatia with regard to gender and police rank. According to these data, in 2020, in the Croatian police comprised 20.2% women, while our sample comprised 22.1%. Regarding police ranks, in 2020 in Croatia, 36.2% were police officers, 41.2% were police sergeants and 15.3% were police inspectors, which is identical to the relative shares of these police ranks in our sample (Table 1). A deviation is only observed in the two highest police ranks: chief police inspector (4.3%), and police superintendent 3.0%, while in our sample, there are relatively fewer of them (Table 1), which is due to the fact that the second wave of research was conducted in police administrations and stations, and excluded the General Police Directorate, where employees with higher police rank work. The 2020 sample also reflects well the structure of the Croatian police with regard to the police unit type to which research participants belong: the sample is composed 41.7% of members of the uniformed police, while in all of Croatia, they account for 32.3%; the percentage of criminal investigation police in the sample is 23.4%, while in all of Croatia, it was 16.5%. Traffic police formed 8.1% of the sample and 8.7% of the entire police force. The only major deviation was found in community police, represented in our sample by 7.8%, and by 2.2% at the national level of Croatia, which is very likely due to the circumstances of the COVID-19 pandemic, when community police officers were more present in police stations than the rest of the police force. The description of the sample from both research waves can be found in Table 1.

From Table 1, several differences between the samples in the observed two research waves are evident. There are statistically significant differences in the sample in terms of age, education and police rank of respondents. In 2020, there were significantly more older respondents by age and work experience, probably because, since the establishment of a democratic state, there has been a continuity of personnel in the police resulting in police officers remaining in the service up to the maximum legal enabled years of age, similar to other professions, regardless of the accelerated retirement scheme, which was reduced in the observed period (2010-2020). In addition, in the early 1990s, during the war, a large number of police officers left the police force and the continuity of personnel was lost. As for the difference in police rank and type of settlement, as previously mentioned, the research in the second wave was conducted in police administrations, and in the first wave, also included in the research were police officers from the General Police Directorate in the capital city of Croatia, where higher ranking police officers are employed. Also, as for the difference in the sample of urban and rural areas, in 2020 respondents may have perceived suburban areas differently than in 2010, i.e. the trend is that these areas are viewed more as rural than urban because there are very intensive changes in cities such as increasing the quality of life, developing smart cities, greater energy efficiency and waste disposal, as well as better transport connections with innovative technological solutions. Moreover, in the observed period, the urban-rural methodology changed (Čagalj et al., 2021), consequently, some settlements previously considered urban might now be considered rural.

Table 1: Socio-demographic characteristics of the sample in the two research waves, 2010 and 2020

| | | : | 2010 | | 020 | | |
|--------------------|-------------------------------------|-----|-------|-------|--------|----------|--|
| | | n | % | n | % | χ^2 | |
| | Male | 948 | 75.8% | 1,009 | 77.9% | 1.45 | |
| Gender | Female | 302 | 24.2% | 287 | 22.1% | 1.45 | |
| | 20-30 | 251 | 20.1% | 262 | 20.2% | | |
| | 31–40 | 572 | 45.7% | 423 | 32.7% | | |
| Age | 41–50 | 385 | 30.8% | 412 | 31.8 % | 125.04* | |
| | 51-60 | 40 | 3.2% | 192 | 14.8% | | |
| | >61 | 2 | 0.2% | 7 | 0.5% | | |
| E la satis a | Secondary school | 750 | 60.0% | 837 | 64.6% | F (0** | |
| Education | Bachelor, master's degree, or Ph.D. | 500 | 40.0% | 459 | 35.4% | 5.69** | |
| | Police officer | 528 | 42.2% | 493 | 38.0% | | |
| | Police sergeant | 363 | 29.0% | 531 | 41.0% | | |
| Rank | Police inspector | 255 | 20.4% | 233 | 18.0% | 63.00** | |
| | Chief police inspector | 73 | 5.8% | 30 | 2.3% | | |
| | Police superintendent | 31 | 2.5% | 9 | 0.7% | | |
| | up to 5 | 215 | 17.2% | 184 | 14.2% | | |
| | 6 to 10 | 94 | 7.5% | 180 | 13.9% | | |
| Work experience | 11 to 15 | 289 | 23.1% | 263 | 20.3% | 684.82** | |
| | 16 to 20 | 550 | 44.0% | 91 | 7.0% | | |
| | over 20 | 102 | 8.2% | 578 | 44.6% | | |
| | Uniformed police officers | 668 | 53.4% | 541 | 41.7% | | |
| | Criminal investigation police | 218 | 17.4% | 303 | 23.4% | | |
| Police unit type | Traffic police | 90 | 7.2% | 105 | 8.1% | 43.25** | |
| | Community police | 54 | 4.3% | 101 | 7.8% | | |
| | Other | 220 | 17.6% | 246 | 18.9% | | |
| Managanial -t-t | Yes | 351 | 28.1% | 272 | 21% | 17 22⊁⊁ | |
| Managerial status | No | 899 | 71.9% | 1.024 | 79% | 17.32** | |
| Type of settlement | Urban | 834 | 66.7% | 627 | 48.4% | | |
| | Rural | 416 | 33.3% | 669 | 51.6% | 87.52** | |

^{*} p < 0.05; ** p < 0.01.

4.3 Data collection and research ethics

In the first wave of research, the data were collected in the period from 20 September to 10 October 2010. In the second wave of research, the data were collected in the period from 15 December to 30 December 2020. In both research waves, the pen-and-paper method was used, and scientific research ethics principles were followed. Furthermore, in both research waves, the data were collected in all 20 police administrations in Croatia, whereby the police stations where the survey was conducted were selected randomly. Data collection in both research waves was organized during the working hours of police officers, mostly at the beginning or end of their shifts, when they were at the police station and when it least disturbed their everyday work schedule. The answers collected in the study were anonymous. The participation was

voluntary and respondents could have decided at any time not to participate, not to answer certain questions or they could have given up filling out the questionnaire at any time, without any negative consequences. After the completion of the questionnaire, it was sealed and placed in a box. The General Police Directorate provided consent for conducting this research. The permission to use measuring instruments was also obtained from the creators of the instruments.

4.4 Measures

The questionnaire was prepared by Tkalac Verčič et al. (2009) for the purpose of scientific research. The questionnaire measures eight dimensions of satisfaction with internal communication. Each dimension is operationalized through four claims (Borovec et al., 2011; Tkalac Verčič et al., 2009). The questionnaire reliability coefficients (Cronbach's α) in the original study (Tkalac Verčič et al., 2009), as well as in the studies from 2010 (Cronbach's α = 0.96) and 2020 (Cronbach's α = 0.97) showed a high reliability. Similarly, this instrument shows good design validity because, in all three studies, it has been confirmed that its structure consists of eight factors.

In this study, through repeated exploratory factor analysis, 32 items of satisfaction with internal communication were subjected to principal component analysis using SPSS 18. The cut-off value was set at 0.30. The value of Kaiser-Meyer-Olkin (KMO) was 0.963 (Kaiser 1970, 1974). The Bartlett's test has reached statistical significance, which confirms the factorability

of the correlation matrix (Bartlett, 1954). The analysis of the main components confirmed the presence of eight components with characteristic values over 1 that explain 50.26%, 6.48%, 5.50%, 4.12%, 3.67%, 3.44%, 3.34% and 2.74% of the variance of the satisfaction with internal communication (79.54% in total). To interpret the obtained components, Varimax rotation (Tabachnick & Fidell, 2013) was performed, and the rotated solution confirmed the existence of a simple structure (Thurstone, 1947), whereby each particle has a significant loading only on one component. Therefore, the interpretation of the structure of this questionnaire is in line with previous research (Tkalac Verčič et al., 2009). Confirmed for all dimensions was a high level of internal consistency, which is evident from the value of Cronbach's α for each subscale shown in Table 2.

After conducting the principal components analysis on 32 items, a second-order analysis was conducted using the varimax rotation by entering the eight dimensions of internal communication. The results of this analysis show that the assumptions are met and that the obtained value KMO (0.904) and Bartlett's test (0.000) are statistically significant. All eight dimensions of internal communication have large projections only on one component that represents overall satisfaction with internal communication, and that explains 52.28% of the common variance. Table 2 presents a description of the variables included in the research, and mean (M), standard deviations (SD), median and mode are shown separately for the 2010 and 2020 samples. Cronbach's α , KMO and the % of the explanation of each variance are shown for each component.

Table 2: Description of variables included in the factor analysis

| Variables | 2010 (n = 1,250) | | | | | | 2020 (n = 1,296) | | | |
|--|------------------|------|------|--------|------|------|------------------|--------|------|--|
| variables | FL* | M | SD | Median | Mode | M | SD | Median | Mode | |
| Satisfaction with communication in meetings ($\alpha = 0.94$; KMO = 0.84; var. = 83.31%) | 0.79 | 4.66 | 1.44 | 5.00 | 6 | 4.35 | 1.46 | 4.50 | 6 | |
| How well the meetings I participate in are organized | 0.82 | 4.60 | 1.64 | 5.00 | 6 | 4.29 | 1.59 | 4.00 | 4 | |
| The usefulness of information obtained in meetings | 0.83 | 4.66 | 1.58 | 5.00 | 6 | 4.33 | 1.58 | 4.00 | 6 | |
| Whether I receive information important for my job on time | 0.68 | 4.72 | 1.61 | 5.00 | 6 | 4.46 | 1.59 | 5.00 | 6 | |
| The duration of meetings | 0.91 | 4.68 | 1.57 | 5.00 | 6 | 4.36 | 1.59 | 4.00 | 4 | |
| Satisfaction with horizontal communication (α = 0.91; KMO =0.82; var. = 77.22) | 0.61 | 5.43 | 1.07 | 5.75 | 6 | 5.22 | 1.17 | 5.50 | 6 | |
| Availability of colleagues | 0.80 | 5.54 | 1.23 | 6.00 | 6 | 5.26 | 1.33 | 6.00 | 6 | |
| How successfully I communicate with the members of my team | 0.89 | 5.83 | 1.12 | 6.00 | 6 | 5.58 | 1.25 | 6.00 | 6 | |
| The results of communication with colleagues | 0.92 | 5.62 | 1.15 | 6.00 | 6 | 5.44 | 1.22 | 6.00 | 6 | |
| The readiness of my colleagues to accept criticism | 0.72 | 4.76 | 1.47 | 5.00 | 5 | 4.64 | 1.47 | 5.00 | 5 | |
| Satisfaction with the quality of communication media ($\alpha = 0.93$; KMO = 0.83; var. = 82.87) | 0.73 | 4.69 | 1.39 | 5.00 | 6 | 4.38 | 1.36 | 4.50 | 4 | |

| The communication media (written notifications, intrane, or al communication the like) The possibility to communicate through contemporary media The quality of communication through contemporary media The quality of communication through contemporary media The quality of communication through contemporary media The manner others choose to communicate with me Satisfaction with communication cilinder (a – 9.95; KNO – 9.84; var. = 86.51) The extent to which the communication in the organization helps me feel like an important part of the organization helps me feel like an important part of the organization helps me feel like an important part of the organization helps me feel like an important part of the organization helps medically in the organization in the organization helps medically in the organization helps medically in the organization helps medically in the organization in the organization or occurages me to achieve the organization's values The extent to which the communication in the organization's values The extent to which the communication in the organization's values The expectation or occurages me to achieve the organization's values The transport of the organization or of the organization's values The quantity of goals in the organization or of the organization or of the organization or organization or of the organization or organiza | | | | | | | | | | |
|---|--|------|------|------|------|---|------|------|------|---|
| Contemporary media 0.99 4.88 1.64 5.00 6 4.40 1.53 4.00 6 6 6 6 6 6 6 6 6 | The communication media (written notifications, intranet, oral communication and the like) | 0.81 | 4.76 | 1.51 | 5.00 | 6 | 4.32 | 1.49 | 4.00 | 4 |
| The quality of communication through contemporary media 0.97 4.61 1.61 5.00 6 4.33 1.52 4.00 6 6 6 6 6 6 6 6 6 | | 0.99 | 4.68 | 1.64 | 5.00 | 6 | 4.40 | 1.53 | 4.00 | 6 |
| with me | The quality of communication through | 0.97 | 4.61 | 1.61 | 5.00 | 6 | 4.33 | 1.52 | 4.00 | 6 |
| (a = 0.95; KMO = 0.84; var. = 86.51) 0.85 4.92 1.24 5.00 6 4.45 1.29 4.90 4 4.15 1.39 5.00 4 4.15 1.39 5.00 4 4.15 | The manner others choose to communicate | 0.73 | 4.74 | 1.39 | 5.00 | 6 | 4.49 | 1.41 | 5.00 | 4 |
| organization helps me feel like an important part the organization 0.95 4.86 1.34 5.00 6 4.51 1.39 5.00 4 The extent to which the communication in the organization promotes the corganization or promotes the organization syalues. The extent to which the communication in the organization encourages me to achieve the organization syalues. The extent to which the communication in the organization encourages me to achieve the organization's yalues. The extent to which informal communication (are – 0.82; KMO – 0.79; var. = 66.35) 0.52 4.89 1.36 5.00 6 4.41 1.37 4.00 4 Satisfaction with informal communication (are – 0.82; KMO – 0.79; var. = 66.35) 0.59 4.39 1.36 5.00 6 4.41 1.37 4.00 4 The quantity of gossip in the organization on the organization of gossip in the organization on the consequences of the organization on the organization on the organization on the organiz | | 0.83 | 4.82 | 1.24 | 5.00 | 6 | 4.46 | 1.27 | 4.50 | 4 |
| organization helps me identify myself with the organization 0.93 4.81 1.23 5.00 6 4.44 1.33 4.00 4 The extent to which the communication in the organization promotes the organization's values. The extent to which the communication in the organization encourages me to achieve the organization goals 0.92 4.89 1.36 5.00 6 4.41 1.37 4.00 4 Satisfaction with informal communication (α = 0.82), KMO = 0.79, var. = 66.35) 0.59 4.39 1.09 4.50 4 4.15 1.12 4.00 4 The number of decisions reached based on informal communication 0.78 3.64 1.71 4.00 4 4.32 1.65 4.00 4 The quantity of time I spend in informal communication 0.78 3.64 1.71 4.00 4 4.42 1.28 4.00 4 The usefulness of information conveyed informally of time I spend in informal communication with communication with a superior 0.66 5.19 142 5.50 6 4.94 1.47 5.25 6 Availability of my direct superior 0.86 | organization helps me feel like an important part | 0.95 | 4.86 | 1.34 | 5.00 | 6 | 4.51 | 1.39 | 5.00 | 4 |
| The extent to which the communication on the organizations values The extent to which the communication in the organization encourages me to achieve the organization spoals Satisfaction with informal communication (α = 0.82; KMO = 0.79; var. = 66.35) The number of decisions reached based on informal communication The quantity of gossip in the organization The usefulness of information conveyed informally The extent to which my superior is familiar with the problems I encounter at work The extent to which my superior understands my problem The extent to which my superior understands my problem The recognition of my potential by my direct superior $A = 0.93$; KMO = 0.84; var. = 80.65) $A = 0.82$; var. = 82.39 $A = 0.82$; | organization helps me identify myself with the | 0.93 | 4.81 | 1.23 | 5.00 | 6 | 4.44 | 1.33 | 4.00 | 4 |
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| The quantity of time I spend in informal communication 10.77 | | 0.55 | 4.62 | 1.24 | 5.00 | 4 | 4.35 | 1.31 | 4.00 | 4 |
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| Satisfaction with corporate information ($\alpha = 0.93$; KMO = 0.84; var. = 80.65) Information on the rulebook Information about the results and success of the organization Information on changes in the organization Information on legal regulations that affect the operations of my organization Satisfaction with feedback ($\alpha = 0.89$; KMO = 0.82; var. = 74.94) Information on the consequences of a poorly done job Information on how much I contribute to the common success Information on how much my job is appreciated within the organization 0.89 4.74 1.28 5.00 6 4.32 1.32 4.25 4 4.00 4 4.43 1.41 5.00 4 4.48 1.41 5.00 4 4.48 1.41 5.00 4 4.49 4.00 4 4 4.50 6 4.14 1.35 4.00 4 4 4 4 4 4 4 4 4 4 4 4 | | 0.94 | 4.94 | 1.72 | 5.00 | 6 | 4.69 | 1.70 | 5.00 | 6 |
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| 0.83 4.50 1.49 5.00 6 4.18 1.56 4.00 4 | done job | 0.55 | 4.61 | 1.42 | 5.00 | 6 | 4.35 | 1.45 | 4.00 | 4 |
| within the organization 0.81 4.22 1.07 4.00 6 3.87 1.07 4.00 4 | | 0.83 | 4.50 | 1.49 | 5.00 | 6 | 4.18 | 1.56 | 4.00 | 4 |
| Information on how I do my job 0.79 4.47 1.56 5.00 6 4.17 1.56 4.00 4 | | 0.81 | 4.22 | 1.67 | 4.00 | 6 | 3.87 | 1.67 | 4.00 | 4 |
| | Information on how I do my job | 0.79 | 4.47 | 1.56 | 5.00 | 6 | 4.17 | 1.56 | 4.00 | 4 |

Principal component analysis, Varimax rotation.
Scale: 1 – very dissatisfied, 2 – dissatisfied, 3 – somewhat dissatisfied, 4 – neither satisfied nor dissatisfied, 5 – somewhat satisfied, 7 – very satisfied.

^{*} FL - Factor loading.

All obtained variables of internal communication had higher mean values in 2010 compared to 2020.

5 Results

Prior to the discriminant analysis, at the level of eight components, multicollinearity and singularity assumptions were verified, and it was determined, based on the results of the Pearson's correlation coefficient, that the dependent variables were moderately correlated, which is evident from the correlation matrix shown in Table 3.

Regarding the assumption of the normality of the distribution, it should be noted that the discriminant analysis is resistant to moderately violated normality and that the large number of respondents in each sample ensure robustness. The distribution of responses for all eight components statistically significantly differed from normal as tested by the Shapiro-Wilk test (p < 0.001 for all), although when examining the skewness and kurtosis coefficients they rarely exceeded ± 2 , which some authors still consider to indicate an approximately normal distribution (George & Mallery, 2003). Discriminant analysis was conducted at the level of eight components as standardized variables whose distribution approaches normal

Table 3: Correlation matrix

| Component | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|-------|-------|-------|-------|------|-------|-------|
| Satisfaction with feedback | - | | | | | | |
| Satisfaction with corporate information | .57** | - | | | | | |
| Satisfaction with communication with a superior | 49** | 49** | - | | | | |
| Satisfaction with informal communication | .43** | .46** | 33** | - | | | |
| Satisfaction with communication climate | 56** | 64** | .49** | 50** | - | | |
| Satisfaction with the quality of communication media | .42** | .57** | 40** | .39** | 55** | | |
| Satisfaction with horizontal communication | .35** | .43** | 39** | .44** | 48** | .37** | - |
| Satisfaction with communication in meetings | .52** | .62** | 51** | .42** | 60** | .52** | .36** |

^{*} p < 0.05, ** p < 0.01.

Table 4: Discriminant analysis: Comparison of internal communication of police officers in 2010 and 2020

| W. atalia. | | 10 | 2020 | | Wilk's lambda | г |
|--|---|------|------|-------|---------------|----------|
| Variables | М | SD | М | SD | Wilks lambda | F |
| Satisfaction with communication in meetings | | 1.44 | 4.35 | 1.46 | 0.98 | 27.48*** |
| Satisfaction with horizontal communication | | 1.07 | 5.22 | 1.17 | 0.99 | 24.08*** |
| Satisfaction with the quality of communication media | | 1.39 | 4.38 | 1.36 | 0.98 | 42.08*** |
| Satisfaction with communication climate | | 1.24 | 4.46 | 1.27 | 0.97 | 57.20*** |
| Satisfaction with informal communication | | 1.09 | 4.15 | 1.12 | 0.98 | 25.62*** |
| Satisfaction with communication with a superior | | 1.42 | 4.94 | 1.47 | 0.99 | 14.96*** |
| Satisfaction with corporate information | | 1.28 | 4.32 | 1.32 | 0.97 | 62.85*** |
| Satisfaction with feedback | | 1.32 | 4.14 | 1.35 | 0.98 | 28.92*** |
| Wilk's lambda | | | | 0.96* | | |

^{*} *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001. Centroids: 2010: 0.187; 2020: -0.179.

distribution. The results of the discriminant analysis (Table 4) show that one discriminant function was extracted for the entire area of satisfaction with internal communication, which is statistically significant.

The results of the discriminant analysis (Wilk's lambda = 0.96, p < 0.05) confirm statistically significant differences in the level of satisfaction of police officers with internal communication in 2010 and 2020. According to the obtained results, all variables included in the analysis statistically significantly contribute to defining the discriminant function, however, contributing most to the difference are the variables: satisfaction with corporate information (0.97; F = 62.85, p < 0.001), satisfaction with communication climate (0.97; F = 57.20, p < 0.001) and satisfaction with the quality of communication media (0.98; F = 42.08, p < 0.001). On the other hand, the least significant variable for defining this discriminant function is satisfaction with communication with a superior (0.99; F = 14.96, p < 0.001).

By comparing the results from the two research waves, it is evident that police officers in 2020, compared to the reference year 2010, were less satisfied with all eight dimensions of internal communication. According to the centroids that present the position of respondents on the discriminant factor, a higher level of overall satisfaction with internal communication is visible from the sample of respondents from 2010 compared to the respondents from 2020.

6 Discussion and conclusion

Internal communication, due to all the positive effects it has on the individual and the organization (Bolfek et al., 2017; Borovec & Balgač, 2017; Kalla, 2005; Starc et al., 2019; Sušanj Šulentić, 2014; Tkalac Verčič, 2021; Tkalac Verčič et al., 2009), should be high on the list of priorities of police managers.

However, employee expectations, in terms of the nature, content and character of internal communication, are changing, along with the changes within and outside the police. This research showed differences in the satisfaction of police officers with internal communication in 2010 and 2020. All eight dimensions of internal communication were rated lower in 2020 than in 2010. This result can be interpreted by the fact that, in the past 10 years, the expectations of police officers regarding the quality of internal communication have increased due to major reform interventions in external communication, which was a reform priority in the observed period (Cajner Mraović & Faber, 2016), and also due to specific security challenges (migrant crisis, earthquakes, COVID-19 pandemic).

What should be a further priority of the Croatian police following the results of this research is the improvement of internal communication, especially some of its components. Firstly, this research has identified corporate information with which police officers in Croatia were more satisfied in 2010 than in 2020. It was during this period that there were numerous changes in regulations and other acts that regulate the performance of police work, not only as a result of reforms but also due to the aforementioned new security challenges, some of which, such as the COVID-19 pandemic, caused significant changes in the modalities of everyday police work, which represented additional requirements from the perspective of this particular dimension of internal communication. Extremely important were changes in strategic documents that were not always sufficiently presented to police officers, especially at lower levels (Cajner Mraović & Faber, 2016), because it is often mistakenly believed that strategic documents are important only at the highest levels of management (White et al., 2010). It is important to raise awareness within the police system of the fact that the key for the sustainability of strategic documents, i.e. the changes they cause, is the entire police force, because police officers are the ones who will implement these changes in practice.

According to the results of this research, the next priority in terms of improving the internal communication of the Croatian police is the communication climate, whose components are quite fluid because they are related to the completely subjective experiences of employees (Smidts et al., 2001). It is much easier to understand and implement better manners of presenting and explaining changes in police regulations than various aspects of internal communication that allow police officers to identify with the police organization or to feel that they are an important part of it.

Although in the period from 2010 to 2020, intensive progress was made in technologies that have enabled the use of a whole range of new digital communication channels (Radić et al., 2022), this research shows that, in 2020, police officers were less satisfied with the communication media than in 2010. On the one hand, there is likely a lack of internal police regulations and instructions that would adequately regulate the use of these new technologies (Radić et al., 2023). In this light, it should be borne in mind that this applies not only to the police, but to the overall state administration, and that the process was initiated with the adoption of the Digital Croatia Strategy 2032 only at the beginning of 2023 ("Strategija digitalne Hrvatske za razdoblje do 2032. godine", 2023). On the other hand, we must be aware of the fact that police officers do not necessarily have to accept the digitization of communication in private and professional life equally, and that the findings from this research should be further examined not

only by quantitative, but also by qualitative research methods to determine the real reasons for the reduced satisfaction of police officers with internal communication media. Previous research shows that it is wrong to focus only on some channels of internal communication, but rather that it is necessary to select those that will enable the most effective communication in accordance with the organizational culture, which is even more important when communicating changes (Sedej & Mumel, 2015).

This research also has certain limitations. First of all, it should be noted that the results are based on a comparison of data obtained from two independent samples. However, given the time lapse from the first study (2010) to the second study, and the staff mobility and employee outflow in the 10-year period, this research could not have been carried out on dependent samples, i.e. in the second wave of the research, it was not possible to identify employees previously included in the research. When assessing the results obtained by discriminant analysis, it should be taken into account that the assessments of satisfaction with internal communication are dependent on certain socio-demographic variables (type of settlement and police unit type in the 2010 sample, and age, type of settlement and managerial status in the 2020 sample) and that the 2010 and 2020 samples are statistically significantly different in terms of those socio-demographic variables.

Research related to satisfaction with the quality of internal communication should be carried out more often and continuously, not only on the national level but also in individual organizational units. Such continuity would enable the immediate involvement of current potential impacts of the social context on the internal communication within the police. Furthermore, quantitative and qualitative research is also needed to obtain data related to less exact dimensions of internal communication, such as the communication climate, the importance of which is confirmed by the results of this research.

In addition to conducting research, it is crucial to ensure that research results are put into practice in a timely and accurate manner. In order to make a sustainable change, it is necessary to raise awareness among employees, especially decision-makers, of the complexity and multidimensionality of internal communication and to systematically raise the quality of all its dimensions. Therefore, the police organization should assign greater importance to communication on all levels of police education and training.

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Spremembe internega komuniciranja hrvaške policije v desetletju intenzivne demokratizacije – primerjava med letoma 2010 in 2020

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Namen prispevka je ugotoviti spremembe internega komuniciranja v policijski organizaciji na Hrvaškem v desetletnem obdobju. Raziskava temelji na anketi, opravljeni na priložnostnem vzorcu anketirancev v letih 2010 (n = 1.250) in 2020 (n = 1.296). Anketiranci, tj. policisti, so izpolnjevali vprašalnik, ki meri osem dimenzij zadovoljstva z internim komuniciranjem. Rezultati diskriminantne analize kažejo, da obstajajo razlike pri zadovoljstvu z internim komuniciranjem v dveh časovnih obdobjih raziskave. Statistično pomembne razlike med policisti v letih 2010 in 2020 so bile zaznane pri vseh dimenzijah. Doprinos prispevka je viden v spremljanju sprememb v zadovoljstvu z internim komuniciranjem pri policistih na Hrvaškem. Raziskovanje sprememb v komuniciranju je izjemno pomembno, saj so se policijske organizacije, predvsem v tranzicijskih državah, pogosto spreminjale.

Ključne besede: spremembe, hrvaška policija, interno komuniciranje, policisti

UDK: 351.741(497.5)