



2

Preventive Security Quadrant Plan. Support and commitment of Carabineros de Chile personnel

Moreno Herrera, Patricio A.

Coronel (R) de Carabineros de Chile.

PhD (C) Security and Crime Science, University College London, United Kingdom

Enviar correspondencia a Patricio Moreno Herrera e-mail: cdtemoreno@icloud.com

Plan Cuadrante de Seguridad Preventiva. Apoyo y compromiso del personal de Carabineros de Chile

RESUMEN

En los últimos 20 años, Carabineros de Chile ha introducido importantes innovaciones con el fin de cumplir de mejor forma su misión de preservar el orden y la seguridad pública en Chile. El Plan Cuadrante de Seguridad Preventiva es la innovación policial más importante implementada en Chile. Muchos estudios han sugerido que las innovaciones policiales deben contar con el apoyo de quienes las ejecutan para que tengan éxito. Este trabajo analizó el papel que juegan las variables organizacionales e individuales en las posturas de apoyo y compromiso del personal policial hacia este plan, utilizando una muestra de 300 Carabineros, con una tasa de respuesta del 78%. Los resultados sugieren que la mayoría de los participantes apoyan y se comprometen con el Plan Cuadrante. Sin embargo, más del 70% de los participantes manifestó que el Plan Cuadrante podría aumentar su rendimiento a través de la asignación de una mayor cantidad de recursos logísticos y humanos. Los análisis de regresión indicaron que las variables “menor escepticismo” y “mayor satisfacción laboral” son predictores de las actitudes de los Carabineros hacia el Plan Cuadrante. Asimismo, las variables “gestión” y “orientación del trabajo policial” fueron también predictores del apoyo y compromiso hacia el Plan Cuadrante.

PALABRAS CLAVE

Plan Cuadrante de Seguridad Preventiva; apoyo; compromiso; escepticismo; satisfacción laboral.

ABSTRACT

Over the past 20 years, the Carabineros of Chile have introduced major advances to improve their mission of preserving public order and security nationwide. The Crime Prevention Quadrant Plan is the most noteworthy innovation to date aimed to improve the Carabineros of Chile's police performance. Many studies have suggested that police innovations must gain the support of those who execute these efforts if the innovations are to succeed in their full implementation.

This study analysed Chilean police officers' attitudes towards the Quadrant Plan, focusing on the role that organisational and individual-level variables play in their stances towards its implementation using quantitative data from a survey administered to 300 police officers. A response rate of 78% was achieved. Findings suggested that most officers expressed positive attitudes of support for and commitment to the Quadrant Plan. However, more than 70% of the participants stated that the Quadrant Plan could increase their performance through the allocation of a greater amount of logistical and human resources. Regression analyses indicated that the individual-level variables 'less scepticism' and 'higher job satisfaction' are important predictors of officers' attitudes towards the Quadrant Plan. Similarly, the organisational-level variables 'management' and 'police work orientation' were also key indicators of support for and commitment to the Crime Prevention Quadrant Plan.

KEY WORDS

Preventive Security Quadrant Plan; support; commitment; scepticism; job satisfaction.

INTRODUCTION

Latin America is commonly described as the most violent region in the world (United Nations Office on Drugs and Crime, UNODC, 2019). With 17.2 homicides per 100,000 people in 2017, this rate is three times the global average and six times the European average. Chile, conversely, reports the lowest homicide rate in the Latin America region, with 3.1 homicides per a population of 100,000 (UNODC, 2019). While homicide rates in the region may reflect certain aspects related to Latin America's crime situation, it does not aid to fully understand the other forms of delinquency present in the region (Vilalta-Perdomo, Castillo & Torres, 2016). The level of violent crime tends to fluctuate between Latin American countries due to an increasing drive towards democracy as well as continual improvements in economic and social development in certain Central and South American countries in the last decade. For example, between 2007 and 2012, Mexico, Bolivia and Colombia recorded an upward trend in both homicides and other violent crimes such as robbery and assault. In contrast, Chile in that period, registered a meaningful decrease in such violent crimes (Vilalta-Perdomo et al., 2016). However, low criminality rates have not been typical in Chile. In 1980, for instance, the violent robbery rate was 284.2 per 100,000 people. In 1990, this rate swelled to 612.7 per 100,000 and remained slightly higher until 1996, when the Quadrant Plan was implemented (Beyer & Vergara, 2006; Frühling, 2001).

30

2 The upward trend in crime rates in the late 1980s and early 1990s also affected residents' fear of crime (Alfaro-Beracoechea, Puente, Da Costa, Ruvalcaba & Páez, 2018). During that period in Chile, the primary concern of the population was the country's socio-political situation, while the second most significant issue was the increase in crime. In a 1995 study on people's perceptions of crime, 69% of Chileans expressed there was more crime compared with the previous years, while 84% said they thought crime was more violent than in the past (Frühling, 2006). Aware of high crime and insecurity rates in the country, the Carabineros of Chile implemented a new police strategy in 1996. This effort was termed the Crime Prevention Quadrant Plan, hereinafter referred to as the Quadrant Plan (Carabineros de Chile, 2010). During its first seven years, the Quadrant Plan was executed as an experimental initiative. Beginning in 2003, the Quadrant Plan became the primary police operating strategy in Chile. Today, the Quadrant Plan covers over 88% of urban cities across Chile. (Carabineros de Chile, 2018).

Regarded as one of the most successful innovations in policing in Latin America (Dammert, 2019), the Quadrant Plan is credited with improving how the Carabineros respond to crime. The effort is considered by many as the main reason for sustained reductions in crime – including homicides, violent robberies, physical assaults, and thefts – that Chile has experienced in recent years (Dammert, 2016; Espriú, 2013).

The apparent success of the Quadrant Plan has not gone unnoticed in other parts of Latin America. Other police agencies in the region have subsequently developed their own versions of the Quadrant Plan (Fröhling, 2006; Glebbeek & Koonings, 2016). Examples include the Plan Nacional de Vigilancia Comunitaria por Cuadrante, introduced by the National Police of Colombia in 2010 (Román & Cárdenas, 2015); the Plan Cuadrante, implemented by the National Civil Police of Guatemala in 2008 (Schols, 2011; Josemans, 2011); the Vecindario Seguro, developed by the National Police of Peru in 2017 (Candia-Haro, 2018); and the Unidades de Policía Comunitaria, applied by the National Police of Ecuador in 2009 (Pontón, 2009; Pontón & Rivera, 2016).

Several studies have examined the impact of the Chilean Quadrant Plan on reducing crime and insecurity (Tudela, Schwaderer, Varela & Palacios, 2013; Salas, Fernández & Muñoz, 2014). The results of evaluations indicated that crime and insecurity were two complex phenomena to address exclusively through a policing strategy such as the Quadrant Plan. After the assessments, the Carabineros of Chile devised an improved version of the Quadrant Plan. This enhanced version termed the Quadrant Plan 2.0, includes the development of the Carabineros–Community Integration Model (CCIM), and a crime analysis platform called Integrated Crime Analysis Platform of Carabineros (ICAPC). Through this improvement, the Carabineros sought to strengthen the Quadrant Plan through better police planning to meet community quadrant, crime analysis and Carabineros–community liaison needs (Carabineros de Chile, 2018).

The Quadrant Plan's principles compete every day against a police approach where decision-making is heavily influenced by other judgments and perceptions of what works best. Furthermore, police officers in Chile, as in other places, can be resistant to change and reluctant to operate according to the community policing approach to reduce crime, preferring instead to use their judgements in their attempts to decrease criminality. Moreover, police officers often consider that most police activities associated with community policing do not constitute real police work, arguing that the community policing approach is too soft on fighting crime in addition to being purely theoretical and limited in reducing criminal activity (Buerger, 2010).

Organizational change not only involves the agency, but also demands that members are involved in the effort, which requires that their psychological aspects be considered (Vakola, Tsaousis, & Nikolaou, 2003). Accordingly, employee attitude towards organizational change is a key component to consider if an entity is to successfully adopt and implement change (Piderit, 2000; Fernandez & Rainey, 2017). Kouzes and Posner (2002) note that, for organizational change to be successful, it needs to have intrinsically motivated employees who can see change as an opportunity for growth while feeling in control of the change. This should then be the product of

a transformational leader leading employees towards the achievement of change, regardless of what that change may be. The arguments put forward by Kouzes and Posner summarize rather succinctly what police organizations seeking to implement change need to consider in some way. Intrinsically motivated police are those who are committed to their professional work. Police who see change as an opportunity for growth are those who seek personal and professional improvement. Therefore, empowered police officers are those who make better decisions. Nevertheless, success also depends on how police leaders generate enthusiasm and commitment to the proposed change (Piderit, 2000).

The research on these individual-level variables and their relationship with organizational change is of particular importance to better understand how members of police agencies deal with change and its relationship to the leadership exercised by their commanding officers. Antoni (2004) has summarized the above noting that 'one has to change the beliefs of the organizational members, which shape their behaviour, to support sustainable organizational change' (p. 198). These changes, however, are expected to transform individual attitudes while simultaneously modifying their behaviour. This can be brief by the argument that change seeks to modify, in some way, the beliefs that shape the behaviour of members of the organization in such a way that sustainable change is achieved (Ajzen, 1985; Katz, 1960).

32

2

Significant academic research has been conducted to understand the attitudes of, for example, police officers towards the organizational changes involved in adopting a community policing approach (Lurigio & Skogan, 1994; Rosenbaum & Lurigio, 1994). These studies have examined the relationship between organizational and individual factors in the implementation of such an innovation using similar research designs. All these studies were developed using anonymous surveys and interviews with police officers, mostly adopting a non-equivalent group research design (Adams, Rohe, & Arcury, 2002; Cochran, Bromley & Swando, 2002; Lurigio & Skogan, 1994; Novak, Alarid, & Lucas, 1993; Kang, Nalla & Chun, 2014; Ulu Turk, Guler, & Karakaya, 2014). Other studies have sought to correlate demographic variables such as gender, race, age, years in service, and training level with police officers' attitudes towards community policing programmes. For example, Lurigio and Skogan (1994) and Skogan et al. (1999) found that female police officers, college-educated officers, and well-trained, senior police officers reported positive attitudes towards community policing, in comparison to younger officers and less-educated police personnel, who reported fewer positive attitudes.

Kang et al. (2014) in South Korea; and Ulu Turk et al. (2014) in Turkey have conducted national-level police research surveys, which suggest that officers' demographic attributes and some organizational features influence their stance on the community policing approach. Further research has also focused on examining job satisfaction

among officers who practice community-oriented policing (Adams et al., 2002; Ford, Weissbein, & Plamondon, 2003; Novak et al., 2003). The results are mixed. On the one hand, the findings suggest that implementing community policing creates job satisfaction (Greene, 1989; Zhao, Lovrich & Thurman, 1999), but other studies could not prove any significant correlation between these variables (Rosenbaum, Yeh, & Wilkinson, 1994). Similarly, studies by Skogan (2008), Ikerd and Walker (2010), and Paoline, Myers, & Worden (2000) have also indicated that organizational change or reform in police agencies is risky and tortuous and that efforts to innovate often fall short. The causes of failure vary, though the three most common are a) internal resistance, b) technical innovations without cultural evolutions, and c) failure to produce sufficient evidence of effectiveness.

In Chile, the case of organizational police change was reasonably like the process other police forces experienced. The Chilean police reform started in 1996 with the Carabineros' first strategic plan, whose fundamental objective was to provide the Carabineros of Chile with the methodological support that would guide it towards modernization, thus positioning it as an international reference in community-oriented police management issues. This led to the creation of the Crime Prevention Quadrant Plan, which is considered the largest and longest-running attempt to adopt community policing practices in Latin America (Carabineros de Chile, 2010, 2018; Dammert, 2019, 2020).

The existing evaluations are external to the Carabineros and mainly focus on the population's attitude towards the Chilean Police force, while others have assessed the technical aspects of the Quadrant Plan, such as economic efficiency and tactical effectiveness (Dammert & Malone, 2006; Frühling, 2001; Salas et al., 2014; Tudela, et al., 2013).

The adoption of the Quadrant Plan has required significant organisational change in the Carabineros of Chile, including modifications in its police culture and attitudes, decision-making, the provision of policing services, and the closeness with which the Carabineros work with the community. The result has been a substantial change in how the Carabineros perform operationally and strategically. However, to date, the Chilean police officers' attitudes towards the Quadrant Plan's implementation and their opinions on its operation have not been examined. Collectively, these suggestions and the lack of evidence inspired the current research aiming to capture and examine police officers' experiences and opinions regarding the existing organisational-level factors of structural reform, management style and police work orientation, and individual-level factors such as demographic characteristics, organisational support, commitment to the Quadrant Plan, job satisfaction and scepticism about its implementation.

METHODS

This study has a quantitative descriptive correlational research design, and used a non-random purposeful sampling technique (i.e., non-probability sampling) to select the research sample. The method used to address this study was a survey questionnaire conducted to a group of traditional Chilean police officers involved in the Quadrant Plan's operations in ten selected police stations located in the Greater Santiago Police Western Area. The researcher chose to conduct a Likert-type survey in preference to other methods such as a focus group or in-depth interviews because it was first necessary to obtain a large amount of both quantitative and qualitative information to address the study. Second, the researcher had easy access to participants, allowing him to choose a convenient sample seamlessly.

The survey questionnaire has two self-completion sections. The first section contained 34 statements aimed to analyse police officer's attitudes according to the organisational and individual-level variables. All statements were randomly presented so respondents could not explicitly discern what the overarching goals of this research survey were. All response options were measured using five-point Likert scales, which varied from 'strongly disagree' to 'strongly agree'. While the second section captured participants' demographics, such as age, sex, hierarchical rank, professional formation, years of service, and police service time in the police unit. Overall, the survey consisted of 42 questions: 34 assertions and 8 structured questions related to the demographic characteristics of the officers.

The sample consisted of 300 police personnel serving at 10 of the 29 police stations in the Greater Santiago Police Western Area. Pondering that the officers selected for the detailed enquiry have different hierarchical degrees, gender, experiences, and years of service, this enquiry expects to see considerable differences in terms of understanding, knowledge, support, and commitment concerning the Quadrant Plan. A total of 235 Carabineros – 78% of the sample – satisfactorily completed the survey, while the other 65 officers – 22% of the sample – did not complete it for personal reasons unknown to the researcher. All uncompleted surveys were excluded from the final analysis because none provided significant information to be included in the study. Regarding their hierarchical rank, 10% of all respondents were Supreme Appointment Staff (15 captains [6%] and 10 lieutenants [4%]). All of them graduated from the police cadet academy. The other 90% of the sample were Institutional Appointment. The latter consisted of 10 master major sergeants (4%), 15 master sergeants (6%), 18 first class sergeants (8%), 31 second class sergeants (13%), 55 first class corporals (23%), 42 second class corporals (18%), and 40 constables (Carabineros) (18%). While 44% of the officers who responded to the survey could be considered newcomers with less than 10 years of experience, over 55% of the participants were experienced police officers, which means that they were also

experienced with the application of the Quadrant Plan. In this sense, due to daily police exposure, years of police experience can be a crucial factor in affecting their perceptions, beliefs, and involvement.

Data analysis

The main objective was to analyse the attitudes of officers towards the implementation of the Quadrant Plan measuring and comparing the effect of organizational, individual variables, and demographic attributes on the support and commitment of officers to the Quadrant Plan. The organizational factors relate to the existing structural reform, management, recognition of work, and police force work orientation, while the individual-level factors refer to police officers' demographic characteristics, job satisfaction and scepticism about the implementation of the Quadrant Plan. Therefore, the dependent variable was termed 'Chilean police officers' support and commitment towards the Quadrant Plan', whilst the independent variables were termed as follows: a) structural reform; b) management; c) recognition of work; d) police work orientation (community and problem-solving oriented); d) demographic characteristics; e) job satisfaction; and f) scepticism.

Descriptive statistics such as mean, percentage distribution, and standard deviation for the study of dependent and independent variables were implemented, whilst frequency distributions were applied then to analyse the officers' attitudes for each survey statement, and therefore to address the research question, "What are Chilean officers' attitudes towards the Quadrant Plan? Then to assess whether the organizational and individual-level variables formed reliable scales, reliability tests were conducted applying Cronbach's alpha coefficient to determine the internal consistency of the survey elements. Internal consistency reliability, therefore, is a method by which the researcher judged how well each of the survey's statements compared to one another and to ensure that the survey included a correct number of assertions which allowed to adequately grasp the concept. Therefore, a coefficient of 0.7 will be considered reliable for this research (Spector, 1992).

To analyse the Chilean officers' support and commitment attitudes concerning the Quadrant Plan according to their demographic characteristics, sample T-tests and one-way ANOVA tests were conducted. A sample T-test is an inferential statistical test that determines whether there is a statistically significant difference between two unrelated groups (Emerson, 2017). Likewise, one-way ANOVA compared the means of two or more groups (i.e., female and male, commissioned and non-commissioned police officers). To evaluate whether the organizational and individual level variables explain/predict Chilean officers' attitudes to the Quadrant Plan Spearman's correlations were conducted. Spearman's correlation measures the strength and

direction of association between dependent and independent variables (Spearman, 1904). Spearman's correlation allowed the researcher therefore to reject or fail to reject a null hypothesis. In addition, a Standard Multiple Regression by OLS (Ordinary Least Square) was evaluated to assess the relationship between the dependent variable and one or more independent variables. The collected data were processed and analysed using the RStudio software (version 1.1.463 MAC OS X) together with the psychological performance analysis packages "lavaan", "semPlot", "OpenMx" and "ggplot2" to develop statistical analysis, including descriptive, reliability analysis, and Spearman's correlation coefficient, and multiple regression analysis (OLS).

RESULTS

Frequencies of variables and Scale Reliability testing

Most of the participants considered the Quadrant Plan to be the main policing strategy of the Carabineros (80%) and saw it as an important approach aimed at reducing crime in quadrants (66%). Moreover, based on the opinions of those surveyed, the Quadrant Plan improves both Carabineros-community partnership work (75%) and the quality of life in the quadrants (61%). These results indicate that the implementation of the Quadrant Plan is supported by Carabineros personnel, as they believe it has contributed to reducing crime in quadrants, improving both the quality of life of their inhabitants and community relations ($\alpha=0.76$; $M=3.76$; $Mdm=4$; $Sd=0.81$; $n=235$). Similarly, 71% were committed to their police station's Quadrant Plan, and expressed feeling a sense of belonging and commitment to the quadrant's security (55%). Overall, 81% participants reported a significant level of personal commitment to the Quadrant Plan ($\alpha=0.77$; $M=3.5$; $Mdm=4$; $Sd=0.76$; $n=235$).

The results offer no clarity regarding whether the Quadrant Plan leads to job satisfaction. Around 45% of the participants stated that the Plan was stimulating, challenging, and provided both professional and personal growth opportunities (48%), as well as some degree of job satisfaction (46%). However, half of respondents indicated that the implementation of the Quadrant Plan did not generate either job satisfaction or other personal gains ($\alpha=0.83$; $M=3.23$; $Mdm=3.33$; $Sd=1$; $n=235$). Nonetheless, the figures revealed that the participating officers report a generally low level of scepticism towards the Quadrant Plan. Overall, 6 out of 10 respondents thought the Quadrant Plan was not a fad likely to be replaced by another strategy. On the contrary, they saw it as a contribution to the community and social order and security of the quadrant, and, therefore, it is real police work. Despite these positive attitudes towards the Quadrant Plan, over 70% thought the Quadrant Plan did not work in their police stations due to a lack of human and logistical resources ($\alpha=0.72$; $M=2.74$; $Mdm=2.71$; $Sd=0.73$; $n=235$; see Table 1).

Table 1. Individual-level variables summary

Individual-level variables	α	M	Mdm	Sd	n
Support	0.76	3.76	4	0.81	235
Commitment	0.77	3.5	3.4	0.76	235
Job satisfaction	0.83	3.23	3.33	1	235
Scepticism	0.72	2.74	2.71	0.73	235

Note: *Scale with no statements deleted.

Nearly 80% participating perceived that their police station lacked the necessary resources for the correct application of the Quadrant Plan. Meanwhile, 46% believed they did not have enough authority, nor autonomy (37%), for problem-solving decision making inside the quadrant. The above results confirm that most participants saw a lack of resources as the greatest problem facing the structural reform promoted by the Carabineros through the implementation of the Quadrant Plan. This structural flaw would, according to the officers, diminish their authority and autonomy in decision making aimed at resolving problems of police interest within the quadrants ($\alpha=0.79$; $M=3$; $Mdm=3$; $Sd=1.07$; $n=235$). In despite the above, the officers reported that their police station commanders were clear with the Quadrant Plan's objectives (66%) and gave specific tasks to achieve them (68%). This suggests that commands of the police units are embedded in the principles and goals of the Quadrant Plan, which the participating officers believed would enable them to better perform their duties in terms of meeting the objectives set by their own police units ($\alpha=0.82$; $M=3.71$; $Mdm=4$; $Sd=1.02$; $n=235$; see Table 2). In terms of the police stations' work orientation, 63% stated that they executed focalized police services suggested by the police station's crime analysis room, while 76% pointed out that they patrolled through the quadrant looking for prolific criminals. Although over 75% of the participants reported that community-oriented policing was not the primary activity performed within quadrants. This indicates that the police work carried out by the frontline patrols in the quadrants is geared towards controlling crime through arresting prolific criminals operating in the area ($\alpha=0.76$; $M=2.32$; $Mdm=2$; $Sd=1.02$; $n=235$; see Table 2).

Table 2. Organizational-level variables summary

Organizational-level variables	α	M	Mdm	Sd	n
Structural reform	0.79	3	3	1.07	235
*Management	0.82	3.71	4	1.02	235
*Recognition of work	0.78	2.31	2	1.22	235
*Police work orientation	0.76	2.32	2	1.02	235

Note: *Scale with no statements deleted.

Comparing Group Means: T-test and One-Way ANOVA

A t-test was applied to evaluate whether statistically significant differences exist between officers' gender and their support for and commitment to the Quadrant Plan. The results revealed that there was no significant difference between male ($M = 3.7$, $SD = 0.82$) and female ($M = 3.9$, $SD = 0.76$) officers in terms of support for [$t (97) = 1.6$, $p = 0.09$], and commitment towards [$t (93) = 1.7$, $p = 0.08$] the Quadrant Plan. This finding suggests that officer's gender does not influences his/her attitudes towards the implementation of this policing strategy (see Table 3).

Table 3. Independent samples t-test results for support and commitment by gender

Support							
		(1)	(2)				
		M	SD	M	SD	t	df
Gender: (Female 1/Male 2)		3.91	0.76	3.71	0.82	1.6	97
Commitment							
		(1)	(2)				
		M	SD	M	SD	t	df
Gender: (Female 1/Male 2)		3.96	0.76	3.75	0.81	1.7	93

38 A further t-test was conducted to evaluate whether the officers' rank category influences their attitudes to the Quadrant Plan. The results indicated that there was no statistically significant difference between commissioned ($M = 3.9$, $SD = 0.6$) and non-commissioned ($M = 3.7$, $SD = 0.8$) officers' support for [$t (33) = 1.3$, $p = 0.1$] and commitment to [$t (34) = -1.3$, $p = 0.1$] the Quadrant Plan. The above suggests that the officers' attitudes to the Quadrant Plan are not affected by the fact of being a commissioned or non-commissioned officer (see Table 4).

Table 4. Independent samples t-test results for support and commitment by rank category.

Support							
		(1)	(2)				
		M	SD	M	SD	t	df
Rank category (Com. 1/Non-Com. 2)		3.93	0.66	3.73	0.82	1.3	33
Commitment							
		(1)	(2)				
		M	SD	M	SD	t	df
Rank category (Com. 1/Non-Com. 2)		3.63	0.63	3.81	0.83	-1.3	34

2 To analyse whether there were significant differences in the level of support and commitment reported by the participants based on their years of service, a one-way ANOVA analysis was performed. The results revealed that there was no significant difference in the means of the categories in relation to level of support for [$F (5, 226) = 0.33$, $p = 0.89$], and commitment to [$F (5, 224) = 0.50$, $p = 0.77$] the Quadrant Plan based on officers' years of service in the Carabineros. These results indicate that their support and commitment attitudes are not influenced by their years of service in the Carabineros (see Table 5).

Table 5: One-way analysis of variance (ANOVA) for years of service

Support					
Predictor	Sum of Squares	df	Mean Square	F	p
(Intercept)	733.13	1	733.13	1099.55	.000
Years of service	1.10	5	0.22	0.33	.894
Error	150.69	226	0.67		
Commitment					
Predictor	Sum of Squares	df	Mean Square	F	p
(Intercept)	701.25	1	701.25	1070.66	.000
Years of service	1.64	5	0.33	0.50	.775
Error	146.71	224	0.65		

The level of support and commitment reported by the officers based on their specific training was assessed by another two one-way ANOVA tests. The analysis showed that there were no substantial differences in the means of the categories in relation to their support [$F (4, 227) = 1.21, p = 0.30$], and commitment [$F (4, 225) = 1.60, p = 0.17$] level according to their specific training on community policing received throughout their police career. These outcomes revealed that the specific training on community policing subjects did not significantly influence their stance towards the Quadrant Plan (see Table 6).

Table 6: One-way analysis of variance (ANOVA) for specific training

Support					
Predictor	Sum of Squares	df	Mean Square	F	p
(Intercept)	168.09	1	168.09	256.72	.000
Specific training	3.16	4	0.79	1.21	.308
Error	148.63	227	0.65		
Commitment					
Predictor	Sum of Squares	df	Mean Square	F	p
(Intercept)	140.05	1	140.05	218.44	.000
Specific training	4.10	4	1.02	1.60	.176
Error	144.26	225	0.64		

To determine whether there were significant differences in the level of support and commitment reported by the officers based on their police formation, another two one-way ANOVA tests were conducted. The analysis revealed that there were no significant differences in the means of the categories in relation to their support [$F (5, 226) = 1.11, p = 0.35$] and commitment [$F (5, 224) = 1.23, p = 0.29$] level toward the Quadrant Plan. These results indicate that the officers' standpoint to the Quadrant Plan is not based on the police formation received during their academies time (see table 7).

Table 7. One-way analysis of variance (ANOVA) for police formation

Support					
Predictor	Sum of Squares	df	Mean Square	F	p
(Intercept)	140.03	1	140.03	213.62	.000
Police formation	3.65	5	0.73	1.11	.354
Error	148.14	226	0.66		
Commitment					
(Intercept)	121.00	1	121.00	187.72	.000
Police formation	3.97	5	0.79	1.23	.295
Error	144.38	224	0.64		

Spearman's rank correlation coefficient

The correlation analyses suggested that there were statistically positive relationships between the organizational and individual-level variables and the police officers' support and commitment attitudes towards the Quadrant Plan, which ranged from weak to moderately positive correlations. The moderate positive correlation between commitment and police work orientation ($rs = 0.30, p < 0.001$) indicates that, as police work orientation increases, the police officer's attitude of commitment to the Quadrant Plan's aims also rises. The correlation between commitment and management was also found to be statistically significant ($rs = 0.30, p < 0.001$). This moderate positive correlation suggests that, as management improves, the commitment of officers to the Quadrant Plan increases. Furthermore, between the support and police work orientation variables, there was a weak positive correlation ($rs = 0.23, p < 0.001$). This indicates that the supportive attitudes of police officers towards the Quadrant Plan increased as the police work orientation fostered by the Quadrant Plan remained largely unchanged. There was also a weak positive correlation between the support and structural reform variables ($rs = 0.21, p < 0.05$). This correlation indicates that officers' support for the Quadrant Plan increases as human and logistical resources available in their police stations to achieve the Plan's goals increase (see table 8).

Table 8. Correlation matrix of organizational-level variables and officers' support and commitment.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Support	1.00					
Commitment	0.46***	1.00				
Structural reform	0.21**	0.19**	1.00			
Management	0.18**	0.30***	0.24***	1.00		
Recognition of work	0.19**	0.12	0.42***	0.41***	1.00	
Police work orientation	0.23***	0.30***	0.30***	0.47***	0.55***	1.00

Note: *** $p < 0.001$, N = 235.

The moderate negative correlation between the support and scepticism factors ($r_s = -0.56$, $p < 0.001$) indicates that, while officers' supportive attitudes towards the implementation of the Quadrant Plan increase, their sceptical attitudes towards such police innovation decrease. Similarly, between support and job satisfaction, there was a strong positive correlation ($r_s = 0.47$, $p < 0.001$). The latter indicates that, the greater the perception of support for the Quadrant Plan, the greater the Carabineros' perceptions of job satisfaction. Moreover, between the commitment and scepticism variables, there was a weak negative correlation ($r_s = -0.32$, $p < 0.001$), which indicates that the greater commitment the Carabineros manifest towards the Quadrant Plan, the less they are sceptical of the strategy. Likewise, the relationship between the commitment and job satisfaction variables was strongly positive ($r_s = 0.51$, $p < 0.001$), which suggests that the Carabinero being committed to the Quadrant Plan increases his or her degree of job satisfaction (see table 9).

Table 9. Correlation matrix of individual-level variables and officers' support and commitment

Variables	(1)	(2)	(3)	(4)
Support	1.00			
Commitment	0.46***	1.00		
Job satisfaction	0.47**	0.51***	1.00	
Scepticism	-0.56***	-0.32***	-0.47***	1.00

Note: *** $p < 0.001$, $N = 235$.

Multiple regression analysis: Ordinary Least Square

An initial regression model was developed to assess whether the organizational and individual-level variables contributed to the participants' support of the Quadrant Plan. The model equation was developed using the formula $[Y = b_0 + b_1 * 1 + b_2 * 2]$. The results suggest that there was a moderate relationship and that the model was significant, $R^2 = 0.38$, $R^2_{adj} = 0.36$, $[F (7, 223) = 19.84, p < 0.001]$. The model explained 38% of the variance, and three predictors significantly contributed to the model. These findings indicate that individual-level variables (scepticism and job satisfaction) contribute better than organizational-level variables ([a] structural reform, [b] management, [c] recognition of work, [d] police work orientation) to explaining/predicting officials' attitudes of support towards the Quadrant Plan. In other words, just job satisfaction ($\beta = 0.13$), scepticism ($\beta = -0.37$), and management ($\beta = 0.16$) were found to be significant predictors of officers' support for the strategy (see table 10).

Table 10: Regression analysis summary for predicting support

Support	β	Std. Error	t	p
Commitment	0.125	0.064	1.96	0.06
Structural reform	0.024	0.043	0.55	0.58
Management	0.156	0.049	3.16	0.001
Recognition of work	-0.015	0.041	-0.36	0.71
Police work orientation	0.046	0.046	0.98	0.32
Scepticism	-0.373	0.068	-5.45	<0.001
Job satisfaction	0.126	0.057	2.33	0.02
Constant (intercept)	3.717	0.375	8.46	<0.001
Observations	235			
R2	0.384			
Adjusted R2	0.364			
F Statistic	19.841			<0.001

A second regression model was developed to assess whether organizational and individual variables contribute to predicting officers' commitment to the Quadrant Plan. The model equation was developed using the formula $[Y = b_0 + b_1 * 1 + b_2 * 2]$. The results suggest that there was a moderate relationship and that the model was significant, $R^2 = 0.33$, $R^2_{adj.} = 0.31$ [$F (7, 223) = 15.86$ $p < 0.01$]. This shows that the model explained 33% of the variance, and just one predictor significantly contributed to the model. This second linear regression model showed that just one individual-level variable (job satisfaction [$\beta = 0.25$]) significantly contributed to predicting officers' commitment attitudes towards the Quadrant Plan. Meanwhile, two organizational-level variables management [$\beta = 0.11$] and police work orientation [$\beta = 0.146$] were predictive of the officials' attitudes of commitment towards the Quadrant Plan. In other words, just the job satisfaction ($\beta = 0.25$), management ($\beta = 0.11$), and police work orientation ($\beta = 0.14$) variables were significant predictors in the model and, therefore, helped to explain/predict officers' support and commitment attitudes towards the Quadrant Plan (see table 11).

Table 11: Regression analysis summary for predicting commitment

Commitment	β	Std. Error	t	p
Support	0.136	0.069	1.96	0.06
Structural reform	0.036	0.045	0.8	0.42
Management	0.116	0.052	2.22	0.02
Recognition of work	-0.054	0.042	-1.28	0.19
Police work Orientation	0.146	0.048	3.07	0.002
Scepticism	-0.049	0.076	-0.65	0.51
Job satisfaction	0.257	0.057	4.5	<0.001
Constant (intercept)	1.832	0.43	4.24	<0.001
Observations	235			
R2	0.332			
Adjusted R2	0.311			
F Statistic	15.860			<0.001

DISCUSSION

This study aimed to gauge Chilean officers' attitudes towards the Quadrant Plan and determine whether their attitudes of support and commitment to the policing strategy varied by demographic attributes, as well as whether some organizational and individual variables could explain or predict Carabineros officers' attitudes concerning that policing strategy. This study is significant since it is the first academic effort evaluating how the Quadrant Plan is perceived among Carabineros police personnel.

The findings indicate that most participants were supportive and committed to the Quadrant Plan as an essential police approach to reduce crime and insecurity in Chile. Consistent with police research, these results imply that the Quadrant Plan in the course of its implementation has in some extent won the 'battle for the hearts and minds of police officers' (Lurigio & Skogan, 1994, p. 316). The above reinforces therefore the hypothesis that the objectives of the Quadrant Plan encourage the fighting of crime as the best way of reducing the feeling of insecurity within the quadrant. Similarly, another significant finding related to officers' attitudes towards the Quadrant Plan is that neither their gender, rank category, years of service, nor their professional formation and training affect their level of support and commitment towards this police strategy. These outcomes are somewhat contradictions to other results gauged by similar studies which suggest that demographic and professional characteristics are significant predictors of the officers' attitudes towards police innovations (Lurigio & Skogan, 1994; Skogan et al., 1999).

Furthermore, findings also suggest that the Quadrant Plan's implementation would not breed scepticism among police personnel, and that the Quadrant Plan is not a

failure-prone police fad to soon be replaced by another strategy. Likewise, these results contrast in some extent with other findings related to the police culture and policing innovation (Paoline, et al., 2000). Skogan (2008) has described some reasons policing initiatives tend to fail, citing resistance to change as the main cause. Resistance to change within police agencies coincides with the fact that police officers think that community policing principles jeopardizes police culture. In this case, the results suggest that in police officers' view the Quadrant Plan is far from being something menacing the Carabineros' organizational culture. On the contrary, the Quadrant Plan reinforces Carabineros' engagement with Chile's public security.

The participating officers found the Quadrant Plan to be a good source of job satisfaction and opportunities for professional and personal growth. These findings are fairly like others suggesting that police innovations such as community policing engender job satisfaction and sense of commitment among police agents (Adams et al., 2002; Ford et al., 2003; Novak et al., 2003; Wilson & Bennett, 1994). Nonetheless, it can also be feasible to assume that these positive outcomes might be more associated to the fact that the Carabineros personnel can be more identified, committed with the Institution's doctrine rather than the Quadrant Plan itself. In other words, these research findings also have shown that Chilean police officers may feel and demonstrate support for the organisation as such, but they may not be pro of certain community-oriented practices the Carabineros introduces. Other results revealed, however, that many thought managements concerns, insufficient police, and logistical resources as difficult obstacles for the Quadrant Plan to overcome. Similarly, the results indicate that, even though the officers recognized station commanders as having clear notions on the Plan's principles and goals, they felt undervalued in being neither rewarded nor encouraged by the policework they had developed.

In sum, the results indicate that the officers' support and commitment attitudes towards the Quadrant Plan could be explained through the existing relationship between organizational-level variables 'management', 'police work orientation', and 'structural reform'. This suggests that officers' commitment to the strategy objectives is consistent with the orientation of their policing in the quadrants fighting crime. The above was also deduced from what they thought about their police station commander's management style. If the style remained the same, their commitment to the objectives of the Plan do not change. However, based on the results obtained, this commitment can also be predicted by considering the number of resources the police unit has. This last variable can determine the degree of commitment and support for the Quadrant Plan. The more and better resources there are, the more commitment and support the Quadrant Plan has. Similarly, the findings indicate that 'scepticism' and 'job satisfaction' are individual-level variables that explain or predict Chilean officers' attitudes towards the Quadrant Plan. This means that, to

the extent that the implementation of the Quadrant Plan breeds job satisfaction in officials, scepticism regarding the potential problems caused by the lack of resources decreases significantly.

This research presented several limitations. First, a non-random sampling technique (i.e., non-probability sampling) was used to select both research sites and participants, limiting the sample's representativity of Carabineros staffing. Moreover, the sample size prevented this study from using more complex statistical methods that could provide a better understanding of the correlation between the variables studied. However, as previously noted, Carabineros of Chile is a nationally uniformed police force, meaning that all members are given the same professional training. In short, they are generally all indoctrinated in the same manner. Thus, the sample analysed could very well represent the Chilean police values and positions. Another key limitation is that notwithstanding this, the current investigation assessed some key individual and organizational-level variables such as structural reform, police work orientation, scepticism, support, and commitment using multiple-item factors, which increased the internal consistency of the measures.

There would be the need, then, to develop a longitudinal study aimed at assessing the change (if any) in Chilean officers' stances towards the Quadrant Plan. When developing such research, senior Carabineros officers can accurately identify potential critical barriers and obstacles – which often go unnoticed – and aid in the streamlining of the Quadrant Plan, making it more objective and appealing to both front-line police officers and senior officers. Similarly, further studies are needed to assess Carabinero-community relations and other factors related to fear of crime in quadrant police units.

Financiamiento: Fondos propios

Conflicto de interés: El autor declara no tener algún conflicto de interés

Recibido: 24 mayo de 2021

Aprobado: 03 de julio de 2021

REFERENCES

Adams, R. E., Rohe, W. M., & Arcury, T. A. (2002). Implementing community-oriented policing: Organizational change and street officer attitudes. *Crime & delinquency*, 48(3), 399-430.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Berlin, Springer.

Alfaro-Beracoechea, L., Puente, A., Da Costa, S., Ruvalcaba, N., & Páez, D. (2018). Effects of fear of crime on subjective well-being: A meta-analytic review. *European Journal of Psychology Applied to Legal Context*, 10(2), 89-96.

Antoni, C. H. (2004). Research note: A motivational perspective on change processes and outcomes. *European Journal of Work and Organizational Psychology*, 13(2), 197-216.

Beyer, H. & Vergara, R. (2006). Delincuencia en Chile: Determinantes y rol de las políticas públicas. *Instituto de Economía UC*. Recuperado de <https://politicaspublicas.uc.cl/wp-content/uploads/2015/02/delincuencia-en-chile-determinantes-y-rol-de-las-politicas-publicas.pdf>

Buerger, M. E. (2010). Policing and research: two cultures separated by an almost-common language. *Police Practice and Research: An International Journal*, 11(2), 135-143.

Candia, I. M. (2018). El modelo de Policía Comunitaria en la Seguridad Ciudadana en la jurisdicción de la Comisaría PNP de Universitaria, Lima, 2017. Recuperado de https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/23899/Candia_HIM.pdf?sequence=1&isAllowed=y

Carabineros de Chile (2010). Orden general No 001960 “Nuevo manual operativo del plan cuadrante de seguridad preventiva”.

Carabineros de Chile. (2018). Orden general No 002618 “Nuevo manual operativo del plan cuadrante de seguridad preventiva”.

Cochran, J. K., Bromley, M. L., & Swando, M. J. (2002). Sheriff's deputies' receptivity to organizational change. *Policing: An international journal of police strategies & management*.

Dammert, L. (2016). Confianza en la policía en Chile: un arma de doble filo. *Civitas-Revista de Ciências Sociais*, 16(4), 575-594.

Dammert, L. (2019). Challenges of police reform in Latin America. In *Routledge handbook of law and society in Latin America* (pp. 259-277). Routledge.

Dammert, L. (2020). Carabineros de Chile ¿ El modelo latinoamericano de seguridad?. *Análisis Carolina*, (25), 1-12.

Dammert, L., & Malone, M. F. T. (2006). Does it take a village? Policing strategies and fear of crime in Latin America. *Latin American politics and society*, 48(4), 27-51.

Emerson, R. W. (2017). ANOVA and t-tests. *Journal of Visual Impairment & Blindness*, 111(2), 193-196.

Espriú, A. (2013). Estudio de Caso: Plan Cuadrante de Seguridad Preventiva en Chile. Recuperado de [http://www2.congreso.gob.pe/sicr/cendocbib/con4_uibd.nsf/1B8DCC02C5BE5D9B05257E75007C8783/\\$FILE/Caso-Plan-Cuadrante-Version-final-Alejandro-Espriu.pdf](http://www2.congreso.gob.pe/sicr/cendocbib/con4_uibd.nsf/1B8DCC02C5BE5D9B05257E75007C8783/$FILE/Caso-Plan-Cuadrante-Version-final-Alejandro-Espriu.pdf).

Fernandez, S., & Rainey, H. G. (2017). Managing successful organizational change in the public sector. In *Debating public administration* (pp. 7-26). Routledge.

Ford, J. K., Weissbein, D. A., & Plamondon, K. E. (2003). Distinguishing organizational from strategy commitment: Linking officers' commitment to community policing to job behaviors and satisfaction. *Justice quarterly*, 20(1), 159-185.

Frühling, H. (2001). *La reforma policial y el proceso de democratización en América Latina*. Centro de Estudios para el Desarrollo.

Frühling, H. (2006). The impact of community policing and police reform in Latin America. *Toward a Society Under Law: Citizens and Their Police in Latin America*.

Glebbeek, M. L., & Koonings, K. (2016). Between Morro and Asfalto. Violence, insecurity and socio-spatial segregation in Latin American cities. *Habitat international*, 54, 3-9.

Greene, J. R. (1989). Police officer job satisfaction and community perceptions: Implications for community-oriented policing. *Journal of Research in Crime and Delinquency*, 26(2), 168-183.

Ikerd, T., & Walker, S. (2010). *Making police reforms endure: The keys for success*. US Department of Justice, Office of Community Oriented Policing Services. Recuperado de <https://www.ojp.gov/ncjrs/virtual-library/abstracts/making-police-reforms-endure-keys-success-0>

Josemans, M. (2011). 'Bridging ideals and reality. A case study of community policing strategy 'Plan Cuadrante' in post-civil war Quetzaltenango, Guatemala' (Master's thesis).

Kang, W., Nalla, M. K., & Chun, Y. (2014). Community policing in South Korea: an analysis of organizational determinants. *Crime, law and social change*, 62(5), 549-570.

Katz, D. (1960). The functional approach to the study of attitudes. *Public opinion quarterly*, 24(2), 163-204.

Kouzes, J. & Posner, B. (2002). The leadership challenge, (3rd ed.). San Francisco, Jossey-Bass.

Lurigio, A. J., & Skogan, W. G. (1994). Winning the hearts and minds of police officers: An assessment of staff perceptions of community policing in Chicago. *Crime & Delinquency*, 40(3), 315-330.

Novak, K. J., Alarid, L. F., & Lucas, W. L. (2003). Exploring officers' acceptance of community policing: Implications for policy implementation. *Journal of Criminal Justice*, 31(1), 57-71.

Paoline, E., Myers, S. M., & Worden, R. E. (2000). Police culture, individualism, and community policing: Evidence from two police departments. *Justice quarterly*, 17(3), 575-605.

Piderit, S. K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of management review*, 25(4), 783-794.

Pontón, D. (2009). *Policía comunitaria y cambio institucional en el Ecuador*. Flacso-Sede Ecuador. Recuperado de <https://repositorio.flacsoandes.edu.ec/bitstream/10469/810/3/TFLACSO-2008DPC.pdf>

Pontón, D., & Rivera Vélez, F. (2016). Postneoliberalismo y policía: caso de Ecuador 2007-2013. *Desafíos*, 28(2), 213-253.

Román, M., & Cárdenas, S. (2015). Efectividad del plan nacional de vigilancia comunitaria por cuadrantes en cuatro barrios de Cali, Colombia. *Cartografías del Sur. Revista Multidisciplinaria en Ciencias, Arte y Tecnología de la Universidad Nacional de Avellaneda*, (2).

Rosenbaum, D. P., & Lurigio, A. J. (1994). An inside look at community policing reform: Definitions, organizational changes, and evaluation findings. *Crime & delinquency*, 40(3), 299-314.

Rosenbaum, D. P., Yeh, S., & Wilkinson, D. L. (1994). Impact of community policing on police personnel: A quasi-experimental test. *Crime & Delinquency*, 40(3), 331-353.

Salas, R., Fernández, J., & Muñoz, J. (2014). Resumen ejecutivo. Programa Plan Cuadrante de Seguridad Preventiva. Ministerio del Interior y Seguridad Pública. Ministerio de Hacienda. Dirección de Presupuestos. División de control de gestión. Evaluación de Programas Gubernamentales. Recuperado de https://www.dipres.gob.cl/597/articles-139801_r_ejecutivo_institucional.pdf

Schols, J. (2011). *Agents of change: A case study of community policing in La Antigua Guatemala* (Master's thesis). Recuperado de <https://dspace.library.uu.nl/handle/1874/215773>

Skogan, W. G. (2008). Why reforms fail. *Policing & society*, 18(1), 23-34.

Skogan, W. G., Hartnett, S. M., DuBois, J., Comey, J. T., Twedt-Ball, K., Gudell, J. E., ... & Keebler, E. (1999). Community policing in Chicago, years five and six: An interim report. *Illinois Criminal Justice Information Authority: Chicago, IL*.

Spearman, C. (1904). The proof and measurement of association between two things. *The American Journal of Psychology*, 15, 72–101.

Spector, P. E. (1992). *Summated rating scale construction: an introduction sage*. Newbury Park, CA.

Tudela, P, Schwaderer, H., Varela, F., & Palacios, A. (2013). Análisis del Plan Cuadrante de Seguridad Preventiva de Carabineros of Chile en comunas de la Región Metropolitana de Santiago. Subsecretaría de Prevención del Delito. Ministerio del Interior y Seguridad Pública.

Ulu Turk, B., Guler, A., & Karakaya, M. (2017). Police officers' attitudes toward the implementation of community-oriented policing in Turkey. *Crime & delinquency*, 63(14), 1946-1967.

United Nations Office on Drugs and Crime, UNODC (2019). Global study on homicide, 2019. Recuperado de <https://www.unodc.org/unodc/en/data-and-analysis/global-study-onhomicide.html>

Vakola, M., Tsaoisis, I., & Nikolaou, I. (2004). The role of emotional intelligence and personality variables on attitudes toward organisational change. *Journal of managerial psychology*, 19 (2), 88-110.

Vilalta-Perdomo, C. J., Castillo, J., & Torres, J. A. (2016). Violent crime in Latin American cities. *Washington, DC, Inter-American Development Bank*.

Wilson, D. G., & Bennett, S. F. (1994). Officers' response to community policing: Variations on a theme. *Crime & Delinquency*, 40(3), 354-370.

Zhao, J., Lovrich, N. P., & Thurman, Q. (1999). The status of community policing in American cities. *Policing: An International Journal*, 22 (1), 74-92.