Direct intervention in crime: The role of satisfaction with police

A study into the relationship between satisfaction with police and direct intervention in the context of the Netherlands Sannah Boersma (5712114) Faculty of Social and Behavioral Sciences Utrecht University

Bachelor Thesis Sociology Supervisor: A.E. Nivette Second reader: L. Norbutas June 2019

Abstract

Various studies showed that satisfaction with police and informal social control, which includes direct intervention and indirect intervention, is positively related. However, some studies concluded that satisfaction with police and direct intervention are not significant related. In addition, research on the relation between satisfaction with police and direct intervention, especially in the Netherlands, is limited. By using data from Longitudinal Internet Studies for Social Sciences (LISS), with as main questionnaire the Guardianship Survey (N = 2021), this study therefore examines the effect of satisfaction with police on direct intervention in crime. To analyze the data, a step-by-step multiple linear regression with a mediator and a moderator effect were executed. The results demonstrate that satisfaction with police and direct intervention are weak significant related. The effect is partially mediated by fear of crime. Feeling of responsibility did not have a moderation-effect. However, feeling of responsibility turned out as a strong predictor of direct intervention.

Keywords: Satisfaction with police; Informal social control; Direct intervention; Fear of crime; Responsibility; Crime

INTRODUCTION

In recent years, satisfaction with police has increased in the Netherlands (CBS, 2018). In 2017, 32% of the Dutch citizens were satisfied with the police compared to 29% in 2012. CBS (2018) asked Dutch citizens about their satisfaction with the overall functioning of the police. More specifically, Hinds (2008) suggests that satisfaction with police is about the extent in which the police fulfill expectations, needs and desires of the public. He states that it is difficult for the police to function, to solve crime, without satisfaction, because the likelihood that people will exert informal social control is relatively low.

Silver & Miller (2004) conceptualize informal social control as the willingness of the neighbourhood residents to actively engage in behaviours aimed at preventing criminal and deviant behaviour in the local area. Informal social control can be seen as an important factor to reduce crime rates (Triple, Gainey & Sun, 2003; Silver & Miller, 2004; Hinds, 2008). Warner (2007) made a distinction between two types of informal social control: direct intervention and indirect intervention. Both types of intervention include feeling responsible for safety in the neighbourhood. The difference between these types of intervention is that direct intervention is when individuals intervene in local disturbances by saying or doing something to disrupt the local disturbances, while indirect intervention is when authorities are mobilized by inhabitants who have called the police in order to report crime (Warner, 2007). The choice to intervene and the type of intervention depend on the feeling of responsibility and the availability of tools for protection someone has, such as owning a dog (Reynald, 2010).

Direct intervention is considered as the best way to prevent crime, because the chances of being caught are higher (Reynald, 2011). There is dark number of cases in which someone directly intervened, because direct intervention will not result in formal consequences (Warner, 2007). Research of Silver & Miller (2004) has shown that satisfaction with police and informal social control are positively related. No distinction was made between direct and indirect intervention. Prior research found no significant effect of satisfaction with police on indirect intervention (Bennett & Wiegand, 1994; Goudriaan, Wittebrood & Nieuwbeerta, 2005; Warner, 2007). Only a few studies have shown that satisfaction with police and direct intervention are positively related (Jackson & Bradford, 2010; Ayodele & Aderinto 2014; Reynald & Moir, 2018). However, some studies also argue that satisfaction with police and direct intervention are not significantly related (Warner, 2007).

The current study seeks to address this gap with data of residents living in the Netherlands. By re-examining satisfaction with the police and direct intervention in the context of the Netherlands, this research will contribute to the insights into direction intervention among residents of the Netherlands. Since the increasing satisfaction with police and the decreasing individual's willingness to indirectly intervene in crime are not significantly related, the relationship between satisfaction with police and direct intervention, especially in the Netherlands, should be examined in order to reduce crime rates (Skogan, 1986; Triple, Gainey & Sun, 2003; Silver & Miller, 2004; Hinds, 2008). Furthermore, it is necessary to investigate the contribution of satisfaction with the police because knowledge of this mechanism affecting direct intervention is important for preventing crime (Reynald, 2011). Additionally, this study will focus on the form of direct intervention in which someone will actually intervene, whereas most research focuses only on supervision (Warner, 2007; Reynald, 2011; Reynald & Moir, 2018).

The purpose of this study is to understand the relationship between satisfaction with the police and direct intervention in the context of the Netherlands. The central question of this study then becomes: 'To what extent does satisfaction with police influence the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands?'

THEORY & HYPOTHESIS

Previous research addresses a variety of insights towards the individual's willingness to directly intervene (Silver & Miller, 2004; Warner, 2007; Jackson & Bradford, 2010; Kochel, 2012; Ayodele & Aderinto 2014; Reynald, 2011; Reynald & Moir, 2018). Reynald (2011) divided three stages of direct intervention: occupancy (stage 1), monitoring (stage 2) and intervention (stage 3). In line with the definition of Warner (2007), this study will only focus on stage 3 of direct intervention in which an individual actually intervene directly by saying or doing something to disrupt. In literature, there are given two perspectives for direct intervention: the social disorganization perspective, which highlights the underlying collective processes, and the bystander perspective, which highlights the underlying individual processes (Reynald, 2011). Since satisfaction with police is part of collective processes, the main perspective of this study will be the social disorganization perspective. The concept of satisfaction with police is defined as 'the extent of feeling satisfied with the overall functioning of the police' (Hinds, 2008). Furthermore, fear of crime as possible mediator and feeling of responsibility as possible moderator will be discussed in order to better understand the relationship between satisfaction with police and direct intervention (Warner, 2007;

Reynald, 2010). These factors were seen as important predictors for informal social control. The hypotheses are presented in Figure 1.

Social control

Hunter (1985) identified three levels of control: private control exerted by primary relationships such as family, parochial control exerted by residents of a neighbourhood and local institutions such as schools or churches, and public control exerted by public institutions. All levels of social control are mutually dependent. Social control is a central concept of the social disorganization theory (Kubrin & Weitzer, 2003; Triplett, Gainey & Sun, 2003; Reynald, 2011). The basic concept of the social disorganization theory argues that disordered neighbourhood structural factors, low economic status, ethnic heterogeneity, and residential mobility decrease the levels of informal social control which, in turn, affects, the level of crime and delinquency in that neighbourhood (Shaw & McKay, 1942). Current models of the social disorganization theory emphasises the relation between shared neighbourhood perceptions of institutions and informal social control (Shaw & McKay, 1942; Triplett, Gainey & Sun, 2003; Reynald, 2011). Their model predicts that the level of informal social control would weaken when public institutions emasculate.

A public institution, such as the police, can delineate and socialize people into societal roles which provide guidance to the public about appropriate and inappropriate behaviour (Triplett et al., 2003). General agreement about this guidance can lead to normative behaviour. When individuals perceive the authorities as legitimate, there is more commitment to this normative behaviour, and so these individuals will delineate in the neighbor role, in which those neighbours are more willing to obey the law, socialize others to those laws and adhere to formal authority of legal institutions (Hunter, 1985; Groff, 2015). The phenomenon of general agreement between neighbours and the police reduces crime rates (Kubrin & Weitzer, 2003; Silver & Miller, 2004). To receive voluntary compliance with this general agreement and to promote informal social control, the police rely on public perception of their legitimacy (Kochel, 2012). The perception of the police itself is affected by the quality of service they provide to a neighbourhood: if the contact between the neighbourhood and police is unpleasant, satisfaction with police decreases (Groff, 2015).

In the context of the Netherlands, satisfaction with police has increased which means that 32% of the Dutch citizens are satisfied with the overall functioning of the police (CBS, 2018; Hinds, 2008). This increase leads to the assumption that the police is more seen as legitimate which provides more commitment to exert norms created by the police. The police

could create guidance about appropriate and inappropriate behaviour and provide some societal roles. In this case, Dutch citizens will be delineated to the neighbor role. Because they perceive the police as legitimate, they are more willing to supervise and directly intervene in local disturbances in order to obey the law and socialize others to those laws (Groff, 2015). Therefore, it is expected that the higher the satisfaction with the police, the higher the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands.

Hypothesis 1 (H1): There is a direct positive effect of satisfaction with police on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands

Fear of crime as mediator

The research of Bennet (1991) shows that satisfaction with police affects the level of fear of crime someone experiences. Fear of crime refers to an individual's evaluation of his perceived safety in a particular environment or his perception of the likelihood of being victimized (Garofalo, 1981). The social disorder model states that fear of crime is influenced by incivilities within neighbourhoods. These incivilities decreases when there are accepted norms and values. As satisfaction with the police increases (CBS, 2018) and by assuming that with it the general agreement about appropriate and inappropriate behaviour improves (Triplett et al., 2003), incivilities within neighbourhoods decreases and thus fear of crime reduces. The general agreement created by the police can be seen as accepted norms and values. Therefore, it is assumed that satisfaction with the police has a negative effect on fear of crime. The relation between satisfaction with the police and fear of crime is reciprocal. Research of Weitzer & Tuch (2005) has shown that fear of crime decreases satisfaction with the police.

Hypothesis 2a (H2A): There is a direct negative effect of satisfaction with police on fear of crime.

Fear of crime and informal social control are closely related. The response to fear of crime leads to negative social outcomes, such as reduction of informal social control, which leads to an increase in crime (Garofalo, 1981; Skogan, 1986; Hale, 1996; Gainey, Alper & Chappel, 2011). According to Skogan (1986), an increasing level of fear of crime leads to less feeling of responsibility to intervene in crime and thus people are less likely to intervene. In addition, Gainey et al. (2011) examined the relation between fear of crime and informal social control. Their results have shown that as the level of fear of crime increases, the level of direct

intervention decreases. As a possible explanation they state that those who live in fear are more likely to spend time at home instead of the street. For this reason, those people are not able to supervise the neighbourhood and intervene directly when something happens. Therefore, it is expected that fear of crime has a negative effect on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands through fear of crime.

Hypothesis 2b (H2B): There is a direct negative effect of fear of crime on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands.

The overall literature shows that those who are more satisfied with police have a decreased level of fear of crime (Bennet, 1991). This can lead to a higher likelihood of an individual's guardianship and willingness to directly intervene, as the literature points out a lower level of fear of crime is a predictor for direct intervention (Gainey et al., 2011). Research of Reynald (2011) has shown that the effect between trust in police, which part of satisfaction with police, and supervision, a form of direct intervention, is not strong. They suggest that the effect may be explained through fear of crime. Therefore, it is hypothesized that there is an indirect effect of satisfaction with police on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands through fear of crime.

Hypothesis 2c (H2C): There is an indirect effect, mediating effect of satisfaction with police on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands through fear of crime.

Feeling of responsibility as moderator

As stated in the first hypothesis, satisfaction with police is expected to have a positive effect on the individual's guardianship and willingness to intervene in the Netherlands (Silver & Miller, 2004). However, this can differ between individuals with more or less feeling of responsibility (Felson, 1995). Taylor (1988) argues that the feeling of responsibility is associated with higher levels of surveillance. This is a type of direct intervention (Warner, 2007). By frequent use of a place, the individual feels more responsible and physically connected to this place unless someone has no formal duty to feel that way (Taylor, 1988; Felson, 1995; Reynald, 2010). Reynald (2010) assumed that the most commonly used place of an individual is his residential place. It is expected that people with a greater feeling of responsibility feel more connected to their neighbourhood, and thus are more inclined to directly intervene. Therefore, the relationship between satisfaction with police and the likelihood of an individual's guardianship and willingness to directly intervene will be stronger for those who have a greater feeling of responsibility:

Hypothesis 3 (H3): The effect of satisfaction with police on the likelihood of an individual's guardianship and willingness to directly intervene will be stronger for those who have a greater feeling of responsibility.

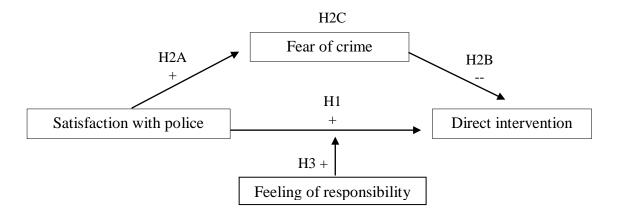


Figure 1. Predicted relationships of hypothesis 1, 2A, 2B, 2C and 3

DATA & METHOD

The data of this study are drawn from the LISS data panel (Longitudinal Internet Studies for the Social Sciences), administered by CentERdata (Tilburg University, The Netherlands) has been used. The LISS panel data were collected by CentERdata (Tilburg University, The Netherlands) through its MESS project funded by the Netherlands Organization for Scientific Research. The panel is a representative sample of Dutch individuals, based on a true probability sample of households drawn from the population register, who participate monthly Internet surveys. The panel members are paid for each completed questionnaire.

For the purpose of this study the following datasets were used: Background Variables (August 2011), Conventional Computer Crime Victimization (wave 2, 2010) and the Guardianship Survey (August 2011). The datasets were merged into one dataset based on the key variable nomem_encr (number of household member encrypted). The merged dataset consists of 11082 respondents.

This study is based mainly on the Guardianship Survey. Out of 6778 selected panel members 16 years of age or older, 4793 (70.7%) did complete the Guardianship Survey. The other panel members did not respond (28.8%) or did not complete the survey (.5%). The Guardianship Survey collects information on three dimension of active guardianship:

availability (occupancy), monitoring (supervision) and intervention practices. All data is self-reported.

Missing data

The valid N for each variable is presented in Table 1. Respondents who did not fill in the Guardianship Survey, the main survey of this study, were deleted. This results in 4793 out of 11082 respondents. Respondents are only selected if they have answered all questions about the police in their neighbourhood, their behaviour in crime, feeling of responsibility and fear of crime. To minimize data loss and to compute valid scales for satisfaction with police and fear of crime based on sufficient information, a minimum number of values for these variables were chosen to compute a scale. This will be explained in the measurements of the variables. In total, 2772 of the 4793 respondents of the Guardianship Survey were coded as missing. With the residual 2021 respondents the analyses were executed.

By using a multiple imputation, it is tried to gain more insights into the missing value pattern. However, multiple imputation found no missing value pattern (see Figure A1, Appendix A). The missings were at random (MAR). The questions about the police in the neighborhood are often not filled in by many respondents. As shown in Table 1, there were only 1525 (77.5%) respondents who filled in all questions about the police. Perhaps these questions were too sensitive for the some respondents. Furthermore, LISS took a random probability sample. Some panel members are not selected by LISS for both questionnaires.

Measures

Dependent variable. The likelihood of an individual's guardianship and willingness to directly intervene was measured by one question that asked respondents to agree or disagree with the following statement: 'if I see a crime in progress, I would take some action to stop it' on a five-point Likert scale (1 = completely disagree; 5 = completely agree). The total valid cases of direct intervention were 4802 out of 6778 respondents. Direct intervention is a continuous variable.

Background Variables	10453
Gender	10453
Age	10453
Personal income	9849
The Guardianship Survey	6778
Satisfaction with police	1525
Satisfaction A	2469
Satisfaction B	3159
Satisfaction C	2663
Satisfaction D	2882
Satisfaction E	3009
Satisfaction F	2886
Satisfaction G	2499
Direct intervention	4802
Feeling of responsibility	4802
Perception of crime	4824
The Conventional Computer Crime Victimization Survey	6693
Fear of crime	5522
Fear A	5673
Fear B	5620
Fear C	5621
Fear D	5666

Table 1. Valid respondents (N) for each variable before selection

Independent variables. The measurement of the independent variable, satisfaction with police, is based on the five-point Likert scale of Sampson & Bartusch (1998). The original scale consists of five statements. Similar statements were taken from the Guardianship survey in order to measure satisfaction with police. Respondents were asked to report their level of agreement with the following seven statements: 'the police in my neighbourhood are effective at combating crime' (A), 'you can rely on the police in my neighbourhood' (B), 'the police in my neighbourhood respond promptly when they are called for services' (C), 'the police in my neighbourhood are never there when you need them' (reverse coded) (E), 'the police in my neighbourhood do a good job' (F) and 'the people in this area have a good relationship with the police' (G) on a five-point Likert scale (1 = completely disagree; 5 = completely agree).

To investigate the underlying structure of the seven items of satisfaction with police, a principle component analysis was performed. Prior to running the principle component analysis, the examination of the data indicated that the variables were not perfectly distributed. Given the histogram of each variable, these deviations were not considered as problematic. The scree plot (see Figure A2, Appendix A) and the factor loadings (see Table 2)

identified a one factor solution as underlying the seven items: this is in line with the theory. Despite that one factor loading was low, the mean score of all seven items was used to compute the satisfaction with police variable. In total, these factors accounted for 67.537% of the variance in the questionnaire data. After the factor analysis, a reliability check was done. A Cronbach's Alpha of α = .912 was found, which indicates that the scale is reliable (Nunnally, 1978). The Cronbach's Alpha would increase to .932 if item E was removed. However, this item is not deleted, because the Cronbach's Alpha is still high. A scale is only computed for a respondent when at least 5 values are valid in order to minimize data loss. The scale is a five-point scale, whereby an average score of 1 indicates not satisfied with the police at all and 5 indicates very satisfied with the police. The total valid cases on this variable were 2498 out of 4793 respondents of the Guardianship Survey.

 Table 2. Principle Component Analysis of satisfaction with police

Item	Statement	Loading
		Factor 1
B.	You can rely on the police in my neighbourhood	.901
F.	The police in my neighbourhood do a good job	.894
D.	The police in my neighbourhood take residents' concerns seriously	.880
A.	The police in my neighbourhood are effective at combating crime	.866
C.	The police in my neighbourhood respond promptly when they are called for services	.846
G.	The people in this area have a good relationship with the police	.763
E.	The police in my neighbourhood are never there when you need	.542
	them' (reverse coded)	
	Percentage of Variance	67.537%

Mediator. To measure fear of crime, respondents were asked the following questions of the Conventional Computer Crime Victimization Survey: 'How often does it happen that you avoid certain areas in your place of residence because you perceive them unsafe?' (A), 'How often does it happen that you do not respond to call at the door because you feel that it is unsafe?' (B), 'How often does it happen that you leave valuable items at home to avoid theft or robbery in the street?' (C) and 'How often does it happen that you make a detour , by car or on foot, to avoid unsafe areas?' (D). The answer categories of all these questions were: Almost never (1), Sometimes (2), Often (3) and I don't know/prefer not to say (missing).

An average score per respondent on fear of crime is conducted by making a scale of these statements. Prior to running the principle component analysis, the examination of the data indicated that the variables were not perfectly distributed. Given the histogram of each variable, the distributions are slightly right skewed. The factor analysis identified one factor as underlying (see Table 3). The scree plot of the scale is presented in Figure A3 (See Appendix A). After the factor analysis, a reliability analysis was done. Cronbach's Alpha for the 4-item fear of crime was. 775. Therefore, a scale is made with these items from 1 (almost never) to 3 (often). A scale is only computed for a respondent when at least 3 values are valid in order to minimize data loss. There were 5664 out of 11082 valid respondents of the merged dataset (Fear of crime was not included in the Guardianship Survey).

Item	Question	Loading Factor 1
D.	How often does it happen that you make a detour, by car or on foot, to avoid unsafe areas?	.854
A.	How often does it happen that you avoid certain areas in your place of residence because you perceive them unsafe?	.802
B.	How often does it happen that you do not respond to call at the door because you feel that it is unsafe?	.761
C.	How often does it happen that you leave valuable items at home to avoid theft or robbery in the street?	.713
	Percentage of Variance	61.489%

Table 3. Princi	ple Comp	onent Analy	ysis of	fear of ci	rime

Moderator. As moderator, the feeling of responsibility was measured using one item of the Guardianship Attitude Scale (Reynald & Moir, 2018). Respondents were asked 'I believe I have a role to play in preventing crime'. This question was on a five-point Likert scale from 1 (completely disagree) to 5 (completely agree).

Control variables. There were several individual factors and contextual factors were taken into account that previous research has demonstrated to have an impact on the individual's willingness to directly intervene. All analysis will be controlled for the variables 'gender', 'age', 'personal income' and 'perception of crime'.

Gender. Research of Nicksa (2014) examined the effect of gender on the type of intervention. His research found that women are more likely to report crime (indirectly intervene), while men are more likely to directly intervene. As possible explanation Nicksa (2014) suggests the traditional gender socialization in which men are raised to be strong protectors and women are raised to be warm and caring. Furthermore, Singer (1988) states that women are less likely to directly intervene in crime, because of fear of crime. Gender of the respondent is recoded into male (0) and female (1).

Age. The research Reynald & van Bavel (2013) has shown that elderly people are more likely to supervise the neighborhood and to report crime if necessary than juveniles. They are less likely to directly intervene in local disturbances, because they experiences

higher levels of fear of crime (Skogan, 1988; Gibson, Zhao, Lovrich & Gaffney, 2002; Gainey et al, 2011). Age of the respondent is measured by the age in years of the respondent.

Personal income. The level of income is related to the level of informal social control. Those who have a lower income are less willing to intervene, because they do not view themselves as agents of informal social control (Sampson, Raudenbush & Earls, 1997; Gibson et al, 2002; Reynald & Moir, 2018). To measure the personal income of the respondent, respondents were asked what their netto personal income is in Euro per month. Personal income is recoded in no income (1) to above \notin 7500 (12).

Perception of crime. Reynald & Moir (2018) showed that the individual's perception of crime is a positive predictor of the intensity of supervision. Those who perceive higher levels of crime in their neighborhood, feel more responsible to directly intervene in crime. Perception of crime is recoded in no crime (0), low crime (1), average crime (2) and high crime (3).

Analysis

First, with the programme SPSS Statistics 25, factor analyses were executed to construct the scales for the variables satisfaction with police and fear of crime. For measuring the reliability of each scale, the Cronbach's Alpha α were calculated. In order to emphasize the strength of the relationship between two variables, the Pearson's correlation coefficients have been calculated. Finally, a multiple regression with a moderating and a mediating effect were executed. Only respondents that did not have missings on included variables were taken into analysis.

To check for normal distribution, a Shapiro-Wilk test and histogram were used. The Shapiro-Wilk test showed that the variable direct intervention is not normal distributed (p = < .001). The histogram showed that the distribution of the variable direct intervention is slightly left-skewed, but seems to be normally distributed. The variable direct intervention was used for the analysis.

A correlation matrix was obtained to analyse the relationships between different variables. For this purpose, Pearson's correlation coefficient (r) is used. A significance level (alpha) of 0.05 will be used to test the significance of the variables. If there is a correlation between the several variables, a step-by-step multiple linear regression analysis can be executed to determine the contribution of the independent variables to the dependent variable.

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To test H1, a multiple linear regression was used. The reason a multiple linear regression was performed, is because direct intervention is a continuous dependent variable, satisfaction with police a continuous independent variable. The control variables were also added to the model.

To see whether there is a mediating effect through fear of crime, the process tool of Hayes (2012) was used. This method allows us to test H2A, H2B and H2C and will show an outline of a complete model with the variables satisfaction with police, fear of crime and direct intervention. First, the main effects of satisfaction with police on fear of crime and fear of crime on direct intervention as conditions of the mediation analysis were checked. Next, the mediation analysis was executed. Based on the 95% confidence interval and the Sobel test, the results were verified. The Sobel test measured if the effect through fear of crime is significant different from zero (Sobel, 1982).

For the moderating effect of feeling of responsibility on the relationship between satisfaction with police and direct intervention, an interaction variable was computed (H3). Before conducting the interaction variable, a multicollinearity test was conducted to determine whether there is similarity between the independent variables. If the VIF value is higher than 4, then the multicollinearity is not a problem (Mansfield & Helms, 1982). The multicollinearity tested indicated a VIF value of 1.026. Therefore, there were no multicollinearity issues found (Robinson, Cecil & Randall, 2009). Despite the fact that there were no multicollinearity issues, the interaction variable, the moderator and the dependent variable were centered. A significance level (alpha) of 0.05 will be used to test the significance of the variables.

To control whether the correlation between satisfaction with police and direct intervention is not partly based on gender, age, personal income in Euro's per month and perception of crime, these variables were also taken into account. In each analysis, the control variables were added.

RESULTS

Descriptive statistics. Table 4 provides the descriptive statistics from all variables. In total, all respondents score on average 3.592 on satisfaction with police with a standard deviation of .997 and 3.314 on feeling of responsibility with a standard deviation of 1.163. A noteworthy result was the score of fear of crime. Respondents score relatively low on fear of crime (Min. = 1; Max = 3; Mean = 1.397; SD = .488). This means that respondents on

average score in between the categories 'almost never' and 'sometimes'. In this sample, individuals do not experience a lot of fear of crime.

The descriptive statistics of the dependent variable shows that respondents score on average 3.232 on direct intervention with a standard deviation of 1.094. Finally, Table 4 presents the descriptive statistics of the control variables. In this sample, 48.3% of the respondents are female and the average age is 52.61 years (Min. = 17; Max. = 91). Furthermore, all respondents score on average 3.42 on personal income, which means that they earn approximately \notin 1001 - \notin 2000 per month. Respondents scored relatively low on perception of crime (Min. = 0; Max = 3; Mean = 1.194; SD = .691), which means that they experiences low crime in their neighborhood.

Table 4. Descriptive statistics ($N = 1205$)			
	Range	М.	Sd.
Independent variable			
Satisfaction with police	1-5	3.592	.997
Feeling of responsibility	1-5	3.314	1.163
Fear of crime	1-3	1.397	.488
Dependent variable			
Direct intervention	1-5	3.232	1.094
Control variables			
Gender	0/1	.483	
Age	17-91	52.61	15.948
Personal income	0-12	3.42	2.050
Perception of crime	0-3	1.194	.691

Table 4. Descriptive statistics (N = 1205)

Correlations. By means of correlation, the relations between the dependent and independent variables were obtained to investigate underlying correlations (see Table 5). Based on the results, most of the variables correlate with each other.

First, *direct intervention* is analysed. The bivariate correlation between direct intervention and satisfaction with police was positive and weak (r = .082; p < .001). This given an indication there is not enough evidence to hold the first hypothesis. The bivariate correlation between direct intervention and feeling of responsibility was positive and strong (r = .405; p < .001). Direct intervention correlates also with fear of crime (r = -.153; p < .001), gender (r = -.182; p < .001), personal income (r = .139; p < .01) and perception of crime (r = -.033; p = .138).

The second variable which is analyzed is *satisfaction with police*. Satisfaction with police correlates significant with feeling of responsibility (r = -.138; p < .001), fear of crime

(r = -.133; p < .001) and age (r = .145; p < .001) and perception of crime (r = -.254; p < .001). However, satisfaction with police do not have a significant correlation with gender (r = .039; p = .079) and personal income (r = .035; p = .121).

The third variable which is analyzed is *feeling of* responsibility. Table 5 shows that there were found correlations between feeling of responsibility and all other variables.

The fourth variable which is analyzed is *fear of* crime. As stated before, fear of crime correlates with direct intervention, satisfaction with police and feeling of responsibility. Furthermore, fear of crime correlates with gender (r = -.239; p < .001), age (r = -.063; p = .005), personal income (r = -.110; p < .001), and perception of crime (r = -.233; p < .001)

Also the control variables were analyzed. Gender correlates negative with age (r = -.060; p = .007) and personal income (r = -.462; p < .001). Furthermore, gender and perception of crime do have a correlation (r = .053; p < .001). Age correlates with personal income (r = .225; p < .001) and perception of crime (r = -.122; p < .001). Personal income and perception of crime do not have a significant correlation (r = -.036; p = .109). Since the presence of the relations between the variables, indirect effects have been considered.

	$\mathbf{Dic} (\mathbf{I} \mathbf{V} = \mathbf{I} \mathbf{V}$	JI)						
	1	2	3	4	5	6	7	8
1.Direct intervention	1							
2. Satisfaction with	.082**	1						
police								
3. Feeling of	.405**	.138**	1					
responsibility								
4. Fear of crime	175**	133**	073*	1				
5. Gender	182**	.039	096**	.239**	1			
6. Age	033	.145**	.093**	.063**	060**	1		
7. Personal income	.139**	.035	.141**	110**	462**	.225**	1	
8. Perception of crime	080**	254**	077**	.233**	.053*	122**	036	1

Table 5. Correlation matrix showing Pearson's r for the independent variables and dependent variable (N = 2021)

***p<.001; **p<.01; * p<.05

Regression analyses. A step-by-step multiple linear regression with a moderator and a mediating effect were performed (N = 2021). Unstandardized (B) and standardised (β) coefficients are reported in Table 6. To test hypothesis 1, satisfaction with police has a positive direct effect on direct intervention, a multiple linear regression was performed. The main effect of satisfaction with police on direct intervention was significant (B = .090; *p* < .001), with an explained variance of R2 = .007. So, the more satisfied with police someone is, the higher the guardianship and willingness of an individual to directly intervene. Table 6 – Model 1 shows that, after controlling for gender, age, personal income and perception of

crime as control variables, the effect of satisfaction with police and direct intervention remains significant (B = .090; p < .001) with an explained variance of R² = .053. These findings confirm hypothesis 1, in which was expected that satisfaction with police has a positive direct effect on the likelihood of an individual's guardianship and willingness to directly intervene in the Netherlands.

After adding the control variables the standardized coefficients of the predictors of the regression model were compared. All included control variables have a significant effect on direct intervention. This means that the guardianship and willingness to directly intervene of a women is .416 lower than the of a men (B = -.416; p < .001), that the guardianship and willingness decreases when people get older (B = -.005; p < .001), that the guardianship and willingness increases when someone have more personal income (B = .045; p = .001) and that the guardianship and willingness decreases when someone have more personal income (B = .045; p = .001) and that the guardianship and willingness decreases when someone has a higher perception of crime (B = -.093; p = .010). The coefficient of personal income is the strongest predictor of direct intervention with a standardized coefficient of .045. Others were, -.005 for age, -.093 for perception of crime and -.416 for gender of the respondent.

Mediation. Before the mediation analysis, the four conditions of a mediation analysis were tested (Baron & Kenny, 1986).

First, the model of Baron and Kenny (1982) assumes that satisfaction with police has a direct effect on direct intervention (H1). As mentioned before, satisfaction with police has a direct positive effect on direct intervention (B = .090; p < .001).

The second condition is that satisfaction with police has a direct effect on the mediator, fear of crime (H2A). The main effect of satisfaction with police on fear of crime is significant (B = -.064; p < .001) with an explained variance of R² = .018. In this case, the more satisfied someone is with police, the less fear of crime someone experiences. After controlling for gender, age, personal income and perception of crime, a difference in beta has been identified However, the main effect of satisfaction with police on fear of crime remains significant (B = -.051; p < .001) with an explained variance of R² = .128. This means that 12.8% of fear of crime can be explained by satisfaction with police. These findings confirms hypothesis 2A about the effect of satisfaction with police on fear of crime. Gender (B = .223; p < .001), age (B = .004; p < .001) and perception of crime (B = .146; p < .001) are significant control variables. This means that women experiences more fear of crime than men, that older people experiences more fear of crime than younger people and that the higher the perception of crime of the individual, the more fear of crime someone experiences. Personal income is

not a significant control variable (B = -.005; p = .412). The results are summarized in Table 6 – Model 2 and Figure 2.

	1	2	3	4	5
Dependent variable	Direct	Fear	Direct	Direct	Direct
Satisfaction with the police	.090***	051***		.076**	.037
	(.025)	(.011)		(.025)	(.023)
	.082	106		.070	.034
Feeling of responsibility					.365***
					(.019)
					.387
Satisfaction * Responsibility					020
(centered)					(.017)
					024
Fear of crime			279***	261***	
			(.052)	(.052)	
			123	115	
Gender	324***	.223***	251***	266***	284***
	(.054)	(.023)	(.055)	(.055)	(.050)
	148	.230	115	122	130
Age	005***	.004***	.004*	005**	007***
	(.002)	(.001)	(.002)	.002	(.001)
	080	.122	057	066	097
Personal income	.045**	005	.045**	.043**	.023
	(.013)	(.006)	(.013)	(.013)	(.012)
	.084	020	.084	.081	.042
Perception of crime	093*	.146***	078*	054	071*
	(.036)	(.015)	(.036)	(.036)	(.033)
	058	.209	049	034	045
Constant	3.312	1.121	1.554	3.605	4.014
\mathbb{R}^2	.053	.128	.414	.064	.197

Table 6: Results of the regression analysis with independent variables on the dependent
variables direct intervention (<i>direct</i>) and fear of crime (<i>fear</i>) (N = 2021)

Note 1: Main entries are unstandardized regression coefficients. Entries in parentheses are standard errors. Entries in italics are standardized regression coefficients.

Note 2: In model 4 and 5, the variables satisfaction with police, feeling of responsibility and the interaction variable are centered.

***p<.001; **p<.01; * p<.05

The third condition is that the fear of crime has a significant effect on direct intervention (H2B). Table 6 – Model 3 shows that the main effect of fear of crime on direct intervention is also significant (B = -.396; p < .001). So, the higher the fear of crime someone experiences, the lower the willingness of someone to directly intervene. When adding gender, age, personal income and perception of crime to the regression model the model of fear of crime on direct intervention was still significant (B = -279; p < .001), with an explained variance of R² = .060. So, the more fear of crime someone experiences, the lower the

The fourth condition assumes that, after controlling for fear of crime, the effect of satisfaction with police on direct intervention decreases. The unstandardized coefficients of the satisfaction with police were compared. As shown in Table 6, the coefficient has decreased (Model 1: B = .090; Model 4: B = .076).

Since the data of this study met the conditions of a mediation analysis, the process tool of Hayes (2012) was used to test whether fear of crime has a mediating effect on the relationship between satisfaction with police and direct intervention. Fear of crime of the respondent as mediator is included in the regression using the bootstrapping procedures. The 95% confidence interval ranged from .0026 to .0219 (p < .001). The zero does not lie in the interval. Therefore, the indirect effect of satisfaction with police on direct intervention through fear of crime is statistically significant (Sobel Z = 3.508; p < .001). The result provides evidence to confirm hypothesis 2C: fear of crime mediates the relation between satisfaction with police and direct intervention. This means that more satisfaction with police leads to less fear of crime and so, the guardianship and willingness to directly intervene will be higher. The relationship between satisfaction with police and direct intervention is not complete mediated through fear of crime. The mediation process of fear of crime is partial, because the direct effect of satisfaction with police on direct intervention stayed significant (see Figure 2).

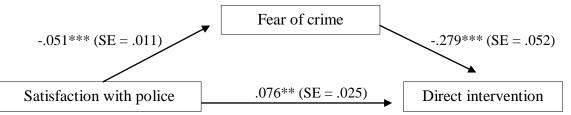


Figure 2. The mediation effect of fear of crime on the relation between satisfaction with police and direct intervention. Note: Main entries are unstandardized regression coefficients. Entries in parentheses are standard errors. ***p<.001; *p<.01; *p<.05

Moderation. For the moderation analysis, the feeling of responsibility and an interaction variable of satisfaction with police and the feeling of responsibility were added. These variables are centered in order to interpret the coefficients. The results are summarized

in Table 6 – Model 5. After adding feeling of responsibility, satisfaction with police is no longer significant associated with direct intervention (B = .037; p = .111). However, feeling of responsibility has a positive significant effect on direct intervention (B = .365; p < .001). Furthermore, the interaction effect of the feeling of responsibility on the effect between with the police and direct intervention was not significant (B = .020; p = .237). Therefore, hypothesis 3 is rejected: the effect of satisfaction with police on the likelihood of an individual's guardianship and willingness to directly intervene is not stronger for those who have a greater feeling of responsibility

CONCLUSION & DISCUSSION

The aim of this study was to investigate whether satisfaction with police has an effect on the likelihood of an individual's guardianship and willingness to directly intervene. Several studies suggest that satisfaction with police is an important factor to reduce crime rates, because the likelihood that individuals will exert informal social control will be higher if an individual is more satisfied with police (Hinds, 2008). This study focused on direct intervention-type of informal social control, which means that individuals intervene in local disturbances and supervise the neighbourhood. The majority of research done on this subject assumed that satisfaction with police and direct intervention are positively related (Jackson & Bradford, 2010; Ayodele & Aderinto 2014; Reynald & Moir, 2018). However, some studies also argue that satisfaction with police and direct intervention are not significantly related (Warner, 2007). Previous research regarding satisfaction with police and direct intervention is not executed in the context of The Netherlands. Four hypotheses were drafted in order to test these effects. To test the hypotheses, LISS data was used.

First, it was hypothesized that satisfaction with police has a positive effect on the likelihood of an individual's guardianship and willingness to directly intervene, because the police were seen as more legitimate (Groff, 2015). After controlling for age, gender, personal income and perception of crime, the relation between satisfaction with police and direct intervention stayed significant and therefore hypothesis 1 is confirmed. This finding is in line with the majority of research about this topic (Jackson & Bradford, 2010; Ayodele & Aderinto 2014; Reynald & Moir, 2018). They have also demonstrated that satisfaction has a positive effect on direct intervention. However, this finding is not in line with the theory of Warner (2007). His research found no significant effect between satisfaction with police and direct intervention.

Second, it was hypothesized that the relationship between satisfaction with police and direct intervention will be mediated by fear of crime (H2C). The overall literature shows that those who are more satisfied with police have a decreased level of fear of crime and that a lower level of fear of crime is a significant predictor of direct intervention (Bennet, 1991; Gainey et al., 2011). These assumptions were also tested in hypothesis 2A (H2A) and hypothesis 2B (H2B). Before the mediating analysis, the analysis of H2A and H2B showed a significant relationship between satisfaction with police and fear of crime and between fear of crime and direct intervention. This is in accordance with previous research and therefore, H2A and H2B are confirmed. Furthermore, this study found evidence that fear of crime partially mediates the relation between satisfaction with police and direct intervention. This means that more satisfaction with police leads to less fear of crime and so, the individual's guardianship and willingness to directly intervene will be higher. Therefore, H2C can also be confirmed. Fear of crime partially mediates the relation, because the main effect of satisfaction with police on direct intervention remains significant. These findings confirm the expectations of Reynald (2011). In the discussion of this study, it was expected that there is an effect of satisfaction with police on direct intervention through fear of crime.

Third, it was hypothesized that the relationship between satisfaction with police and direct intervention is stronger for those who have a greater feeling of responsibility towards crime. There is no moderation effect of feeling of responsibility found. The relationship between satisfaction with police and direct intervention does not differ between individuals with more or less feeling of responsibility. However, after adding feeling of responsibility to the analysis, the relation between satisfaction with police and direct intervention disappeared. The results showed that feeling of responsibility is a significant predictor of direct intervention. So, the higher the feeling of responsibility towards crime, the higher guardianship and willingness of an individual to directly intervene. This is consistent with previous research (Taylor, 1988; Reynald, 2010). Taylor (1988) also found that there is an effect of feeling of responsibility on direct intervention. However, this research only includes supervision as form of direct intervention. Additionally, these results go beyond research of Taylor (1988), showing that feeling of responsibility also affects actually intervene directly as form of direct intervention.

Limitations. There are several limitations that provide directions for future research.

First, a systematic error called social desirability has been identified. Social desirability comes to sensitive topics like intervening in crime (Gosen, 2014). There is a dark number of cases in which someone actually intervened directly, because direct intervention

will not result in formal consequences (Warner, 2007). The dataset consists of self-reported data. It could be that in the questionnaire an individual showed a high likelihood to directly intervene in crime, while they won't actually intervene in local disturbances. In the current study, respondents were only asked about their behaviour regarding direct intervention in the future. Future research could also ask respondents about their behaviour regarding direct intervention in the past in order to consider the potential effects of social desirability more carefully. Additionally, studies could examine the difference between claiming to directly intervene in local disturbances and actually taking action.

Another limitation of this study is the degree of reliability as a result of the merged dataset. The merged dataset consists of three different surveys collected at three different time periods: the Background Variables was collected in August 2011, the Conventional Computer Crime Victimization Survey was collected in 2010 and the Guardianship Survey was collected in August 2011. Fear of crime, obtained from the Conventional Computer Crime Victimization Survey, depends on contextual factors that constantly change over time (Garofalo, 1981). Despite the same sample size, it remains unclear if the same results could be obtained by conducting the surveys at the same time. Future research should test the reliability by means of a test-retest reliability.

Furthermore, a measurement issue of this study was the reliance on secondary data. It must be noted that the operationalization of direct intervention only includes one form of direct intervention: intervening in local disturbances with the aim to stop it, since this study used secondary data of LISS which had been collected before the execution of this study. There are more possible forms of direct intervention, such as supervising neighborhood activities or gossiping about inappropriate behavior (Warner, 2007; Reynald, 2011). Future research could thus focus on the different forms of direct intervention by using more complete data in order to specify the concept of direct intervention.

Another measurement error of this study is the non-normal distribution of the variables. A condition for the regression analysis is that the variables should be normal distributed. However, satisfaction with police and direct intervention was not normal distributed. This increases the chance of a type-I error, this means finding an effect that actually does not exist (Field, 2013). Future research should strive for normal distribution of the variables in order to confirm the findings of this study by transforming the data to fit a normal model.

Future research. Future research could focus on different factors that could explain direct intervention. After theoretical research, it turned out that the research on direct

intervention and the explanations given for this phenomenon is limited. However, this study showed that some control variables (gender, age and perception of crime) have a significant effect on direct intervention. It could be interesting to investigate into these specific relationships in order to get a better understanding of the scope of these relationships.

Furthermore, feeling of responsibility turned out as a significant strong predictor of direct intervention (B = .365; p < .001) and consequently the relation between satisfaction with police and direct intervention disappeared. However, the bivariate analysis indicates that there is something between satisfaction with police and direct intervention (r = .082; p < .01). Future research could take into account the relationship between satisfaction with police and direct intervention through feeling of responsibility in order to strengthen the relation between satisfaction with police and direct intervention through feeling of responsibility in order to strengthen the relation between satisfaction with police and direct intervention. Furthermore, Skogan (1986) expected that there is a relation between fear of crime and direct intervention through feeling of responsibility. This study found a mediating effect of satisfaction with police on direct intervention and fear of crime. It could be that there is a relation between direct intervention and fear of crime through feeling of responsibility. Maybe the relation between satisfaction with police and direct intervention would be more strengthened by adding fear of crime and feeling of responsibility in the same model. This could be examined in future research.

Conclusion. In answer to the research question, it could be stated that those who are more satisfied with police show a higher willingness to directly intervene. However, the relation between satisfaction and direct intervention is weak. After carrying out the analysis, it can be concluded that fear of crime and especially feeling of responsibility are important significant predictors of direct intervention. Future research would benefit from a focus on the effect of satisfaction with police on direct intervention through these significant predictors.

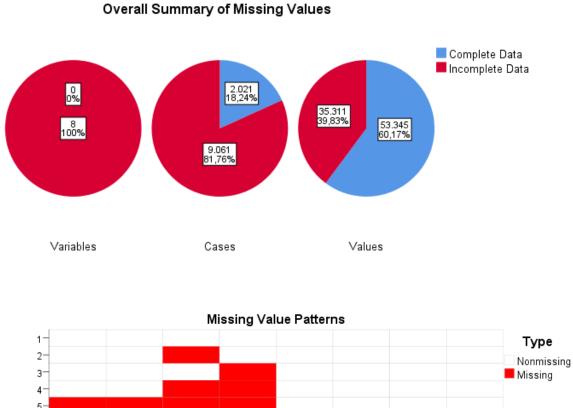
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APPENDIX A



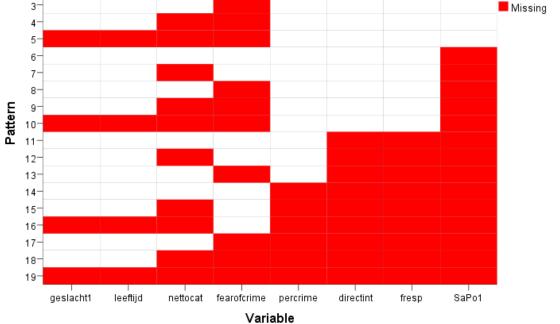


Figure A1. Missing Value Pattern of all variables

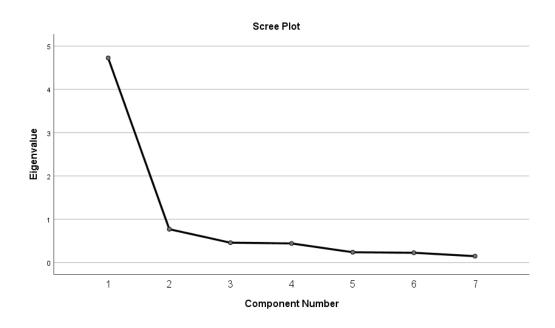


Figure A2. Scree plot of the scale of satisfaction with police

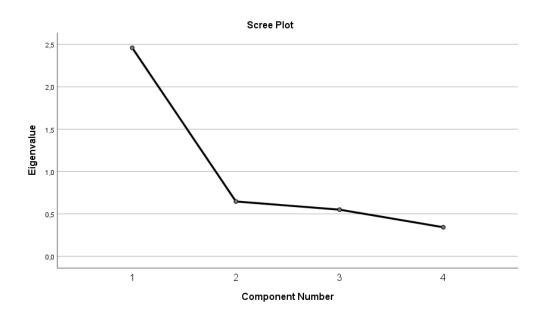


Figure A3. Scree plot of the scale of fear of crime