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Published in:
 J Exp Criminol

DOI:
[10.1007/s11292-007-9030-4](https://doi.org/10.1007/s11292-007-9030-4)

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Document Version
 Publisher's PDF, also known as Version of record

Publication date:
 2007

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Goudriaan, H., & Nieuwbeerta, P. (2007). Contextual determinants of juveniles' willingness to report crimes: A vignette experiment. *J Exp Criminol*, 3, 89. DOI: 10.1007/s11292-007-9030-4

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Contextual determinants of juveniles' willingness to report crimes

A vignette experiment

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Published online: 27 April 2007
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Abstract A growing body of literature on the willingness of victims to report crimes focuses on the context in which crimes occur. Recently, a socio-ecological model has been developed from which hypotheses on the effects of social context on reporting can be derived. This study tests these hypotheses using a vignette experiment, in which 499 juveniles read a description of a violent incident and answered questions on their willingness to report to the police or to an employee of the organization they belong to (here, their school). The effects of three factors were studied: the location of the crime, the extent to which victim and offender knew each other, and whether or not the offender was part of the same organization as the victim. Results show that the willingness to contact the police is lower when the incident takes place within the organization (cf. in the public domain) and when the offender is well known (cf. vaguely known), and that there is an additional negative effect when the incident takes place within the organization and the offender also belongs to the organization. The willingness to contact an employee is higher when the offender belongs to the organization and when the incident takes place within the organization. Implications of these findings and the advantages and limitations of the vignette approach are discussed.

Keywords Contextual effects · Crime location · Juvenile victimization · Reporting behaviour · Victim–offender relationship · Victimization · Vignette experiment · Violence

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Introduction

Randomized controlled experiments are generally considered the gold standard research design for assessing causal effects in social sciences in general (Cronbach et al. 1980; Rossi et al. 1999; Shadish et al. 2002) and, thus, also in criminology (e.g. Weisburd et al. 2003). It is only recently, however, that a growing interest in experimental research in criminology has developed. More and more, the need for assessing systematic evidence in crime and justice is seen (Sherman et al. 2002; Weisburd et al. 2003).

The recent growth in experimental research in criminology, however, does not so much involve the testing of hypotheses deduced from criminological theories. Instead, most of the experimental studies in this field examine the success or failure of prevention and intervention measures. The aim of these studies is to select (and develop) evidence-based crime prevention programmes (Sherman et al. 2002). While, in other fields—e.g. social psychology—randomized experiments are frequently used to test hypotheses derived from theories, in criminology this is relatively rare.

An area where experimental research especially is underdeveloped is in victimology. Here, hardly any experiments have been carried out (but see Greenberg and Ruback 1992). The fact that experimental studies in victimology are scarce can at least partly be explained by the nature of the field itself: it is hardly possible to make participants actually believe they are victims of a crime without jeopardizing their emotional well-being and violating ethical norms.¹ So, instead, most quantitative empirical studies use (cross-sectional) data from local, national, or international population surveys to test hypotheses from victimological theories. These studies address questions on victimization risk, attitudes of victims towards crime, and reporting to the police. By comparing characteristics of groups, researchers aim to test whether certain factors are of influence. Problems with (self-)selection and problems of inference are obvious.

A way to overcome these ethical, practical and methodological problems of experimental studies in victimology is by applying so-called randomized vignette experiments. Vignettes are short descriptions of a social situation. In vignette experiments, participants are asked to imagine themselves in one or more scenario and then to respond to various questions or stimuli. By randomly assigning participants to vignette conditions, researchers can avoid the possible bias originating from (self-)selection, and the effects of experimental factors composing the vignettes on respondents' responses can be determined. Therefore, a vignette design is a valuable type of experimental design that avoids the disadvantages of natural experiments. Thanks to these advantages of vignette experiments, they have become a common research technique in the social sciences in general (Alexander and Becker 1978; Rossi and Nock 1982) and have also been applied extensively in criminology (e.g. De Keijser 2001; Feldman-Summers and Linder 1976; Leeper Piquero and Piquero 2006; Nagin and Paternoster 1993; Smith et al. 1976), but

¹See Greenberg and Ruback (1992) for some successful real-behaviour experiments on crime victims' decision-making, but also to find information about a lawsuit filed against them and their employers by one of the participants.

hardly in victimology—although a few studies have used vignette designs to study crime reporting (Greenberg et al. 1982; Skelton and Buckhart 1980).

Despite the advantages of vignette experiments, there are also limitations. One of these limitations is that participants have to place themselves in a hypothetical situation. This raises concern about whether the data collected are comparable to data collected in real-life situations with regard to capturing actual variation in the experimental (and dependent) variables (Leeper Piquero and Piquero 2006). Furthermore, what is measured as outcome variables are intentions, instead of actual behaviour. Actual behaviour could, for example, be influenced by advice given by the victim's social network, which can not be incorporated in a vignette study. Although intended behaviour is certainly not a perfect predictor of real behaviour, various empirical studies have found a strong correlation between reported intentions and real-life behaviour (Kim and Hunter 1993). The hypothetical nature of vignettes, as well as the fact that intentions instead of real behavioural responses are measured, can seriously limit the generalizability of the results to real-life settings. To minimize these limitations of vignette studies, it is important to design scenarios that participants perceive to be realistic, by describing specific situations and by framing the scenarios in a setting that is familiar to the participants (Fishbein and Ajzen 1975; Leeper Piquero and Piquero 2006).

In the present study, a vignette experiment ($N=499$) is used to test hypotheses on the influence of three contextual factors theoretically considered to be of importance for crime victims' decisions to notify the police or an employee of the organization they belong to (here, the school). These factors are: the location of the crime, the extent to which victim and offender know each other, and whether or not the offender is part of the same organization as the victim. These factors are assumed to be important in theories on reporting behaviour, especially in the recently developed socio-ecological model (e.g. Baumer 2002; Goudriaan 2006; Ménard 2003), but, so far, empirical tests have been scarce.

In the vignette experiment applied in this study, students from seven (high) schools in the Netherlands were asked to read a scenario of a violent incident and to fill out a questionnaire. Participants were randomly assigned to a vignette condition. The scenarios differed with respect to the three contextual factors. Other factors that could be relevant to the decision to report, such as the seriousness of the incident, were kept constant. After reading the vignette, participants answered questions on their willingness to report the crime to the police and to a school employee. This experimental design makes it possible to isolate and control effects of specific independent variables and is thus suitable for testing causal hypotheses.

Effects of social context on reporting

The reporting behaviour of crime victims has enjoyed a great amount of attention in research in the past three decades (for an overview, see Goudriaan 2006). In line with developments in social science in general (e.g. Granovetter 1985; Nee and Ingram 1998), a growing body of these studies has noted that victims' decision-making does not take place in a vacuum, but rather is part of a dynamic interaction with the social environment in which they are embedded (e.g. Baumer 2002; Goudriaan et al. 2004; Ménard 2003). In

these studies it is assumed that the social context in which citizens find themselves, and in which events take place, influences their decision-making and behaviour, and, therefore, it is considered important to incorporate incident, individual and contextual level effects to understand better the victims' crime reporting behaviour.

Ménard (2003) was one of the first authors to note explicitly that victims, as are all human beings, are embedded in different social contexts (e.g. social networks, organizations, communities), which influences their decision-making on reporting to the police. Baumer (2002) addresses the influences of neighbourhood characteristics on reporting. Goudriaan (2006) builds upon Ménard's and Baumer's framework by assuming that, in addition to the social context in which crime victims are embedded, aspects of the context in which crimes take place influence their decision-making. In this regard, Goudriaan argues that the location in which a crime takes place is a contextual factor considered to be of importance. She argues that a distinction has to be made between public locations on the one hand (such as a public road) and private locations on the other, and that, especially, the features of semi-private or semi-public locations (organizations such as schools, shops, offices, hospitals, sports clubs, and factories) need to be considered.

Until now, empirical research has focused primarily on victims' willingness to report crimes that took place in the public and private domain (think of domestic violence), while surprisingly little is known about the reporting of crimes in semi-private and semi-public locations. An aspect of the crime location considered to be of importance is the presence of alternative authorities to report the crime to. For, in case of victimization in the semi-private (and, to a lesser extent, the semi-public) domain, often the possibility exists to report to an alternative authority within the organization. In empirical research, however, almost no attention has been given to this aspect to date (see, however, Finkelhor and Ormrod 1999; Fisher et al. 2003; Garofalo et al. 1987).

The degree to which victim and offender know each other is a related factor that is also considered to influence crime victims' reporting behaviour. However, empirical research has yielded contradictory findings in this regard. From some studies it can be concluded that victims report less often if they know the offender (e.g. Gartner and Macmillan 1995; Lizotte 1985; Pino and Meier 1999; Pollard 1995; Ruback 1993); others find that cases with an unknown offender are reported less often (Felson et al. 1999; Goudriaan et al. 2004), and some studies find no relationship at all (Bachman 1993, 1998). Thus, a great deal still remains unclear about the effects of this factor on victims' reporting behaviour.

Hypotheses

In this study, based upon the socio-ecological theoretical model, the effects of three factors related to the context in which a crime takes place are studied, and are hypothesized to affect (juvenile) victims' reporting behaviour: (1) the location in which the crime takes place (public or semi-private), (2) the extent to which victim and offender know each other, and (3) whether the offender is part of the same organization as the victim. Hereafter, hypotheses regarding the effects of these factors on both the probability of reporting to the police and of reporting to an employee of the organization will be formulated and tested.

Location of the incident

The probability that victims will report a violent crime can be assumed to be dependent on the location in which the incident takes place. As argued by Goudriaan (2006), it is important whether the location is in the public, semi-public, semi-private, or private domain. A private location is someone's home or other private property. A semi-private location is less private than the first category, but it is only open to specific people (e.g. someone's workplace or school). Semi-public locations are open to everyone, but one has to obey the norms and regulations that exist in that specific location and sometimes one has to pay to be allowed in (e.g. cinemas, nightclubs, restaurants, and public transport). Public locations are open to everyone, free to enter, and they are owned by the (local) government (e.g. streets, forests, public parks, and beaches). Note that semi-public and semi-private locations are organizations, while private and public locations are not. A great deal of research has been conducted on the willingness to report violent crimes taking place in the private domain (e.g. Block 1974; Gartner and Macmillan 1995; Malsch and Smeenk 2004). These studies have shown that victims' willingness to report violence taking place in the private domain is relatively low. For acts of violence occurring in the semi-private and semi-public domain, the consequence of the situation is not as clear.

What difference would the type of location make for the probability that crimes are reported? In the semi-private domain, including schools, universities, and other organizations or companies, formal rules and regulations often exist that describe what to do if a crime takes place. A formal control mechanism exists through which those who commit crimes can be punished and others (belonging to their organization) can be protected (Finkelhor and Ormrod 2001). Thus, if people become crime victims within their own organization, it can be attractive to report this to an employee of this organization. If victims believe that the organization they belong to is capable of protecting them against future crimes and/or punishing the offender, they might be less likely to report the crime (also) to the police. On the other hand, in the case of a comparable violent crime's taking place in a public space, absence of an alternative formal authority that can punish the offender and/or protect the victim may increase the odds of an incident's being reported to the police. In those instances, the police are often the only formal organization one can turn to. That is why, so far as location of the incident is concerned, the following hypotheses on the reporting behaviour of victims of violence are formulated: *(H1a) victims of a violent crime report their victimization to the police more often if the incident takes place in the public domain than when it takes place within an organization they belong to (the semi-private domain); and (H1b) victims of a violent crime report their victimization to an employee of the organization they belong to more often if the incident takes place within this organization than when it takes place in the public domain.*

Knowing the offender

A second factor hypothesized to influence reporting, mentioned in the current literature, is the victim-offender relationship. Although it is commonly assumed that the relationship between the offender and victim influences the probability of a

violent crime's being reported to the police or to an alternative authority, empirical findings are contradictory (Felson et al. 1999).

In this respect, several authors have argued that informal social control is inversely related to formal social control exerted by the police (e.g. Black 1976; Boggs 1971; Conklin 1975; Gottfredson and Hindelang 1979; Laub 1981). Informal social control is assumed to vary, depending on the degree to which the victim and offender know each other (e.g. Black 1976; Hunter 1985; Ménard 2003). According to these scholars, informal social control is more likely to be available to those who know each other. Formal social control, namely police intervention, on the other hand, is most common where interaction, intimacy, and integration are scarce. Strangers frequently use formal social control to solve their disputes, whereas people who know one another are less likely to call the police on each other.

Furthermore, it has been found that victims have different considerations that can play a role in their decision-making (Felson et al. 2002). Two of these considerations are strongly related to how well the victim knows the offender: fear of retribution by the offender and the perception that the incident is a private matter and should therefore be solved privately. The first is a cost–benefit consideration: if the victim knows the offender well, the chance that the victim fears retribution by the offender after reporting the incident to the police or an alternative authority will be higher than if the offender is unknown (Bachman 1993; Felson et al. 1999; Felson et al. 2002; Gottfredson and Gottfredson 1988; Singer 1988). The second is a normative consideration: in case of a known offender the probability that the victim decides that it is a private matter and the situation should be resolved privately is higher than when the offender is unknown (Felson et al. 2002). These considerations would have a negative effect on victims' willingness to report crimes if they know the offender (well).

The above reasoning leads to the following hypothesis: *(H2a) victims of a violent crime report to the police most often if they do not know the offender and least often when they know the offender well; and (H2b) victims of a violent crime report to an employee of their organization most often if they do not know the offender and least often when they know the offender well.*

Offender is part of the same organization

Another contextual characteristic assumed to be important for crime reporting is whether the offender is part of the same organization as the victim. The formal control mechanism within an organization with which offenders can be punished and victims can be protected functions best if not only the victim, but also the offender, is part of this organization. After all, if the offender does not belong to the organization, it often has fewer means to punish him or her. At most, it can deny access to the offender, thereby protecting the victim when he or she finds him- or herself within the walls of the organization. One could expect, therefore, that it is more profitable to report to an employee of the organization if the offender also belongs to the organization than if the offender comes from outside the organization. In this last case, contacting the police would be more useful. Therefore, the following hypotheses are formulated: *(H3a) victims of a violent crime report to the police less often if the offender is part of the same organization they belong to than when the offender comes from outside the organization; and (H3b) victims of a*

violent crime report to an employee of their own organization more often if the offender belongs to this organization also than when this is not the case.

Interaction between offender and location

In addition, the interaction between the offender and the location can be hypothesized to affect reporting behaviour. It is assumed that victims will be more likely to perceive that the organization is capable of protecting them and punishing the offender if the violence takes place within the organization or if the offender belongs to the same organization. It seems obvious that the expectation of the victims that the organization can protect them or punish the offender is especially high if the crime both takes place within the organization *and* the offender is part of this organization. Contacting the police could then be assumed less attractive. This leads to the following hypotheses: *(H4a) victims of a violent crime report to the police less often especially if the crime takes place within the organization they belong to and if the offender belongs to the same organization also; and (H4b) victims of a violent crime report to an employee of the organization more frequently especially if the incident takes place within the organization and the offender is part of the same organization.*

Availability of an alternative authority

Finally, it can be argued that the availability of alternative authorities has an effect on victims' reporting decisions. As stated above, within many organizations (the semi-private domain) there is some sort of formal control mechanism to maintain order. If victims and offenders are part of the same organization, offenders can be punished and victims can be protected from future victimization (Finkelhor and Ormrod 2001). Such organizations can, therefore, provide an alternative to the police. In situations in which victims will expect more benefits from reporting a crime to an employee of the organization (that is, if the crime takes place within the organization and/or the offender is also part of this organization), reporting to the police seems less useful. In situations in which reporting to the police seems more useful, one might expect less benefit from reporting the incident to an employee of the organization. Therefore, the following is hypothesized: *(H5) in situations in which victims of violent crimes report more often to an employee of the organization they belong to, they will be less inclined to report to the police.*

Method

Participants and procedure

A total of 511 students from seven (high) schools in the Netherlands volunteered to take part in the vignette study.² All participants were in the 3rd, 4th or 5th grade of *VMBO* (lower vocational education), *HAVO* (higher general secondary education) or

²The schools and participants within the schools were not selected using a non-probability sample, but there is no reason to doubt that they are a representative sample of the population of Dutch secondary school students. Therefore, it is assumed that the findings can be generalized to this population.

VWO/Gymnasium (pre-university education/high school). Contacting seven (high) schools directly resulted in an excellent percentage response: all contacted schools cooperated and person-response within the participating classes was 100%, not considering students not present in the classroom during the experiment (unfortunately, the number of students not present is unknown). During class, the teacher asked the students to participate anonymously in a study on their situation, both at school and at home, and the way in which they would deal with violence. After the data had been collected, the answers of 12 participants had to be excluded due to too many missing values on the relevant items in the questionnaire. The resulting sample contained 499 participants, of whom 265 (51%) were female. Most participants were aged between 14 years and 17 years; the mean age was 15.9 years. This sample size was expected to result in sufficient statistical power.³

Design

To test the aforementioned causal hypotheses, this study employs a vignette experiment in which certain factors (the experimental variables) are manipulated, while others are kept constant. The three characteristics of the context in which crimes take place that are assumed to affect the victims' decision-making were systematically manipulated in the vignettes. These three factors are: the type of location in which the crime takes place (on the street vs at school), the degree of familiarity with the offender (unknown, known by face, well known), and whether the offender is part of the same organization as the victim (schoolmate vs no schoolmate). Participants were asked to imagine themselves in one of the scenarios and then answer questions regarding their intended behaviour. This resulted in a $2 \times 3 \times 2$ between-subjects factorial design. However, in vignettes with an unknown offender, the variable on whether the offender is part of the same organization is excluded, because then obviously the participant could not know whether the offender was someone from school or not. Therefore, there are ten and not 12 experimental conditions. Participants were randomly assigned to one of these ten conditions. To maximize the external validity of vignette experiments, it has been found important to make the scenarios specific and to frame them in a setting that is familiar to respondents (Fishbein and Ajzen 1975). To make sure that this was the case, a pilot study has been done, and necessary alterations to the vignettes were made before the final data collection.⁴

³With a total sample size (N) of 500, an alpha of 0.05, an effect size of 0.5 in actual units of response (the response variable was measured on a ten-point scale), and a standard deviation (SD) of 2, the statistical power would equal 0.87 in case of two sub-samples with equal N (e.g. students who read a scenario of a violent incident's taking place at school versus students who read a scenario of a violent incident's taking place on the street). In case of two sub-samples with unequal N (with a total N of 500, about 100 participants would receive a vignette describing an incident taking place at school in which the offender is a fellow student, and about 400 participants would receive another vignette) statistical power would equal 0.72 (see, for more information on power analysis, Cohen 1988).

⁴The reader is referred to Alexander and Becker (1978), Rossi and Nock (1982), or Sniderman and Grob (1996) for further general information on the use of vignettes in survey research.

Materials

Vignettes Participants were asked to read the following scenario of a violent incident:

Carefully read the following instructions. Please try to place yourself in the situation described below. After reading the scenario, you will be asked what you would do if you were in this situation. We want to stress that we are asking for your opinion and that there are no "right" or "wrong" answers. *Try to imagine yourself in the following situation:*

It is break-time at school and you are walking in the school yard. [*Or: It is the middle of the day and you are walking in the street.*]

Suddenly someone your age walks towards you, gives you a hard slap in your face, and then runs away without having said a word. It is unclear to you why you were hit and you didn't see it coming. You now feel a stinging pain near your eye.

The person who hit you is a schoolmate. [*Or: The person who hit you is not a schoolmate.*]⁵

You know the offender well. You have often talked to this person and know the offender's name and address. [*Or: You know the offender by sight. You have not spoken to this person before and don't know the offender's name and address.*] [*Or: You don't know the offender. You have not spoken to this person before and don't know the offender's name and address.*]

You are left with a black eye and your face hurts, but you don't need to see a doctor.

The location is the school yard (within the organization) or the street (public area), the participant knows the offender well, by sight, or not at all, and the offender is someone from school (belonging to the same organization) or not (not belonging to the same organization). Other factors that could be relevant to the decision to report (such as seriousness of the incident) are kept constant.

Dependent variable: reporting After reading the vignette, participants answered two questions regarding their willingness to report: 'Would you report this to the police?' and 'Would you report this to a school employee (e.g. teacher, dean, trusted representative, principal)?'.⁶ Answers were given on a 10-point scale in which 1 means 'definitely not' and 10 means 'yes, definitely'.

Reasons for (not) reporting In addition, *all* participants were asked to imagine that they would decide *not to report* the incident to the police. They then had to score their agreement with six motivations they could have to not report (on a 10-point scale, in which 1 means 'completely disagree' and 10 means 'completely agree'). These motivations were: 'I solve these situations myself', 'not worth it', 'no use; the police couldn't do anything', 'no use, the police wouldn't find it important', 'I have little confidence in the police', and 'I would be afraid for more problems with the offender'.

⁵If the offender is unknown (condition three of the third variable), this variable has been excluded.

⁶Participants were also asked whether they would tell their parents and friends or classmates what had happened. In the present study, this has not been taken into consideration. Almost everyone had a strong inclination to tell what had happened to parents and friends or classmates, regardless of the vignette they had read.

Also, all participants were asked to imagine that they would decide *to report* the incident to the police, whereupon they had to score (on a similar 10-point scale) their agreement with six possible motivations to report the incident to the police: ‘to prevent this from happening to me again’, ‘to prevent the offender from doing the same to someone else’, ‘the offender must be caught’, ‘for more police surveillance’, ‘it is my duty, it ought to be done’, and ‘to be cared for and helped’. In previous (retrospective) research on victimization, these 12 considerations have all been found to be important motivations for the decision (not) to report violent crimes (e.g. Politiemonitor Bevolking 2001; Van Kesteren et al. 2000). The approach used here is unique, because, in earlier research, only the victims who did report were asked for their motivations for doing so, and only those who did not report were asked for their reasons not to.

Participant characteristics To make sure the randomization was successful, we asked the participants to provide background information regarding their gender, age, level of education, and school.

Manipulation checks To test whether the vignettes were perceived to be realistic and whether there were any differences between the perceived realism and seriousness over the ten vignettes, we asked the participants questions about the realism of the vignette (‘I can imagine something like this happening in real life’ and ‘it was easy for me to place myself in the situation described’) and about the seriousness of the incident (‘I would find it very serious if something like this happened to me’). Participants indicated the extent to which they agreed with these statements on a 10-point scale (1 = completely disagree, 10 = completely agree). In addition, they were asked if they had ever experienced a similar incident in real life and if they knew somebody who had experienced something similar (0 = no, 1 = yes).

Analytical strategy

The hypotheses were tested using univariate analysis of variance (ANOVA). ANOVA allows for testing whether one or more of the manipulated factors (categorical variables) have a main effect on one dependent (interval) variable (here, reporting) and whether interaction effects (joint effects of two or more of the manipulated factors on the dependent variable) are present. The key statistic in ANOVA is the *F*-test of difference of group means, which tests whether the mean of the dependent variable differs significantly over different levels of the experimental variable(s) by comparing the variance due to between-group variability with the within-group variance (hence, the name ‘analysis of variance’). If between-group and within-group variances are about equal, the group means do not differ significantly and it is inferred that the experimental variable(s) do(es) not have an effect on the dependent variable. If an overall difference between group means is found, then multiple comparison tests of significance (often called ‘post-hoc’ tests) can be done for experimental variables with more than two categories, to explore which levels of the experimental variable differ significantly from each other. In the present study, one-tailed tests of significance are used to test the formulated hypotheses, as all hypotheses are directional.

Although some background information about the participants was available, the present design is considered to remove the necessity to include these variables to control for their possible effects. The random allocation of participants to experimental conditions should successfully eliminate competing explanations of effects found. For this to be the case, it is important that background characteristics that are possibly relevant for the willingness to report are indeed independent of the conditions. If this requirement is not met, it may be impossible to distinguish between experimental effects and individual effects. Therefore, *randomization checks* were done using Pearson's chi-square tests for education, school and gender of the participants, and using ANOVA for the age of the participants. Pearson's chi-square tests were also computed to check whether there was a difference between vignette conditions with regard to the percentage of participants who had ever experienced a similar incident in real life and those who knew somebody who had experienced something similar.

In addition, *manipulation checks* were done, using ANOVA, to test whether the perceived seriousness and perceived realism of the scenario differed depending on vignette conditions. As the objective seriousness (i.e. the injury resulting from the violence) is kept constant over vignettes, while the (perceived) seriousness has previously been found to be the single most important predictor of reporting, it is important that the seriousness is judged to be equal over vignette conditions. It is also important that the scenarios are perceived to be realistic (and equally realistic across conditions). If this is not the case, the generalizability to real life situations would be limited.

Results

Randomization and manipulation checks

All vignette conditions had a sample size of between 47 and 51 participants. Pearson's chi-square tests were calculated for education, school, and gender of the participants. No significant differences in these participant characteristics were found between the ten vignette conditions. There also was no significant age difference between participants for the conditions. In addition, Pearson's chi-square tests were calculated to test whether there was a difference for the various conditions with regard to the percentage of participants who had ever experienced a similar incident in real life and those who knew somebody who had experienced something similar. Again, no significant differences between participants were found for the experimental conditions.⁷ Thus, characteristics of the participants did not vary for different experimental conditions.

Generally, participants judged the vignettes to be rather realistic. The average scores on the questions 'I can imagine something like this happening in real life' and 'it was easy for me to place myself in the situation described' were 7.4 and 6.7, respectively (on a 10-point scale with 1 meaning 'totally disagree' and 10 meaning 'totally agree'). Furthermore, the perceived seriousness (6.6 on average) of the

⁷Forty-three percent of all participants answered that they knew somebody who had experienced a similar incident, of which 10% said they had been in such a situation themselves.

violent incident and the perceived realism of the scenario were found not to differ depending on the vignette condition (all F values < 1).

Reporting to the police and to the own organization

Participants were asked if, in the situation described, they would report their victimization to the police and to an employee of their school. Sample sizes, means and standard errors (SEs) for each level of the three experimental variables and for the hypothesized interaction between location and offender are given in Table 1.⁸ Overall, willingness to report to the police is lower than willingness to report to an employee of the organization (4.14 vs 5.62, on a scale ranging from 1 to 10). This seems especially the case for incidents taking place inside the organization the victim belongs to (i.e. the school) and for incidents with well-known offenders. The willingness to report to the police is highest for those who received a description of an incident's taking place in the public domain (i.e. the street) and for those who received a scenario with a vaguely known offender. Participants' willingness to report to an employee is highest for incidents taking place at school (especially when the offender is a schoolmate) and lowest for incidents taking place on the street.

The descriptive results presented in Table 1 suggest that the manipulated variables do have an effect on juveniles' willingness to report violence. To test whether the differences found in willingness to report are statistically significant, we performed a three-way ANOVA for each of the two dependent variables. Table 2 shows the results.

Reporting to the police

First, the empirical tests of the hypotheses on reporting to the police will be examined. Regarding juveniles' willingness to report the act of violence to the police, it is found that the willingness to report a violent victimization is significantly higher for incidents taking place in the street than for incidents taking place inside the school ($F=4.60$, one-tailed $p<0.05$). This finding is consistent with hypothesis 1a.

A statistically significant main effect is also found for the degree to which the offender is known. A Games–Howell post-hoc test⁹ (not shown) revealed that the willingness to contact the police is significantly lower for violence committed by a well-known offender than for violence committed by a vaguely known offender,

⁸SDs of the intention to report to the police and to an employee of the organization are higher than assumed in the statistical power analysis before the sample was selected (see footnote 3): in the entire sample these were 2.50 and 2.97 on average, respectively. Unfortunately, with the present sample size, this makes the probability to detect a difference of at least 0.5 in mean score on the dependent variable (in actual units of response) in the population smaller than was calculated beforehand. In comparing two samples of 250 participants (as with H1a, H1b, H3a, H3b, and H5) one finds that, on average, the statistical power is about 0.65. If we test hypotheses 4a and 4b (comparing a sample of 100 with a sample of 400 participants), the average statistical power is 0.5.

⁹Games–Howell post-hoc tests, instead of the more familiar (modified) Bonferroni tests or Tukey's HSD, are used because the variances of the dependent variable within the three conditions of knowing the offender turned out to be unequal.

Table 1 Means and standard errors (SEs) of the willingness (range 1–10) to report the violent incident to the police and to an employee of the organization per experimental variable

Parameter		N	Report to Police Mean (SE)	Report to Employee Mean (SE)
Location	School	249	3.96 (0.15)	6.51 (0.18)
	Street	250	4.33 (0.16)	4.72 (0.18)
Offender	Unknown	101	4.07 (0.26)	5.42 (0.31)
	Vaguely known	200	4.46 (0.18)	5.90 (0.21)
	Well known	198	3.87 (0.16)	5.43 (0.20)
	Schoolmate	200	4.21 (0.18)	6.04 (0.21)
Location/Offender	No schoolmate	299	4.10 (0.14)	5.33 (0.17)
	School/schoolmate	99	3.71 (0.23)	6.59 (0.30)
Overall	Other	400	4.25 (0.13)	5.38 (0.15)
		499	4.14 (0.11)	5.62 (0.13)

which is in agreement with hypothesis 2a (willingness to report to the police is lower for violence committed by a well-known offender). However, hypothesis 2a also stated that victims will be most inclined to report violent crimes to the police if the offender is unknown, which is not the case. Therefore, hypothesis 2a is not confirmed.

Hypothesis 3a, which states that violence committed by an offender from the same organization (here, a schoolmate) will have a smaller likelihood of being reported to the police than violence committed by an offender who does not belong to the same organization, is not confirmed, as no statistically significant main effect is found for this factor.

To test for the hypothesized interaction between the crime location and whether the offender is a schoolmate or not, we also included in the analysis an interaction between these two factors (see the last row of Table 2). This interaction-effect turned out to be statistically significant, with a lower willingness to report to the police when the violence was committed by a schoolmate and it took place at school than in other situations (see Table 1). Hypothesis 4a, which states that violence would be especially less likely to be reported to the police especially if the incident took place inside the organization *and* the offender is part of the organization, is thus confirmed.

The interpretation of the interaction between the crime location and whether the offender is a schoolmate is also shown in the left-hand graph of Fig. 1. This figure is based on the estimated marginal means in the ANOVA model (thus controlled for main effects of all three factors). Specifically, the willingness to report to the police does not differ for violence on the street or at school if the offender is not a schoolmate (both 4.1), while the willingness to report violence that happens in the street is higher than for violence that happens at school if the offender is a schoolmate (4.7 and 3.7, respectively).

Reporting to an employee of the organization

Next, the hypotheses on the effects of contextual characteristics on the willingness to report violence to an employee of the organization are tested. As can be seen from Table 2, juveniles' willingness to report the violence to an employee of the

Table 2 Analyses of variance on the willingness to report to the police and to an employee of the organization (*df* degrees of freedom)

Parameter	<i>df</i>	Report to Police		Report to Employee	
		Mean squares	<i>F</i>	Mean squares	<i>F</i>
Location	1	28.25	4.60*	331.65	42.25***
Offender known	2	17.69	2.88*	9.15	1.17**
Offender schoolmate	1	0.74	0.12	58.50	7.45**
Location school/Offender schoolmate	1	32.67	5.31*	41.93	5.34*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (one-tailed)

organization is significantly higher for incidents taking place within the organization (the school) than for incidents taking place in the public domain (the street). This is a confirmation of hypothesis 1b.

Furthermore, the willingness to report the violence to an employee of the organization is not significantly influenced by the degree to which the offender is known. Hence, hypothesis 2b is not confirmed.

A statistically significant main effect in the hypothesized direction (see Table 1) is found for the variable indicating whether the offender is a schoolmate or not. Therefore, hypothesis 3b, which states that violence committed by an offender from the same organization (here, a schoolmate) will have a greater likelihood of being reported to an employee of the organization than violence committed by an offender who is not part of the same organization, is confirmed.

It was also hypothesized that the willingness to report to an employee of the organization will be especially high if the incident takes place within the organization *and* the offender is part of the organization (H4b). The interaction-effect between location and whether the offender is part of the organization or not, which has also been included in the ANOVA, turned out to be significant. Thus, the effect of location is different for acts of violence committed by offenders who are part of the organization and offenders who are not. A graphic representation of this interaction-effect is given in the graph on

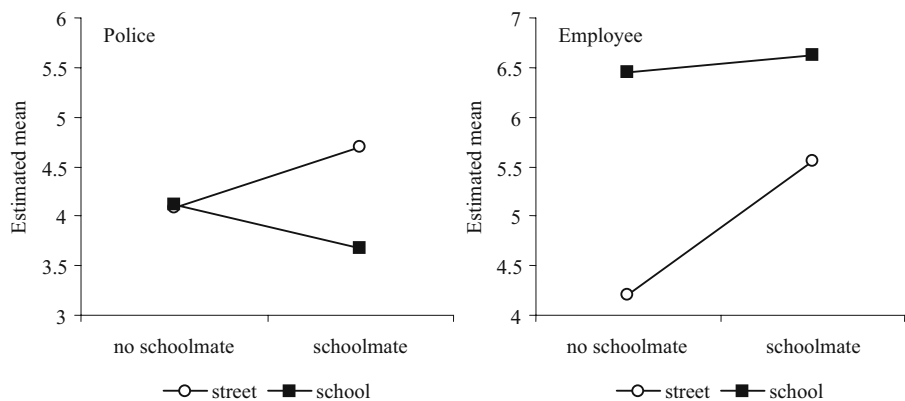


Fig. 1 Predicted willingness to report the violent incident to the police (*left*) and to an employee (*right*) for different locations and depending on whether the offender is part of the same organization or not

the right in Fig. 1. The overall likelihood of reporting the violence to a school employee is higher if it takes place at school and that in that case, it hardly makes a difference whether the offender is a schoolmate or not. If it takes place in the street, the willingness to contact a school employee is lower, but this is the case especially if the offender is not a schoolmate. However, since the willingness to report to a school employee is not especially high when the incident takes place within the organization and the offender is part of the organization, hypothesis 4b is not confirmed.

Finally, hypothesis 5 is tested. It was assumed that in situations in which victims are more inclined to report their victimization to an employee of the organization (hence, if the incident takes place within the organization and/or the offender as well as the victim are part of the organization), they would be less inclined to report to the police. A higher willingness to report to the police for the four experimental conditions concerned would have to be related to a lower willingness to report to an employee. To test this hypothesis, we compared the willingness to report in each of these four experimental conditions. Figure 2 is a combined bar chart of the effects of the location and whether the offender is part of the same organization on participants' willingness to report the incident to the police and to an employee. It shows the estimated willingness to report, based on the two ANOVA models, of the willingness to report for someone who received a vignette with a vaguely known offender. The bars with the predicted values for 'reporting to an employee' ascend, while the bars with the predicted values for 'reporting to the police' do not consistently descend (Spearman's rank correlation is -0.4 ; $n=4$). Hence, hypothesis 5 is not confirmed.¹⁰

Reasons for (not) reporting to the police

Participants were also asked to rate the extent to which they agreed with different reasons provided for reporting *and* for not reporting the violent incident to the police.¹¹ These questions are not directly related to the tests of the hypotheses, but they can provide extra information on the processes involved in the decision (not) to report to the police. The mean agreement with each motivation per experimental condition is presented in Table 3. The findings are generally consistent with the hypotheses.

On average, the two reasons for not reporting that the participants agreed with most are 'I solve these situations myself' and 'it wouldn't help; the police wouldn't be able to do anything' (6.8 and 6.7, respectively). They agreed least with 'afraid for more problems with the offender' as a reason not to report (4.0). The degree to which the participants agreed with a reason not to report seems to be influenced by

¹⁰The general relationship between the intention to report to the police and the intention to report to an employee in fact was found to be of an opposite nature: participants with a higher intention to contact the police have, overall, also a higher intention to contact an employee (Pearson's $r=0.25$, two-tailed $p<0.001$; $N=499$).

¹¹All participants were asked to imagine the decision not to report the incident to the police *and* the decision to report the incident to the police and to rate their agreement with a series of reasons one can have (not) to report. They were not asked for their level of agreement with motivations (not) to contact a school employee.

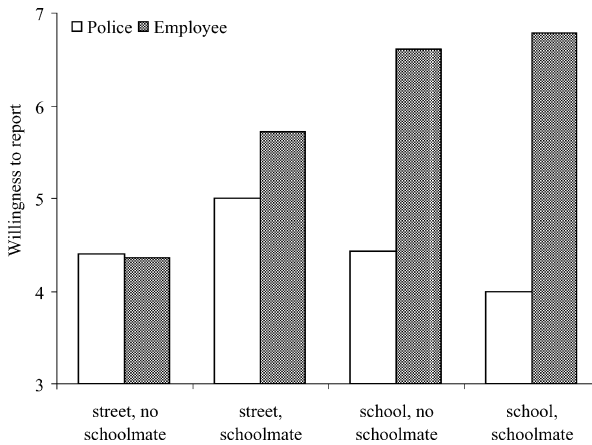


Fig. 2 Predicted willingness to report the violent incident to the police and to an employee for different locations and depending on whether the offender is part of the same organization or not. (This is the predicted willingness of a participant who received a vignette describing the offender as being vaguely known.)

the victim–offender relationship. Participants who read a vignette stating that the offender was well known, indicated a higher level of agreement with the motivation ‘I solve these situations myself’ and ‘I would be afraid of more problems with the offender’ than those who read a vignette with an unknown or vaguely known offender. These reasons bear a strong resemblance to the considerations that were assumed to be of influence when hypothesis 2a (victims report to the police least often if the offender is well known) was formulated. It was assumed that with well-known offenders, victims would more often experience fear of retribution by the offender. Furthermore, it was assumed that victims of violence committed by someone they know well would be more inclined to opt for an informal solution of the incident, thus to solve the situation directly with the offender. It was also assumed that they would more often believe that the incident was a private matter and not something one should contact the police for. The level of agreement with the two corresponding motivations do, indeed, suggest that victims take these aspects into consideration when deciding to report or not.

The two motivations for reporting to the police that the participants agreed with most are ‘to prevent the offender from doing this to someone else’ and ‘the offender must be caught’ (7.4 and 7.3). They agreed least with ‘to be cared for and helped’ (3.9). As with the motivations not to report, the agreement with the different motivations to report to the police seems to be influenced mostly by the degree to which the offender is known. The extent to which participants agreed with ‘the offender must be caught’ as a motivation for reporting is higher for those who read a vignette in which the offender was unknown than for those who read a vignette with a well-known offender. Again, this finding suggests that victims prefer to solve the situation informally when possible (i.e. when they know the offender), as was argued when hypothesis 2a was formulated. Participants who read a vignette in which the location was the school generally agreed more with ‘to prevent this from happening to me again’ than those who had to imagine the incident happening to them in the street.

Table 3 Mean agreement of participants with reasons (not) to report the violent incident to the police (1 = definitely not, 10 = definitely) per experimental condition

Location	School						Street						Total			
	Relationship with Offender			Unknown			Schoolmate			Not a Schoolmate				Unknown		
	Well Known	Vaguely Known	Not a Schoolmate	Well Known	Vaguely Known	Unknown	Well Known	Vaguely Known	Not a Schoolmate	Well Known	Vaguely Known	Unknown		Well Known	Vaguely Known	Unknown
Reasons not to report																
I solve these situations myself	7.4	6.4	7.2	6.7	6.9	6.6	6.8	6.1	7.4	6.8	6.7	6.6	6.8	6.1	6.7	6.8
No use; police couldn't do anything	6.5	6.7	6.4	6.8	6.7	5.9	6.3	7.5	6.6	6.7	5.9	6.3	7.8	7.5	7.8	6.7
Not worth it	6.6	5.5	5.9	6.0	6.2	5.7	5.5	6.4	6.3	6.0	5.7	5.5	6.3	6.4	6.3	6.0
Police would find it unimportant	5.9	5.9	6.1	6.0	5.9	5.8	6.0	6.5	6.2	6.0	5.8	6.0	6.0	6.5	6.0	6.0
Little confidence in police	4.8	4.1	5.2	4.9	5.0	5.2	4.9	5.2	4.9	4.9	5.2	4.9	5.3	5.2	5.3	4.9
Afraid of more problems with offender	4.3	4.0	5.0	3.3	3.1	3.8	4.1	4.8	4.1	4.0	3.8	4.1	3.7	4.8	3.7	4.0
Reasons to report																
Prevent offender doing this to someone else	6.9	7.7	7.9	7.1	7.6	7.5	7.6	7.7	7.1	7.6	7.5	7.6	7.2	7.7	7.2	7.4
Offender must be caught	6.8	7.5	7.1	8.0	7.7	7.0	7.5	7.4	6.3	7.3	7.0	7.5	8.1	7.4	8.1	7.3
Prevent this happening to me again	6.5	6.9	7.1	6.4	6.5	6.4	6.0	6.4	5.6	6.4	6.4	6.0	5.9	6.4	5.9	6.4
For more police surveillance	5.0	6.0	5.5	6.0	5.5	5.1	5.1	5.5	5.6	5.5	5.1	5.1	5.7	5.5	5.7	5.5
It is my duty/it ought to be done	4.7	4.8	4.8	5.3	5.6	4.9	4.8	4.7	5.0	5.0	4.9	4.8	5.1	4.7	5.1	5.0
To be cared for and helped	3.3	4.8	4.2	4.0	4.0	4.0	4.0	4.2	3.7	3.9	4.0	4.0	3.3	4.2	3.3	3.9

Summary and discussion

Why crime victims (do not) report crimes to the police has been the subject of many empirical studies over the past decades. The majority of those studies use a simple cost–benefit model in which crime seriousness is assumed to be the most important predictor of victims' decisions (not) to report (Skogan 1984). Crime seriousness has, indeed, been proven to be an important determinant of reporting behaviour. One of the most consistent findings in empirical studies on reporting behaviour of crime victims is that victims report to the police if they have been (severely) injured or have experienced great material losses.

However, according to many scholars, other factors are important as well, and these factors should be included in models of crime reporting to increase the insight into reporting behaviour. Recently, for example, scholars have argued that especially factors constituting the social contexts in which victims and crimes are nested deserve more attention. Ménard (2003) and Baumer (2002) were among the first to note that crime victims' decision-making regarding police reporting is influenced by the social contexts (e.g. social networks, organizations, communities) in which they are embedded. Goudriaan (2006) stressed that, in addition to the social context in which victims are embedded, the context in which a crime takes place is an important determinant of victims' decisions to report to the police. She especially argued that it is of major relevance whether a crime occurs in the public domain, the private domain, or in semi-private or semi-public locations (e.g. schools, shops, offices, hospitals, sports clubs, and factories). In addition, the victim–offender relationship is assumed to influence victims' reporting decisions. These ideas are incorporated into the socio-ecological theoretical model of reporting developed by Goudriaan (2006).

The present study is among the first to test, empirically, specific hypotheses on the effects of type of location and victim–offender relationship that can be derived from the socio-ecological model of reporting. A vignette experiment has been conducted to study the effects of three factors constituting the context in which crimes take place that were supposed to influence juveniles' decisions to report violent crimes: the location of the incident (the public or the semi-private domain; i.e. within an organization), the degree to which victim and offender know each other, and whether or not the offender is part of the same organization as the victim. Both the willingness to report to the police and the willingness to report to an employee of the organization one is part of (here, the school) have been studied. The hypotheses and the corresponding results are given in Table 4. The findings are discussed below.

The findings with respect to the effects of the *type of location* are in accordance with the hypotheses and clearly in line with the socio-ecological theoretical model of reporting behaviour. The willingness to report to the police is found to be lower for incidents taking place within the organization than for incidents taking place in the public domain, while the willingness to report to an employee of the organization is found to be higher for incidents taking place within the organization. These findings are also consistent with studies based on population victimization surveys. For example, Finkelhor and Ormrod (2001) and Garofalo et al. (1987) found a lower reporting percentage for violent incidents inside schools than for incidents on the

Table 4 Summary of the hypotheses and results of the analyses

Hypothesis	Confirmed?
Hypotheses on willingness to report to police	
H1a ↑ If location street (cf. location organization)	Yes
H2a ↑ If offender unknown and ↓ if offender well known	No
H3a ↑ If offender is not part of organization (cf. is part of organization)	No
H4a ↓ If location organization and offender organization	Yes
Hypotheses on willingness to report to employee	
H1b ↑ If location organization (cf. location street)	Yes
H2b ↑ If offender unknown and ↓ if offender well known	No
H3b ↑ If offender is part of organization (cf. is not part of organization)	Yes
H4b ↑ If location organization & offender organization	No
Interaction hypothesis	
H5 Report police ↑ if report employee ↓	No

street. These differences in reporting to the police are assumed to be caused by the fact that, if victims believe that the organization is able to help them with recovering stolen property or capable of protecting them against future crimes and/or punish the offender, they might be less likely to (also) report to the police (Finkelhor and Ormrod 2001; Goudriaan 2006). On the other hand, in the case of a comparable crime taking place in a public space (e.g. in the street), absence of an alternative formal authority that can offer help can increase the odds of an incident's being reported to the police. In those cases, the police are often the only formal organization one can turn to.

The findings with respect to the effects of *victim-offender relationships* are partly in line with the hypotheses. As was hypothesized (H2a), the outcomes of the vignette experiment revealed that the willingness to report to the police is lowest for incidents with well-known offenders. This is consistent with many previous studies (e.g. Block 1974; Fisher et al. 2003; Gartner and Macmillan 1995; Hanson et al. 1999; Lizotte 1985; Pino and Meier 1999; Pollard 1995; Singer 1988) and is assumed to be related to the fact that victims who know the offender have the possibility to deal with these incidents by informal means. In addition, juveniles who read a vignette with a (well) known offender agreed more strongly with 'afraid of more problems with the offender' as a reason not to report to the police, than did juveniles who read a vignette with an unknown offender. This indicates that fear of retribution does influence the odds that crimes are reported to the police when the victim knows the offender.

No main effect on reporting to the police was found for whether the *offender is part of the same organization* as the victim. However, this factor did turn out to *interact with the crime location*. If victim and offender belong to the same organization, and the violence also takes place within that organization, participants generally have a very low willingness to report the incident to the police. If the same incident, with the same offender, takes place in the public domain, however, the willingness to contact the police is higher than for similar incidents with offenders who are not part of the same organization. This finding suggests that people weigh up the perceived probability that the offender can be caught in a cost-benefit calculation to decide whether to report to the police (or an employee) or not. The findings in Table 3, in which the participants' agreement with different motivations

for reporting and not reporting is given per experimental condition, also point in this direction. Those who received a vignette describing the act of violence taking place in the public domain agreed more strongly with ‘no use; the police couldn’t do anything’ as a motivation not to report if the offender was not a schoolmate (6.6 for well-known offenders and 7.5 for vaguely known offenders) or was unknown (7.8) than if the offender was a schoolmate (5.9 for well-known schoolmates and 6.3 for vaguely known schoolmates).

Finally, it was hypothesized that *the availability of an alternative authority* has an effect on victims’ reporting decisions. More specifically, it was hypothesized that, in situations in which victims are more inclined to report their victimization to an employee of the organization (hence, if the incident takes place within the organization and/or the offender as well as the victim are part of the organization), they would be less inclined to report to the police (H5). However, no such effect was found. The general relationship between the willingness to report to the police and the willingness to report to an employee turned out to be the opposite: participants with a higher willingness to contact the police had, overall, a higher willingness to contact an employee also. This finding seems to be in line with findings by Fisher et al. (2003). In a study on the reporting behaviour of female victims of sexual assaults, Fisher et al. found that just over 2% of the incidents had been reported to the police, while about 70% had been disclosed to other persons (including alternative authorities as well as friends and family). It turned out that *all* incidents that had been reported to the police had also been disclosed to someone else. This suggests that people’s willingness to contact others after being victimized might partly be an internal trait: some people might be more inclined to contact authorities in general, while others are less likely to contact authorities. Future studies on victims’ willingness to contact the police or other authorities, or studies on repeatedly victimized people, could possibly increase insight into this matter.

Recapitulating the results of this study, we can conclude that factors constituting the context in which violent incidents take place indeed influence victims’ decisions to report. Therefore, it is important to include such contextual factors in theoretical models explaining reporting behaviour.

Although this study confirms the role of the contexts in which crime incidents take place in the reporting behaviour of victims, the results, of course, do not give a definite answer as to how exactly these factors exert their influence. More research is required to comprehend truly the mechanisms behind the effects of social contexts on victims’ reporting behaviour. In future studies it would be useful to test the socio-ecological model on other types of crime as well, to see whether the effects of contextual factors are similar across crime types. The effect of the type of location might, for example, play a more important role in predicting reporting behaviour of victims of violent crimes than of victims of property crimes. In addition, in a follow-up study, the models to be tested might be expanded so that possible interactions between contextual characteristics, victim characteristics and crime characteristics are taken into consideration. Clearly, further substantial research is needed on the effects of the contexts in which victims are embedded and in which crimes take place on the reporting decisions made by crime victims. This study therefore invites other scholars to devote attention to contextual factors, such as type of location, in future empirical studies on crime reporting and to expand the theories on reporting.

To conclude, future researchers are encouraged to aim for (quasi-)experiments as the gold standard research design for assessing causal effects in research on reporting behaviour. As noted in the introduction, experimental studies in victimology are relatively scarce. It has been argued that this might be due to the fact that it is difficult to make participants actually believe they are victims of a crime without jeopardizing their emotional well-being and violating ethical norms. Nevertheless, experimental designs, like the vignette design applied in this study, are possible. Vignette experiments do not have the above-mentioned disadvantage of real-life experiments and can, therefore, be a very valuable method for testing causal hypotheses in victimology.

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