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# Different measures of fear of crime and survey measurement error

Wim Hardyns and Lieven Pauwels

## Abstract

The measurement of fear of crime is acknowledged as a hot methodological issue. Many studies have focused on the cognitive and behavioural components of fear. The emotional affective component of fear of crime has been studied rather less, however. Traditional measures of fear of crime fail to address the complexity of this concept. Knowledge of prevalence, frequency and intensity of fear are largely absent in a quantitative design. Following an alternative question structure, previous research has shown that 'old'-style questions overestimate the everyday experience of fear (see Farrall, 2004; Farrall and Gadd, 2004; Gray, Jackson and Farrall, 2008). Furthermore, gender differences in fear of crime seem to be influenced by socially desirable answers by men (Sutton and Farrall, 2005). In this paper, we study differences in outcomes when measuring fear of crime using 'old'-style questions ('avoidance behaviour') and an alternative question structure introduced by Stephen Farrall (three-part questions treating prevalence, frequency and intensity of fear). We conducted a survey (2008) in eighteen postal code areas and interviewed 750 key informants. Descriptive analyses by gender were conducted for both the traditional avoidance behaviour scale and the alternative question structure that measures the emotional affective component of fear of crime. Subsequently some correlational analyses were conducted to examine how different these fear of crime measures are from supposed covariates such as perceived sense of community, perceived disorder and previous victimisation. Furthermore, we assessed the effects of social desirability on measures of fear of crime components and on the gender-fear relationship in particular. In short, measuring the emotional affective component of fear with an alternative question structure presents a totally different picture than can be found by measuring the behavioural component of fear of crime with a traditional scale such as avoidance behaviour. Second, different measures of fear of crime are especially differentially related to previous victimisation. Third, we found rather surprising effects of social desirability on gender differences in fear of crime.

# 1. Introduction

Large-scale surveys of a general population are very popular in the social sciences. In criminology, a growing interest in survey methodology has been observable since the 1950s. One major reason for the growing body of research in this tradition can be found in the discovery of bias in official measurement instruments, more specifically the bias in police statistics. Official statistics tend to underestimate true rates of victimisation in the population, and are said to be seriously biased with respect to race, gender and social class. As a consequence, the validity of earlier research concerned with the causes of crime has been called into question. Another important reason for the widespread interest in surveys lies in their potential to serve as a means to empirically test causal theories of offending, victimisation and fear of crime. Studies on the causes of crime and victimisation have disappeared from the agenda of criminologists in Belgium to make room for the study of the criminal justice system (Goethals, Ponsaers, Beyens, Pauwels and Devroe, 2002). In Anglo-Saxon countries, victim surveys and to a lesser extent self-report studies were periodically repeated on a large scale and were used to describe the epidemiology of crime and to address theoretical issues. The British Crime Survey and the (US) National Crime Survey are well-known examples. In one of the first sweeps of the National Crime Survey widespread anxiety about crime was discovered, and the 'fear of crime' was born (Ditton and Farral, 2000; Hale, 1996). 'Fear of crime' as a distinct field of criminological research can be traced back to Lyndon Johnson's 1967 Crime Surveys. Originally the level of public concern about crime was interpreted as an indicator of the importance politicians should attach to crime rates. High levels of concern were taken to imply the need to reduce crime levels. They were not read as a diagnosis of a public malaise to be treated in its own right. Concern for crime seemed to be confused with fear of crime. Although a large body of research concentrates on the subject internationally, in Belgium this is not the case and therefore we follow Pleysier, Vervaeke and Goethals (2002) and prefer to talk about a research tradition under development (Pauwels and Pleysier, 2005a).<sup>1</sup>

Notwithstanding the massive body of research since the 'fear of crime' concept was 'empirically discovered', two issues in this research tradition stand out in explaining the overall pessimism in most reviews of the literature (Ditton and Farral, 2000; Hale, 1996; Pleysier, Pauwels, Vervaeke and Goethals, 2005; Pleysier, Vervaeke and Goethals, 2004; Vanderveen, 2006). A first issue, which we will deal with in this paper, concerns the weak theoretical and conceptual framework surrounding studies of 'fear of crime'. Obviously, both the policy-driven character of the early – and later – large-scale victim surveys and the

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<sup>1</sup> Apart from some local studies in the 1980s and 1990s the first general population victim survey at the federal level was not conducted prior to 1997. This Federal Victim Survey is generally referred to as the 'Security Monitor' (Board of the Operational Police Information (Dutch: CGO), Police Policy Support, Department of Policy Data). The Security Monitor is a two-year large-scale Belgian population survey and is mainly conducted for policy reasons: the Security Monitor is an instrument designed to evoke new policy directions towards crime and victimisation and even to evaluate past policy strategies. Besides fear of crime and victimisation questions, the Security Monitor also includes questions concerning perceived disorder, the reporting of crimes to the police and public attitudes towards the police.

positivistic approach of the era in which 'fear of crime' research originated are largely indebted to this. A second issue – which follows from the first issue – is related to problems of measurement: studies of fear of crime, especially the studies that are conducted on demand of the Ministry of the Interior, use somewhat conservative outdated methodologies and measures of fear of crime. Because the 'fear of crime' concept in these large-scale surveys, as well as in many smaller initiatives, for reasons of 'comparability', was predominantly measured with one single indicator (i.e. 'How safe do you, or would you, feel walking alone in this area after dark?'), all claims concerning the reliability and validity were considered questionable. In recent years, numerous authors have indeed objected to this conservative approach, and has resulted in a tendency to use scaling techniques, instead of the traditional standard items. Nevertheless, the complexity of a concept such as fear of crime demands further studies on the different components of fear, before one moves on to an explanation of fear based on survey data.

## **2. Measuring fear as the emotional affective component of fear of crime**

In this paragraph we reconstruct some of the important problems that remain in the measurement of fear. It has been said many times before that the widespread public anxiety about crime, later known as 'fear of crime', became a research subject of its own, and led to a new tradition in criminology. A representative historical overview of this tradition can be found in Hale (1996), Ditton and Farrall (2000) and Vanderveen (2006). For an overview of this research tradition, including its 'growing pains' in Belgium we refer the reader to Pleysier (2009). Despite the weight of publications that have appeared since the early years, it is striking that the content and theoretical 'body' are less imposing. Ferraro and LaGrange (1987, p. 76) argue that *'conceptual cloudiness and inappropriate operationalization taints the majority of this literature, thereby distorting the meaning and the utility of the fear of crime concept'*; although perhaps somewhat pessimistic, the bottom line of this critique is not outdated, and has been repeated ever since. In fact, Ditton and Farrall (2000, p. xxi) state in their review of the literature that, despite more than thirty years of research on the subject, *'surprisingly little can be said conclusively about the fear of crime'*. Nowadays, this statement remains true and keeps challenging scholars to study measurement issues related to fear of crime.

This pessimistic view has largely to do with the use of fear of crime as an umbrella concept. The distinction between *'feelings of insecurity'* and *'fear of crime'* particularly leads to some essential conceptual confusion (Pleysier, 2009). Too often these concepts are mixed up. The key difference is that *'feelings of insecurity'* are not necessarily related to crime. They can refer to health, globalisation, lack of informal control, antisocial behaviour, etc. The measurement of *'feelings of insecurity'* and *'fear of crime'* in the Belgian Security Monitor is in many ways indicative of this general malaise in *'fear of crime'* literature and

research (Pauwels and Pleysier, 2005a; Pleysier, 2009; Pleysier, Vervaeke and Goethals, 2004). The 'feelings of insecurity' item used in the Security Monitor contains a single, general or 'formless' item on 'how safe the respondent feels', without reference to crime, a specific offence or situation, and tapping more into a general feeling of unease (see Appendix 1, v63).

Another well-known example of a recurrent single-item question is: 'How safe do you, or would you, feel walking alone in this area after dark?' A classic criticism in the international literature is that the measurement of a complex concept such as fear of crime by a single-item instrument causes some existential problems in terms of reliability and validity. An empirical measure of fear of crime through a single-item measurement instrument lacks theoretical depth and conceptual clarity (Ditton and Farrall, 2000; Farrall, 2004; Hale, 1996; Pleysier, 2009). Numerous authors have questioned this conservative approach with profound persistence, resulting in recent years in a growing tendency to use scaling techniques as a far better way of measuring a complex and multidimensional concept such as 'fear of crime'. A well-known example in the Belgian Security Monitor is the 'avoidance behaviour' scale, which measures the behavioural component of fear of crime and consists of four questions; the respondent is asked whether he or she avoids certain areas in the neighbourhood, does not open the door to strangers after dark, hides valuable things at home, or avoids leaving home after dark because he or she does not consider it safe otherwise (see Appendix 1, v57-v60).

In contrast with 'feelings of insecurity', the 'fear of crime' concept has a more situational and concrete character (Pleysier, 2009). Ferraro's definition (1995, p. 4) describes the content very well: '*an emotional response of dread or anxiety to crime or symbols that a person associates with crime*'. In other words, fear of crime is an emotion, fear of crime is a reaction, and in particular fear of crime refers to crime or symbols that can be associated with crime. A narrow interpretation of this definition points to the *emotional affective component of fear of crime*. Following some well-known classifications (Ferraro and LaGrange, 1987; Gabriel and Greve, 2003) a broad interpretation of the fear of crime concept also demonstrates the importance of a cognitive and a behavioural component. The *cognitive component* comes before the emotional affective component and refers to a process that converts signals and stimuli which have to do with threat and danger into a risk assessment of personally becoming a victim of crime (Oppelaar and Wittebrood, 2006). The *behavioural component* comes after the emotional affective component and refers to the behavioural reactions of fear, such as avoidance and defensive behaviour.

Until now the measurement of fear of crime has almost exclusively focused on the cognitive component (perception of risk) and the behavioural component (avoidance behaviour) of fear of crime. The emotional affective component has been less studied. Some authors take the view that it is impossible to measure the emotional affective component because of the lack of a concrete fear-stimulating situation. They use 'feelings of insecurity' as an alternative (Covington and Taylor, 1991; Taylor and Covington, 1993; Ward, LaGory and Sherman, 1986). Others are of the opinion that an intensity scale, on which respondents need to

indicate the severity of their fear, can bring a solution (Chiricos, Hogan and Gertz, 1997; Ferraro, 1995). In general, traditional measures of fear of crime in surveys fail to address the complexity of this emotional affective component. After all, knowledge of prevalence, frequency and severity of fear are absent or inadequate in traditional standard items and scales, and people mostly memorise and report the most serious extent of their fears instead of the most common or typical (Farrall, Bannister, Ditton and Gilchrist, 1997). Undoubtedly this leads to an overestimation of the everyday experience of fear of crime in a population (Farrall, 2004; Farrall and Gadd, 2004; Gray, Jackson and Farrall, 2008), or (Farrall, 2004, p. 163): *'Are we really prepared to unquestioningly accept that almost a third to two-thirds of the westernized, civilized society are 'fearful' of crime 'some' or 'a lot' of the time?'*

Given the fact that traditional measures of fear of crime in surveys encounter a wave of criticism, alternative question structures that build on these strictures and focus on the emotional affective component of fear should be heartily welcomed in quantitative criminology. According to Farrall (2004), change in the survey tradition of fear of crime is desirable, possible and inevitable. Therefore Farrall had developed an alternative question design, considering two important assumptions: first the questions need to refer to the past year only and second the respondents need to recall any occasions on which they felt fearful in the past year because they thought they might be victimised. If both assumptions are fulfilled, additional information can be gathered about the frequency and the intensity of these feelings. In this study we were motivated to use the alternative question structure as used by Farrall and his colleagues (Farrall, 2004; Farrall and Gadd, 2004; Gray, Jackson and Farrall, 2008).

In this paper we focus on the measurement of 'fear' as the emotional affective component of fear of crime by using a 'fear frequency' and 'fear intensity' scale and we mirror these response rates with regard to more traditional measures of fear of crime by using a single-item question and an 'avoidance behaviour' scale, without suggesting that they are comparable. Second, we assess how similar these different measures of fear of crime are in terms of relating to some well-known covariates of fear, such as perceived sense of community, perceived disorder and previous victimisation. Finally, we assess to what extent different measures of fear of crime and their relation with well-known covariates are susceptible to social desirability.

### **3. Survey measurement error and hypotheses**

Measurement can be described as the systematic assignment of numbers to variables to represent features of persons, objects or events (Vandenberg and Lance, 2002, p. 4). In 'fear of crime' studies, researchers assign scores to respondents on variables expected to 'explain' a substantial part of observed differences in 'fear of crime'. When conducting victim surveys we assume that 'fear of crime' is not directly observable. Fear of crime is a latent concept, i.e. not directly observable, which is made observable through the use of indicators. These indicators are assumed to constitute a valid representation of the underlying

concept. A careful selection of indicators is therefore obligatory. In the social sciences in general the construction of valid concepts has been called problematic (Waage, 1997).

Validity problems are known to affect survey results under different survey conditions. A thorough definition of measurement error can be found in Billiet (1997, p. 2): *'Survey measurement error refers to error in survey responses arising from the method of data collection, the respondent or the questionnaire (or other instrument)'*. In the present study we are concerned with two major measurement issues: measurement error that arises as a consequence of the questionnaire and measurement error that arises as a consequence of respondent characteristics.

When examining the *'measurement error that arises as a consequence of the questionnaire'* we wonder to what extent the measurement of fear of crime by using an alternative question structure will lead to another descriptive picture when we use a scale such as avoidance behaviour, as has traditionally been used in the Belgian Security Monitor and many other surveys. Frequently, in both political and scientific circles, one wrongly intends to measure 'fear' when using traditional measures such as avoidance behaviour. Because of that it is interesting to confront an alternative question structure that really focuses on the emotional affective component. This question structure was used for the first time by Farrall and Gadd (2004) and the findings were very promising. In short, the authors found that traditional measures of fear of crime seemed to overestimate 'fear' in a population because of a lack of depth in question wording. By using an alternative question structure, which was able to dissect the fear of crime concept in terms of frequency and intensity, Farrall and Gadd were able to prove that the fear of crime in the population was less pronounced than what was concluded so far in many traditional fear of crime studies. This is especially of relevance for studies of the epidemiology of fear, but also empirical tests of theories of fear. Measuring fear of crime in surveys is seldom the ultimate goal, but rather a means to analyse the link with some important covariates. With the question wording differences in mind, it is interesting to observe if different measurement tools of fear of crime do have an impact on correlational validity.

When examining the *'measurement error that arises as a consequence of respondents characteristics'* we are restricted to the study of social desirability as a validity problem. Social desirability can be described as the tendency of a respondent to be less willing to admit attitudes and behaviour of a rather threatening character, i.e. attitudes and behaviours that are less socially acceptable (Pauwels and Pleysier, 2005b). In fear of crime studies this type of measurement error is strongly related to the frequently discussed gender differences in fear of crime. Many studies found that women tend to report far more fear than do men, even though their reported risk of being victimised is lower (Fürstenberg, 1971; Smith and Torstensson, 1997). As a consequence, the question can be asked whether socially desirable responding behaviour plays a part in this finding, better known as the fear of crime paradox. One possible reason for this could be the influence of the socially constructed idea that 'boys don't cry' (Goodey, 1997). The stereotype that associates

femininity with vulnerability and masculinity with dangerousness could be so deep-rooted in a community that it leads to socially adaptive responding behaviour (Hollander, 2001). Indeed, some men might report lower levels of fear of crime in surveys because of that masculine ideal, notwithstanding the fact that they are more at risk of being victimised than women. In addition to that it is often seen as socially desirable behaviour for women to talk about their emotions and fears, which could even enlarge the gender differences in fear of crime (De Groof, 2008; Hurwitz and Smithey, 1998; Snedker, 2006).

This validity problem can be actively studied with the help of social desirability scales, i.e. scales that are especially designed to measure this tendency. Very often this tendency is measured by asking respondents about behaviours that almost all of us have at some time committed. A striking example can be found in Sutton and Farrall (2005). By using a 'lie scale' they tested the social desirability of some answers on fear of crime questions by gender and came to a striking conclusion: *'our results suggest that when men are being perfectly honest, they may actually report higher levels of crime than do women'* (Sutton and Farrall, 2005, p. 219). Previously it has been shown that social desirability somewhat affects covariates of self-reported delinquency in a survey of adolescent offending, but that no substantively different results would have been reported if social desirability was not controlled for (Pauwels and Pleysier, 2005b). Pauwels and Pleysier, however, tested the effect of social desirability on a sample of young adolescents, although it has been argued that social desirability is positively related to greater age. Thus, the effect of social desirability might be larger in general surveys where mainly adults are surveyed. In general, two strategies are reported to deal with social desirability: one is to omit respondents that answer desirably (Rovers, 1997). The other strategy is to statistically control for the effect of social desirability (Pauwels and Pleysier, 2005b). In this study we deal with this form of measurement error by using social desirability as a control variable. When testing the relationship between different fear of crime measurement tools and some important covariates, we statistically control for social desirability.

In short, in this study we focus on the previously identified forms of measurement error. More specifically, four general hypotheses can be distinguished:

- (1) Different measures of fear of crime lead to different conclusions in terms of magnitude and incidence.
- (2) Measuring 'fear' by different fear of crime components has an impact on the correlations with theoretically important covariates (perceived sense of community, perceived disorder and previous victimisation).
- (3) Social desirability disturbs this relationship between different measures of fear of crime and measures of perceived sense of community, perceived disorder and previous victimisation.
- (4) Social desirability contributes to gender differences in fear of crime.



## **4. Assessing the construct validity of 'fear of crime': theoretical framework**

Construct validity refers to the networks of relationships that exist between theoretical concepts and empirical constructs. If two constructs that are theoretically related are validly measured then one can expect an empirical correlation between these constructs. In this paper construct validity is restricted to simple correlational validity. To assess the impact of measurement on fear of crime outcomes, concepts from a well-known theoretical framework are used. The concepts that are used to assess the construct validity of different measures of fear of crime have their roots in the early Chicago School (Shaw and McKay, 1942; Taylor and Covington, 1993) and refer to the perception of community social climate. It has been established that community social structural characteristics and sense of community affect one's perception of disorder and that these perceptions are strongly related to 'fear of crime' (Lee and Earnest, 2003; Plank, Bradshaw and Young, 2009). In this article we can only take the perception of neighbourhood 'sense of community' and 'disorder' into account. Another important fear of crime covariate is 'previous victimisation'. The relationship between victimisation and fear of crime has been much discussed and questioned. One possible explanation is that previous victimisation shapes one's perception of disorder and crime, which in turn affects fear of crime. For an overview we refer the reader to Hale (1996) and Vanderveen (2006).

## **5. The present study**

The data used in the present study of fear of crime are not based on a representative sample of respondents but on a survey of professional key informants. Professional key informants are persons that have a great deal of knowledge of social situations in neighbourhoods and can provide additional and more accurate information than the average neighbourhood inhabitant in community surveys on social cohesion and disorder (Pauwels and Hardyns, 2009). Recently, Pauwels (2006) and Pauwels and Hardyns (2009) demonstrated that the technique of 'key informant analysis' could be used to create ecologically reliable and valid measures of community (dis)organisational processes. For this study we decided to question key informants by presenting them different measures of fear of crime to detect possible differences in the responses.

The key informants that meet the criterion of above-average knowledge of local area processes were previously identified in jobs such as social work, local police, local shops (e.g. grocers, newsagents, etc.), local pubs and local policy work. One major difference between the use of surveys of inhabitants and profession-based key informants is the selection procedure employed. Whereas random selection is the criterion used in resident surveys, professional key informants are chosen on the basis of their knowledge

about community (dis)organisational processes. Key informants are thus field experts. The key informants were selected on the criterion of self-selection. We are aware this selection method delivers an atypical sample of the population. Therefore replications with representative samples are necessary to exclude specific effects on the results.

A survey of 750 key informants in eighteen postal code areas situated along the Belgian coast was conducted between October and November 2008.<sup>2</sup> This Belgian coast area is characterised by a high touristic activity in the summer months and a relatively high violent crime rate (Hardyns, Van de Velde and Pauwels, 2010). Appendix 2 presents descriptive statistics relating to the demographic and professional background characteristics of the questioned key informants. The survey of key informants was originally designed as a pre-test of a large-scale survey of community social cohesion, collective efficacy and disorder and was meant to assess the reliability and validity of the scale constructs used.<sup>3</sup> On this occasion we decided to include a traditional single-item question from the Belgian Security Monitor, a traditional 'avoidance behaviour' scale and the alternative question structure that actually measures frequency and intensity of 'fear' that was derived from Farral and Gadd (2004) to evaluate the measurement issues that were explained above.

## 6. Measurement of constructs and reliability

### 6.1. Fear of crime measures and social desirability

A traditional scale that measures the behavioural component of fear of crime is avoidance behaviour. 'Avoidance behaviour' is measured by an additive index consisting of three items: *does it happen that ... 'you avoid certain areas in your neighbourhood because you think they are not safe', 'you avoid opening the door to strangers because you think it is not safe', 'you avoid leaving home after dark because you think it is not safe'?* Cronbach's alpha is 0.67.<sup>4</sup> The alternative question structure aims to measure the emotional affective component of fear of crime with special reference to the frequency and intensity of these feelings. 'Fear frequency' is measured by an index consisting of four items: *'in the last year how frequently have you felt fearful about the possibility of becoming a victim of ... "crime in general", "car theft", "burglary", "assault"?'* Cronbach's alpha is 0.64. 'Fear intensity' is also measured by an index of four items. Each 'fear intensity' item follows on

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<sup>2</sup> The survey was conducted in De Panne, Koksijde, Oostduinkerke, Nieuwpoort, Lombardsijde, Westende, Middelkerke, Raversijde, Mariakerke, Oostende, Bredene, Vosseslag, De Haan-Centrum, Wenduine, Blankenberge, Zeebrugge, Heist, and Knokke.

<sup>3</sup> The large-scale survey fits in with the project 'Social Cohesion Indicators for the Flemish Region', which started in January 2007 and which is a continuation of the scientific and policy interest in the concept of 'social cohesion'. For further information, please refer to [www.socialcohesion.eu](http://www.socialcohesion.eu)

<sup>4</sup> A reliable scale consists of a set of items that meet the demands of internal consistency. This can be checked by factor analysis of the observational questions and by computing Cronbach's alpha, one of the most well-known estimators of scale reliability (Tacq, 1992). For each scale in this study, additional exploratory factor analyses were conducted as an extra control for reliability at the respondent level.

a 'fear frequency' item with the question: *'on the last occasion, how fearful did you feel?'* Cronbach's alpha is 0.66. Intensity and frequency of fear as the emotional affective component have never been measured like this in a Belgian study of fear of crime. Therefore it is of utmost importance to consider the reliability coefficients of these constructs. The Cronbach's alpha values do not reach the generally suggested level of 0.70. Possibly the relative low number (three or four) of items in these scales could have influenced this conservative reliability indicator. The factor loadings were, however, satisfactory (0.40 or higher) for all the items in the fear of crime scales, the lie scale, the perceived sense of community scale and the perceived disorder scale.

To measure social desirability we have adopted a 'lie scale' which is part of a well-known psychoticism scale in psychological sciences: the Abbreviated form of the Revised Eysenck Personality Questionnaire (EPQR-A).<sup>5</sup> This scale consists of four scales of six items each (Eysenck, Eysenck and Barrett, 1985; Francis, Brown and Philipchalk, 1992). The lie scale is one of these four scales. The items in this scale refer to dichotomous (0=yes, 1=no) questions on which disagreement is socially desirable but highly unlikely to be true. The 'lie scale' consists of an additive index of the following five items: *'Were you ever greedy in terms of helping yourself to more than your share of anything?'*, *'Have you ever blamed someone for doing something you knew was really your fault?'*, *'Have you ever taken anything (even a pin or button) that belonged to someone else?'*, *'Have you ever cheated at a game?'*, *'Have you ever taken advantage of someone?'* The more people respond with 'no' to these questions, the higher their score on the social desirability scale. Cronbach's alpha is 0.58, which is not very high but in line with the relatively low values in previous reliability tests based on this scale (Eysenck, Eysenck and Barrett, 1985; Francis, Brown and Philipchalk, 1992). Given that we are dealing with dichotomous items this was the best reliability parameter we could find. Future studies, however, might want to look for better or alternative scales of social desirability behaviour.

## **6.2. Perceived sense of community, perceived disorder and previous victimisation**

Social cohesion is such a broad concept that it is hard to find agreement on how it should be measured (Peper et al., 1999). The collective efficacy dimension of social cohesion is increasingly of interest to scholars in Europe (e.g. Flap and Völker, 2005; Friedrichs and Oberwittler, 2007; Oberwittler, 2001). In this context Flap and Völker (2005) introduced the closely related construct 'sense of community', thereby referring to the social trust component of collective efficacy.<sup>6</sup> To measure '*perceived sense of community*' key informants

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<sup>5</sup> Using an extended version of this lie scale (EPQ-R) Sutton and Farrall (2005) found some interesting effects from social desirability on the relation between fear of crime and gender. More specifically they found that men, with high scores on the social desirability scale, show some reluctance to admit fear of crime.

<sup>6</sup> Collective efficacy has been defined as '*social cohesion among neighbors combined with their willingness to intervene on behalf of the common good*' (Sampson, Raudenbush and Earls, 1997, p. 918). Social cohesion and mutual trust among members of a community ('social trust') are an absolute condition to foster the willingness to intervene in the common interest of a community ('informal social control').

were asked on a three-point scale to what extent they agreed with following statements: *'I feel safe in my own neighbourhood'*, *'contacts in my neighbourhood are rather positive in general'* and *'I am respected in my neighbourhood'*. Cronbach's alpha was 0.62. Disorder is, like social cohesion, a rather ambiguous concept. Usually both physical (urban decay) and social nuisances (truants on the streets, public use of drugs and alcohol, etc.) are measured. Following Pauwels (2006) and Pauwels and Hardyns (2010), *'perceived disorder'* was measured by asking the key informants how many times they observed: *'adolescents hanging around on street corners'*, *'a group of adolescents harassing persons to obtain money or goods'*, *'men drinking beer in public'*, *'persons selling drugs on the streets'*, *'somebody being threatened with a weapon on the street'*, *'fights between adolescents because one adolescent was challenged'*, *'men urinating in public'*. Cronbach's alpha was 0.85. Finally, the key informants were asked whether or not they had been the victim of crime. Here *'previous victimisation'* is a count variable that summarises the different offences a person (or a household member of the respondent in case of theft from car and bicycle theft) reports as a victim during the last year. The following offences were included in the survey: (1) *'burglary with theft'*, (2) *'attempted burglary'*, (3) *'theft from car'*, (4) *'bicycle theft'* (5) *'physical violence'* and (6) *'being threatened with violence'*. The original survey items were dichotomous (1 = experienced victimisation, 0 = not experienced victimisation). These six victimisation experiences were counted for each respondent.

## 7. Results

### 7.1. Comparing different measures of fear of crime

A classic and much criticised single-item question to measure fear of crime can be found in the Belgian Security Monitor: *'does it happen that you feel unsafe? Is that ... (never, seldom, sometimes, often or always)'*? As already mentioned, an operational measure of fear of crime through a single-item measurement instrument lacks theoretical depth and conceptual clarity (Pleysier, 2009). For that reason the use of scale constructs to measure fear of crime has been established for some time in this research tradition. In this study we use the well-known *'avoidance behaviour'* scale, which measures the behavioural component of fear of crime. Let us take a look at the percentage of respondents that scores high on the single-item question in the Security Monitor and the avoidance behaviour scale in the survey of key informants, before we examine the alternative measurement instrument that measures the emotional affective component of fear of crime. Table 1 presents the distribution for both the single-item question and the scale construct by gender.

**Table 1: Frequency distribution for the single-item question (Security Monitor 2006) and the *'avoidance behaviour'* scale (Key Informant Survey 2008)**

	Unsafe question (Security Monitor 2006)†			Avoidance behaviour (Key Informant Survey 2008)††		
	M	F	Total	M	F	Total
<b>Never or seldom</b>	67.5% 13,825	54.2% 12,365	60.5% 26,190	66.8% 231	46.7% 188	55.9% 419
<b>Sometimes, often or always</b>	32.5% 6,653	45.8% 10,423	39.5% 17,076	33.2% 115	53.3% 215	44.1% 330
	100.0% 20,478	100.0% 22,788	100.0% 43,266	100.0% 346	100.0% 403	100.0% 749

† Chi-square: 896.37 df: 4 p < 0.001

†† Chi-square: 38.34 df: 9 p < 0.001

From Table 1 we can see that for the unsafe question ('does it happen that you feel unsafe?'), 39.5 per cent of the 43,266 respondents questioned report that they sometimes, often or always feel unsafe. Split up by gender, this is 32.5 per cent of the male population and 45.8 per cent of the female population (Chi-square: 896.37 df: 4 p < 0.001). Furthermore for the 'avoidance behaviour' scale we observe that 44.1 per cent of the 749 key informants report they sometimes, often or always report avoidance behaviour. Split up by gender, this is 33.2 per cent of the male population and 53.3 per cent of the female population (Chi-square: 38.34 df: 9 p < 0.001). First of all, it is striking that approximately four out of ten people report they sometimes, often or always feel unsafe or show avoidance behaviour. Second, the difference between men and women is remarkable (13 per cent versus 20 per cent respectively).

In short, from Table 1 it can be seen that the use of both a single-item and the 'avoidance behaviour' scale yield large proportions of respondents who answer positively to these questions. It is not clear from these questions whether such large numbers of respondents really fear crime. One other criticism is that these items do not have any follow-up questions that measure in more detail the frequency and the intensity of the reported avoidance behaviour. Omitting such follow-up questions may lead to a serious overestimation of the fear of crime in a population because people largely memorise and report the most serious extent of their fears instead of the most common or typical (Farrall, 2004; Farrall and Gadd, 2004; Farrall, Bannister, Ditton and Gilchrist, 1997; Gray, Jackson and Farrall, 2008). Nevertheless these traditional crime measures have been used for years and are difficult to change in large-scale surveys, especially because of the advantages of comparability over time. One is tempted to start with a new zero point that would complicate the existing trend analyses. The alternative question structure we discuss in this article, however, meets the criticisms mentioned above. This structure refers to the past year only and tries to recall any occasions on which the respondents felt fearful in the past year because they thought they might be victimised. In addition, information is gathered about the frequency and intensity of these feelings (Farrall, 2004). Let us first present the alternative question structure inspired by the work of Farrall and his colleagues:

*Q1: In the past year, have you ever felt fearful about the possibility of becoming a victim of crime? (yes, no, can't remember)*

*Q2: If yes, how frequently have you felt like this in the last year? (absolute number)*

*Q3: If yes, on the last occasion, how fearful did you feel? (cannot remember, not very fearful, a little bit fearful, quite fearful, very fearful)*

The first question (Q1) is a kind of filter question which aims to measure the 'prevalence' of fear of crime. Only those respondents who admitted their fear were asked the subsequent questions in the questionnaire. With the second question (Q2) one wants to gather information about the 'frequency' of the fear of crime feelings. Respondents were asked to give an approximation of this frequency, which could easily be categorised afterwards. The third question (Q3) probes the 'intensity' of the fear of crime feelings by using the last occasion as a reference point. Table 2 presents the results for this alternative question structure which was used in the key informant survey.<sup>7</sup>

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<sup>7</sup> This table is based on the presentation of the alternative question structure results as shown by Farrall and Gadd (2004).

Table 2: The incidence, frequency and intensely fearful experiences of crime in general in the past year (Q1, Q2 and Q3 combined)

	Not fearful			Low fear <sup>1</sup>			High fear <sup>2</sup>			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
<b>Never in past year</b>	273 81.5%	297 77.3%	570 79.3%	-	-	-	-	-	-	273 81.5%	297 77.3%	570 79.3%
<b>Once</b>	-	-	-	6 1.8%	5 1.3%	11 1.5%	5 1.5%	13 3.4%	18 2.5%	11 3.3%	18 4.7%	29 4.0%
<b>Twice</b>	-	-	-	8 2.4%	11 2.9%	19 2.6%	2 0.6%	7 1.8%	9 1.3%	10 3.0%	18 4.7%	28 3.9%
<b>Three times</b>	-	-	-	6 1.8%	7 1.8%	13 1.8%	5 1.5%	2 0.5%	7 1.0%	11 3.3%	9 2.3%	20 2.8%
<b>Four times</b>	-	-	-	0 0.0%	1 0.3%	1 0.1%	1 0.3%	6 1.6%	7 1.0%	1 0.3%	7 1.8%	8 1.1%
<b>Five and more times</b>	-	-	-	13 3.9%	15 3.9%	28 3.9%	16 4.8%	20 5.2%	36 5.0%	29 8.7%	35 9.1%	64 8.9%
<b>Total</b>	273 81.5%	297 77.3%	570 79.3%	33 9.9%	39 10.2%	72 10.0%	29 8.7%	48 12.5%	77 10.7%	335 100%	384 100%	719 100%

Notes: Total N = 719, as the 31 respondents who replied 'Don't know' to one or more of the questions have been excluded from the analyses. All percentages are of totals of the sample size.

1. Includes those respondents who said that they felt 'not very fearful' or 'a little bit fearful'.

2. Includes those respondents who said that they felt 'quite' or 'very' fearful.

The advantage of such a question design is the chance to combine frequency and intensity scores which can help to formulate more subtle pronouncements about fear of crime. In doing so, Farrall and Gadd (2004) found that 'only' 8 per cent of their sample, which was taken in the UK, frequently (five and more times) experienced high levels of fear. In Table 2 'only' 5 per cent of the respondents in the key informant survey frequently (five and more times) experienced high levels of fear. The results of the studies are remarkably identical. Split up by gender, 4.8 per cent of the male population and 5.2 per cent of the female population frequently (five and more times) experienced high levels of fear. The observed differences between men and women when traditional questions are used seem to be strongly reduced when this alternative question structure is applied. Over and above this the significant differences analysed between men and women in the traditional structure were not significant in analysis of the alternative question structure.

In summary, we can argue that publications of fear of crime distributions strongly depend on the measurement instrument, and we cite the huge differences between Table 1 and Table 2. Using a traditional single-item question and the measure of avoidance behaviour as the behavioural component of fear, one cannot but conclude that no less than 40% of the Belgian population experiences some feelings of unsafety or expresses some avoidance behaviour. It may be clear that this results in a severely distorted view on the 'fear of crime': the alternative question structure presents a much more balanced result. Thus when statements are made about the extent of 'fear' in a population on the basis of confusing items that do not measure the emotional affective component of fear of crime, this has misleading consequences in terms of evaluation and decision-making. In other words, studies that wrongly intend to measure the emotional affective component will result in a much more pessimistic view.

## **7.2. Correlational validity of avoidance behaviour, fear frequency and fear intensity**

It may be clear from the previous paragraph that univariate results and thus estimates of the proportion within a given population that experiences fear is seriously overestimated when more traditional measures that usually originate from the well-known large-scale surveys are used. Another concern that methodologists have identified is the question of the correlational validity of fear of crime measures. Especially when theories of fear and victimisation are tested, it is important to assess whether different concepts that are related to fear of crime yield different correlations with variant measures of fear of crime. This paragraph therefore tries to answer the question: do different measures of fear of crime have an impact on the relationship between fear of crime and some supposed related concepts such as perceived sense of community, perceived disorder and previous victimisation?

All correlations shown in Table 3 are statistically significant. It can be seen that avoidance behaviour is especially strongly correlated with perceived sense of community and perceived disorder, whereas the



scales measuring frequency and intensity of fear are more strongly correlated with previous victimisation. The fear intensity scale in particular is highly correlated with previous victimisation. This is an important finding that may shed some light on the discussion that has been going on in the literature. It seems that the impact of previous victimisation on fear may well be underestimated when the emotional affective component of fear of crime is confused with avoidance behaviour.

**Table 3: Correlations between fear of crime measures, perceived sense of community, perceived disorder and previous victimisation**

	Fear frequency	Fear intensity	Avoidance Behaviour
Perceived sense of community	-.24***	-.30***	-.38***
Perceived disorder	.22***	.27***	.30***
Previous victimisation	.36***	.44***	.20***

\*\*\* p < 0.001

### 7.3. Does social desirability affect the relationship between fear of crime and covariates of fear?

Methodologists point to the fact that measurement error arising from respondent characteristics can bias results. Social desirability was identified as one such respondent characteristic that may lead to biased results in surveys. The only strategy that allows for confronting empirical results with the effects of measurement error is to actually measure social desirability and to assess whether this respondent characteristic actually disturbs the relationship between theoretically relevant concepts. Thus, in order to get an impression of the impact of social desirability we calculated the partial correlations between the fear of crime scales and perceived sense of community, perceived disorder and previous victimisation. From Table 4 we can see that there is hardly an effect of social desirability on the empirical correlations between all constructs. All partial correlations are identical to the bivariate correlations shown above in Table 3. This finding is interesting because people often expect that some kinds of measurement errors will have a serious impact on empirical findings. In the case of the key informant survey, this is not the case.

**Table 4: Partial correlations between fear of crime measures, perceived sense of community, perceived disorder and previous victimisation, controlling for social desirability**

	Fear frequency	Fear intensity	Avoidance Behaviour
Perceived sense of community	-0.23***	-0.28***	-0.37***
Perceived disorder	0.21***	0.27***	0.30***
Previous victimisation	0.36***	0.44***	0.19***

\*\*\* p < 0.001

## 7.4. Social desirability and gender differences in fear

Sutton and Farrall (2005) empirically demonstrated that women score significantly higher on fear of crime scales and the lie scale than men, but additionally presented results that suggested that only for men does social desirability have an effect on fear of crime scores. Therefore controlling for social desirability is necessary to get a better understanding of gender differences in fear of crime. These findings were replicated in our key informant survey with some identical, but also some different, results.

Table 5 reveals the mean differences (and standard deviations) between men and women on different measures of fear and the EPQR-A lie scale as a measure of social desirability. From Table 5 it can be seen that, on average, women have higher scores than men on all constructs. This is consistent with most of the fear of crime studies and with the finding of Sutton and Farrall (2005) in particular. The differences between men and women are significant only in the case of 'avoidance behaviour' and the 'EPQR-A lie scale' (respectively:  $F(747) = 34.64, p = 0.001$  and  $F(747) = 22.65, p = 0.001$ ).<sup>8</sup> Anova tests revealed that in the case of 'fear frequency' and 'fear intensity' the differences between men and women are not significant (respectively:  $F(748) = 0.02, p = 0.887$  and  $F(742) = 0.54, p = 0.461$ ).

**Table 5: Means (and standard deviations) for fear of crime measures and the EPQR-A lie scale (n = 748)**

	Gender	
	<i>Men</i>	<i>Women</i>
<b>Avoidance behaviour **</b>	3.69 (1.26)	4.38 (1.85)
<b>Fear frequency (ns)</b>	2.76 (4.45)	2.80 (4.20)
<b>Fear intensity (ns)</b>	1.81 (2.96)	1.97 (2.85)
<b>EPQR-A lie scale **</b>	3.23 (1.40)	3.69 (1.25)

\*\*  $p < 0.01$

ns = not significant

Table 6 reveals that in the general sample, without differentiating between men and women, there seems to be no relationship between social desirability and avoidance behaviour, fear frequency and fear intensity. The correlations are negligible and not significant. When, however, the analyses are split up by gender and re-run, some significant correlations emerge. The results reveal that social desirability is inversely related to avoidance behaviour, fear frequency and fear intensity among women, whereas it is positively related only to avoidance behaviour among men. Social desirability is not significantly correlated with fear frequency and fear intensity as far as men are concerned.

<sup>8</sup> The reporting style of these Anova tests operates in the following fashion:  $F(\text{degrees of freedom}) = [\text{F score}]$ , significance level.

These findings are the opposite of what was found by Sutton and Farrall (2005). In that study, the only significant correlations between social desirability and fear of crime were related to men. These were negative correlations. Table 6 shows that in this study significantly negative correlations are related to women, whereas the correlation between social desirability and avoidance behaviour is significantly positive for men. This means that women who have high scores on the lie scale, and thus exhibit socially desirable responses, report lower scores of fear of crime. On the other hand, men with high scores on the lie scale report higher scores of avoidance behaviour. Therefore, on the basis of our key informant survey we cannot agree with the hypothesis of Sutton and Farrall (2005) that masculinity should lead to a suppression of reporting fear of crime feelings. Nor can we agree with the argument that women who are characterised by socially desirable responding behaviour should openly admit fear of crime feelings. Caricatural we could say that instead of ‘masculinity’, this study found a kind of ‘feminism’ which leads to more socially desirable responding and thus to a reluctance to report feelings of fear of crime as far as women are concerned. The question of whether this finding is culturally determined or not cannot be answered within the scope of this study. As already mentioned, the atypical sample of key informants in this study could also have an effect on these results. For that reason it is recommended that this study should be repeated with a representative sample of inhabitants.

**Table 6: Correlations between the EPQR-A lie scale and fear of crime measures for the whole sample, for women only, and for men only**

	EPQR-A lie scale		
	Whole sample	Women	Men
Avoidance behaviour	0.03 (ns)	-0.11*	0.15**
Fear frequency	-0.07 (ns)	-0.13*	-0.01 (ns)
Fear intensity	-0.07 (ns)	-0.13**	-0.02 (ns)

\* p < 0.05 \*\* p < 0.01  
ns = not significant

From Table 7 it can be clearly seen how social desirability affects the empirical relationship between gender and avoidance behaviour. This behavioural component of fear is the only fear of crime measure that significantly correlates with gender ( $r = .21$ ,  $p < 0.001$ ). This positive correlation means that women score higher on the avoidance behaviour scale than men (0=male, 1=female). To demonstrate the effect of social desirability on the relationship between gender and avoidance behaviour, we split up the whole sample in three approximately equal groups based on the lie scale; i.e. respondents with low scores, moderate scores and high scores on the lie scale. It can be clearly seen that the positive relation between gender and avoidance behaviour only exists for those respondents who do not answer in a socially desirable way. This result means that women show significantly more avoidance behaviour than men only when respondents with low and moderate scores on the lie scale are taken into account. When we focus exclusively on respondents with high scores on the lie scale there is no significant relationship between gender and

avoidance behaviour. Thus, the more respondents show social desirable responding behaviour, the less women and men differ in avoidance behaviour.

**Table 7: Correlations between gender (0 = male, 1 = female) and fear of crime measures by subgroups of social desirability**

	Avoidance behaviour	Fear frequency	Fear Intensity
<b>Gender</b>			
<b>Lie scale ↓ ↓</b> <i>low score<sup>1</sup></i>	0.30***	0.07 (ns)	0.09 (ns)
<b>Lie scale</b> <i>Moderate score<sup>2</sup></i>	0.21**	-0.10 (ns)	-0.02 (ns)
<b>Lie scale ↑ ↑</b> <i>High score<sup>3</sup></i>	0.04 (ns)	0.01 (ns)	-0.02 (ns)

\* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001

ns = not significant

1. Respondents (47.1%) with low score on the lie scale (0, 1, 2 or 3 'no' answers on the lie scale items)

2. Respondents (23.6%) with moderate score on the lie scale (4 'no' answers on the lie scale items)

3. Respondents (29.3%) with high score on the lie scale (5 'no' answers on the lie scale items)

## 8. Conclusion and discussion

Fear of crime is politically popular: it appears to provide governments with a new moral target and a well-established arsenal to attack it. Frequently, however, politicians blow the problem out of proportion from a populist perspective. With a punitive attitude towards crime and criminals they try to convince their electorate. In doing so, they often ignore the actual underlying problems (Chevigny, 2003; Scheingold, 1995). From such a policy-oriented perspective it is perfectly understandable that there is a widespread attention to the issue of fear of crime and the development of surveys measuring fear. From a criminological perspective, however, it remains very important to ask oneself what actually is measured, before drawing premature conclusions. Measurement issues are not studied in as much detail or as frequently as one would expect, given the attention the issue has had in worldwide victimisation surveys.

Although more research is needed in this domain, it is already clear from this small-scale study that more precise measures are necessary to evaluate fear of crime. Measuring fear of crime through more traditional single-item questions or scales that refer to avoidance behaviour – as is by and large commonly done in large-scale surveys that are conducted at the request of the (Belgian) government – is not without danger. Few studies have tackled measurement issues. This is especially true of the Belgian situation, with some exceptions (Pleysier, 2009). Measures that actually measure the frequency and intensity of fear reveal that fewer people really are afraid of crime, contrasting with the picture we receive when the behavioural component 'avoidance behaviour' and the single-item question 'does it happen that you feel unsafe?' are taken into account. Statements about the extent of 'fear' in a population based on confusing items that do not measure the emotional affective component of fear of crime have important consequences and often lead to a much more pessimistic view. In addition, the huge differences between men and women that can

be observed when fear of crime is assessed by more traditional measures seem to be strongly diminished when the emotional affective component of fear of crime is measured by an alternative question structure.

Furthermore, this study revealed that measuring 'fear' by different fear of crime components does have an impact on the correlations with theoretically important covariates. Although this study was empirically restricted to the study of perceived sense of community (perceived social cohesion), perceived disorder and previous victimisation, it is already clear that the correlation between previous victimisation and fear is seriously affected by the choices that scholars make when they measure fear of crime. This is a very important finding, especially when one reflects on the amount of discussion that has been going on between scholars on the ambiguous relationship that exists between previous victimisation and fear. In the measurement of avoidance behaviour, correlations with previous victimisation are moderate at best but when one actually measures the emotional affective component, it becomes clear that previous victimisation may have a greater effect than previously established.

The measurement of fear is not the only issue that should be taken into consideration in future studies of fear of crime. The actual measurement of potential confounders is another. Confounders may mask the 'true relationships' that exist between fear of crime and its theoretically derived correlates. This study was rather limited because it only took into account social desirability, whereas other potential validity threats exist (such as acquiescence). We found that social desirability does not affect the relationship between fear of crime measures and perceived sense of community, perceived disorder and previous victimisation, but we were able to demonstrate that social desirability does affect the relationship between gender and fear of crime. In particular, the significantly negative correlations for women's social desirability and all fear of crime measurements deserve attention. The correlation between social desirability and avoidance behaviour for men was significantly positive. In this study we found that women who gave socially desirable answers are characterised by a kind of reluctance to report feelings of fear of crime. Moreover, the observed differences in avoidance behaviour between men and women disappear when socially desirable responding behaviour is at stake. These particular findings of the key informant survey are the opposite of what was found in the similar study by Sutton and Farrall (2005). A possible explanation for these opposite results may be found in the atypical sample of key informants that was used for this study. For that reason it is recommended that this study should be replicated with a representative sample of inhabitants. Otherwise the question could be asked whether this finding could be culturally determined. In that respect more international comparative research could contribute.

Finally, we hope that this study brings the issue of carefully measuring constructs related to fear of crime and the study of potential confounders to the attention of both scholars and policymakers. Our understanding of fear cannot develop unless we pay attention to both measurement errors. Only by combining two strategies, avoiding error and measuring error, one can proceed and gain new knowledge about fear of crime in contemporary society.

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**Appendix 1: 'Fear of crime' items in the Belgian Security Monitor**

<i>Variable</i>	<i>FOC item</i>
v63	Does it sometimes happen that you feel unsafe? Is this...?
v57	Does it sometimes happen that you avoid certain areas in your municipality because you do not consider them safe? Is this...?
v58	Does it sometimes happen that you do not open the door to strangers in the evening or at night because you do not consider it safe? Is this...?
v59	Does it sometimes happen that you hide valuable things at home? Is this...?
v60	Does it sometimes happen that you avoid leaving home if it is dark? Is this...?
<i>(always/often/sometimes/seldom/never)</i>	

**Appendix 2: Descriptive statistics of sample**

<b>Belgian coast survey (2009)</b>		
<b>Postal code area level</b>		
Number of units: 18		
Total number of informants: 750		
<b>Background characteristics</b>	<b>Absolute counts</b>	<b>%</b>
<b>Professional background</b>		
Local shops and catering industry	492	65.6
Social work and medical doctors' surgeries	93	12.4
Local governance	111	14.8
Local police and private security	54	7.2
<i>Total</i>	<i>750</i>	<i>100</i>
<b>Gender</b>		
Male	346	46.1
Female	404	53.9
<i>Total</i>	<i>750</i>	<i>100</i>
<b>Age</b>		
18-25	69	9.2
26-35	158	21.1
36-45	222	29.6
46-60	251	33.5
60+	50	6.7
<i>Total</i>	<i>750</i>	<i>100</i>
<b>Length of stay in the postal code area</b>		
< 1 year	17	2.3
> 1 year & < 5 years	66	8.8
> 5 years & > 10 years	90	12.0
> 10 years	577	76.9
<i>Total</i>	<i>750</i>	<i>100</i>