THEORY: Crime is a social phenomenon which evokes fear as a consequence, and this fear of crime affects people not only at their place of residence or work, but also while travelling. Traditional methods for measuring fear of crime employ static household survey questionnaires. This limits the type of information that can be gathered on the times and spaces when people feel fearful. What’s more, the surveys do not capture actual experiences, but rely on recall, which is known for being affected by issues with memory.

PURPOSE: The purpose of this data collection technique is to collect data that will provide insight into when and where fear of crime is experienced, and by whom. This allows for a holistic understanding of perceptions of security covering people’s entire activity space (i.e. all places people interact with day-to-day). Collecting data on people’s perceptions and experiences as they occur in space and time allows us to identify, at the micro-level, what areas are perceived as safe and unsafe, and know precisely how that changes with different demographic groups, times of the day, days of the week, or other variables. This knowledge can be used to design targeted, efficient and effective situational interventions to enhance perceptions of safety in the built environment.

METHOD: The Fear of Crime Application (FOCA) is deployed as a questionnaire on a mobile device. It is a powerful way of seeking information from people during (and about) their daily activities. Utilising in-built sensors of phones allows for real-time collection of spatial (GPS) and temporal (time and date) information about the report. This means that when a participant answers the question “In this moment how worried are you about becoming a victim of crime?” information is collected about their characteristics, when and where they feel worried, as well as their answer.

Participants download the application from an app store onto their own mobile devices before filling out a quick demographic survey. Participants are subsequently sent reminders or “ping’s” to complete the questionnaire. This can be set to remind them at certain times (e.g. during morning peak travel times and evening peak travel times) or in certain locations (e.g. when they come within 50 meters of Camden Town Station). Participants can either complete the survey questionnaire about their fear of crime levels when the ping is sent, or at a non-ping time (if they want to record an experience outside of this time). Retrospective annotation option is also offered for participants if they would prefer to remove themselves from a dangerous situation before using their (potentially) valuable phones. The data collected contains demographic information (who sent the report), GPS (where it was sent from), date and time (when it was sent), what the person felt (fear of crime), which option they used to send the report (responding to a ping, voluntarily, or retrospectively), and any additional questions put to participants (in this case whether they are on public transport or not).

APPLICATION: To determine the feasibility of this method, a pilot study was conducted. We recruited a convenience sample of 27 people. Participants submitted a total of 467 data points over the course of two weeks. Number of reports per person varied from a minimum of 2 (one a week) and a maximum of 44 (over 3 a day). On average, people submitted 16 reports (over 1 each day) which, it can be argued, give a good insight into how people experience fear of crime in the day-to-day.
THEORY: Crime is a social phenomenon which evokes fear as a consequence, and this fear of crime affects people not only at their place of residence or work, but also while travelling. Higher fear of crime is associated with less cycling and walking, increased use of private transport, and can act as a barrier to travel. To encourage use of public transport, perception of safety during the entire door-to-door journey needs to be better understood in order to be improved.

Traditional methods for measuring fear of crime apply household survey questionnaires, where respondents are typically asked whether they are ‘very’, ‘fairly’, ‘not very’ or ‘not at all’ worried about becoming a victim of crime. Such research omits many of the complexities involved with experiencing fear of crime in everyday life. Instead, these measures often reflect generalised attitudes towards risk and future-oriented anxieties, rather than actual experiences. Recall-based surveys that ask participants about their experiences in the past 3 -12 months are also affected by issues with recollection. Memories of emotional experience from longer than about two-weeks draw on general knowledge from people’s beliefs rather than the specifics of the event itself.

Data collected by retrospective questionnaires is further restricted in terms of level of detail provided about when and where fear of crime is experienced. Geographically it is usually restricted to views of the residents of an area, and excludes perceptions of people who travel to or through that area (e.g. people who work there, or who walk through that neighbourhood to catch the train). Temporally (i.e. by time) we normally get a “during the day” and “after night” division, which leaves no way of telling if there are peak times for fear of crime within all hours of darkness. Inaccurate measurement – in space or time - can lead to misguided interventions and wasted public agency resources. Even experts struggle to consistently identify areas of high crime (e.g. mapping crime hotspots helped show that police perceptions of crime patterns do not always correlate with where the most crimes are recorded). The same may be true for fear of crime. In order to gain insight into the nature of fear of crime, a new method of measurement is needed that captures these dynamics.

PURPOSE: The purpose of this technique is to collect data that will provide insight into when and where fear of crime is experienced, and by whom. This allows for a holistic understanding of perceptions of security covering people’s entire activity space (i.e. all places people interact with day-to-day). Data collected by this method is not restricted by traditional limitations. Instead, collecting data on people’s perceptions and experiences as they occur in space and time allows us to identify, at the micro-level, what areas are perceived as safe and unsafe, and know precisely how that changes with different demographic groups, times of the day, days of the week, or other variables. This knowledge can be used to design targeted, efficient and effective situational interventions to enhance perceptions of safety in the built environment.
The Fear of Crime Application (FOCA) is a data collection technique that samples people’s everyday experiences to provide space, time, and individual information about fear of crime in their entire activity space (all places people interact with day-to-day).

The FOCA is deployed as a questionnaire on a mobile device. It is a powerful way of seeking information from people during (and about) their daily activities. Utilising in-built sensors of phones allows for real-time collection of spatial (GPS) and temporal (time and date) information about the report. This means that when a participant answers the question “In this moment how worried are you about becoming a victim of crime?” information is collected about their characteristics, when and where they feel worried, as well as their answer. The following will outline and illustrate how this works:

1. Participants download the application from an app store onto their own mobile devices.
2. The first time the app is launched, users fill out a quick demographic survey to collect information such as age, gender, etc. This only needs to be completed once, and is linked to all submitted reports.
3. Participants are sent reminders or “ping”s to complete the questionnaire. This can be set to remind them at certain times (e.g. during morning peak travel times and evening peak travel times) or in certain locations (e.g. when they come within 50 meters of Camden Town Station).
4. When participants receive this ping they open the application and complete the survey questionnaire about their current state.
5. Participants can also report something un-prompted. So if they experience a fear of crime event at a non-ping time, they can still send a report about it.
6. Retrospective annotation option is also offered for participants if they would prefer to remove themselves from a dangerous situation before using their (potentially) valuable phones. In this version participants are offered the option of finding the location of the event on the map, and telling how many hours ago the incident happened, allowing for an adjusted GPS and timestamp value that is still accurate to the report.
7. Finally the data collected will contain demographic information (who sent the report), GPS (where it was sent from), date and time (when it was sent), what the person felt (fear of crime), which option they used to send the report (responding to a ping, voluntarily, or retrospectively), and any additional questions put to participants (in this case whether they are on public transport or not) (Figure 1).
Figure 1: Methodology of the experience sampling application
APPLICATION: The Fear of Crime Application (FOCA) is a data collection technique that samples people’s everyday experiences to provide space, time, and individual information about fear of crime in their entire activity space (all places people interact with day-to-day).

To determine the feasibility of this method, a pilot study was conducted. We recruited a convenience sample of 27 people. In traditional experience sampling studies (studies that seek information about everyday activities and experiences), sample sizes of 5 to 10 are common, and so in comparison 27 participants is a good number for this type of study. Participants submitted a total of 467 data points over the course of two weeks. Number of reports per person varied from a minimum of 2 (one a week) and a maximum of 44 (over 3 a day). On average, people submitted 16 reports (over 1 each day) which, it can be argued, give a good insight into how people experience fear of crime in the day-to-day.

The majority of the reports were “Not at all worried” reports (86.5%), followed by “Not very worried” (9.4%), “Fairly worried” (3.6%), and “Very worried” (only 2 reports). Data about time and location of reports revealed multiple reviews of the same locations, which will allow for the creation of collective ‘fear maps’ (see for example Figure 3 for the pilot map), and a good distribution of reports throughout different hours of the day (Figure 2).

Another finding from the pilot was that there was a mismatch between the pre-experiment questionnaire and the reports – meaning three people did not complete it before they began the study. This was assumed to be because they had to do this as a separate online form. To make it easier to fill in, and as a pre-requisite, this has now been changed to all be done within the app.

Overall, the preliminary results from the pilot study demonstrate that this methodology can be used to collect dynamic spatial, temporal, and individual data about fear of crime experienced in everyday life in a holistic manner that covers people’s entire activity space.

This method is not restricted by problems of recall, or tied to static representations of time and place. The map also illustrates the variation in fear of crime in very small areas, which highlights the need for precise spatial data. To ensure that limited policing or public agency resources are targeted effectively to problem areas and times, this method can be utilised to collect the data that can then inform such policy and planning decisions.
Fear of Crime in Camden and Islington

Fear of crime measured over 2 weeks using experience sampling via a mobile application

Figure 2: Fear of Crime map for pilot study
GENERAL RESOURCES


A SELECTION OF ACADEMIC PAPERS AND BOOK CHAPTERS


