

Celia CALLUS, Noellie BROCKDORFF, Sunčica ZDRAVKOVIĆ

Chapter 3. Attitudes Towards Using a Community Policing App

Table of Contents

Abstract.....	71
1. Introduction.....	72
1.1. Community Policing.....	72
1.2. Risk and Fear of Crime.....	73
1.3. New Technology in Policing	73
1.4. Community Policing App	74
2. Method.....	75
2.1. Developing the CITYCoP App Features.....	75
2.2. Descriptions of the App Used as Research Stimulus	76
2.3. Research approach	77
2.4. Participant Recruitment and Group Compositions.....	78
2.5. Ensuring Consistency Across Cities.....	80
3. Discussion of Results.....	80
3.1. Perceptions of Safety in Local Areas and Attitudes towards Local Police	81
3.2. Reactions to the Concept of a Community Policing App	83
3.3. App Appeal and Perceived Benefits	84
4. Conclusions	86
References.....	88

Abstract

One of the main aims of the CITYCoP project was to develop a community policing app that would be capable of being used throughout the EU and take into consideration the needs of both police forces and citizens. This chapter describes the research undertaken as part of the CITYCoP project to explore citizens' needs and expectations from community policing tools

with the objective of identifying what will lower citizens' feelings of insecurity, increase feelings of security and increase the use of community policing tools. Another key objective of this research was to understand whether a smartphone app, with the functionalities being proposed, was likely to be downloaded and used by citizens. The study adopted a two-phase qualitative approach including: face-to-face discussion groups and participant in-home testing of an app proto-type.

Keywords

App, Apps, Social media, Community policing, Police, Policing, Risk, Crime, Fear, Security, Citizen, Participants, Europe, Citizen engagement, CITYCoP.

1. Introduction

Community policing is a complex social construct that unfortunately does not have a universally accepted definition (Tilley, 2008). A number of definitions have been offered which vary according to theoretical points of view, era, and practical needs (Seagrave, 1996). Most of these definitions emphasise reduction of *fear of crime*, a phrase used in criminology research to describe various negative emotional and cognitive states linked to crime (for example COPS, 2014). The reduction of fear of crime is achieved through another omnipresent characteristic of community policing: partnership between the police and the community. Some, more philosophically inclined authors, also mention improvement in the quality of life (Tilley, 2008) and the proactive role of citizens (Skolmick and Bayley, 1988). Given this state of the literature, for the purpose of our project (CITYCoP), we adopted a specific working definition (CITYCoP, Deliverable 3.1, 2016): "Community policing is a participatory approach to the production of 'security' – understood as a common good – on the part of the police, in specific territorial areas, through collaboration or a true partnership with residents and local stakeholders, playing in various ways an active and propulsive role" (for more on this definition and an in-depth discussion of the sociology of community policing see Chapter 1 of Part I, in this volume).

1.1. Community Policing

Community policing was developed in Anglo-Saxon influenced countries in the 1980s and represents an innovative, modern mode of policing. In the last few decades it has become a dominant modus operandi in several countries such as the UK, United States, Canada, and Australia (Oliver, 2000). Community policing seems especially well-suited to the structure that police forces have acquired in democratic societies, with a strong emphasis on citizens' well-being and a well-established trust in state institutions. The practices of community policing can be, through their link to the reduction of fear of crime, linked to several crucial concepts, such as the perception of safety and crime-related risk perception.

1.2. Risk and Fear of Crime

Risk perception is considered the best predictor of fear of crime (Henson, Reyns, & Fisher, 2013) and is often equated with security (Kanan, & Pruitt, 2002). The concept of risk is borrowed from the natural sciences, where it is defined as the objective probability distribution of adverse effects (Waschinger *et al.*, 2010). In the context of crime, the meaning of risk is less clear; it can correspond to the objective risk of adverse events but might also be understood as a socially constructed subjective phenomenon (Renn, 2008). As such, risk perception can be measured either using a quantitative or qualitative methodology, although the latter seems better suited (Sjöberg, 2000).

Perceived risk related to crime is sometimes defined as the cognitive component of the fear of crime (e.g., Hale, 1996; Lorenc *et al.*, 2012). Within the framework of the vulnerability hypothesis, Killias (Killias, 1990) defines risk perception as the interaction of three factors: (1) the objective level of exposure to the risk, (2) the level of control people have, and (3) the seriousness of consequences. Although all three factors seem intuitively obvious factors, actual crime rates seem to be only mildly correlated with perceived risk (Hraba, *et al.*, 1998; Mesch, 2000). As a result, in this study we have focused more on the other two factors.

In addition, we were interested in attitudes toward the police. The easiest way to assess citizens' views on police performance is through public opinion surveys, in the form of questionnaires. Most such published studies find that people value police efforts such as the mainly traditional efforts oriented toward reducing crime rates. Crime prevention activities and similar initiatives are viewed as less effective in fighting crime (Beck, Boni, and Packer, 1999; John *et al.*, 1997). At the same time, most people agree that it is important to include community policing through different types of activities when it comes to crime prevention (Webb and Ketz, 1997). In research carried out in London, citizens were also found to value the police not only when dealing with crime and criminals but also when they deal with the community in a civil and fair manner, and when they deal with victims, preserving their dignity and defending them (Jackson and Bradford, 2010). These results are supported by findings in Chicago, in a study that examined regular encounters between police and citizens (Skogan, 2005). Skogan stresses the importance of what they call the police "bedside manner" that seems to be evaluated highly by citizens: patience, attention, showing concern and willingness to share information.

1.3. New Technology in Policing

Development of technology, such as wearable devices, enabled another giant leap in community policing and crime prevention. Mobile phones and apps permit fast communication, extensive spread of information and the forming of ad hoc communities based entirely on geographical proximity. An app connected to a location map was suggested in 2010 as a way to tag the spatial locations of unsafe urban areas (Blom *et al.*, 2010). The use of apps was shown to be successful in the reduction of fear of crime in vulnerable groups such as elderly citizens (Blythe, Wright and Monk,

2004) and women (Satchell and Foth, 2011; Cumiskey and Brewster (2012). Several such apps have been examined in the academic literature (for example, *ComfortZones* in Blom *et al.*, 2010; or *CityWatch* in Kadar and Pletikosa Cvijikj, 2014).

The use of mobile phone apps has become ubiquitous amongst the residents of countries with developed economies, especially in Anglo-Saxon influenced countries. Therefore, it is unsurprising that such countries have seen a proliferation of specialised apps for crime prevention and community policing. It is an empirical question whether the two concepts of community policing and mobile phone apps would be a similarly good fit in other European countries. With this in mind, we started our research in Sheffield, UK, and included another five European cities, each in a different country, which are not typically considered to be Anglo-Saxon influenced.

Two main differences may be expected in other cities. One difference may relate to the use of apps in the context of crime and personal security. Another is to do with the attitudes toward the police that may be different in each city. Community policing apps do not exist in a vacuum but rather present one type of communication channel between citizens and police.

If community policing is facing problems in certain cities, the introduction of technology, such as a community policing app, might amplify the problems, especially if the community views it as an alien concept. The literature suggests that in many places community policing is not fully implemented and practices lag behind theory. Community policing may attract some criticism and there is often a discrepancy between the resources allocated to community policing and the work load it entails (Taylor, *et al.*, 1998; Yero *et al.*, 2012; Donnelly, 2013). Heterogeneous neighbourhoods seem to represent an additional challenge for community policing (Hills, 2011).

1.4. Community Policing App

When a community policing app is launched, technology enters an already complex arena, changing the routine and established interaction patterns between the police and members of the community. As already mentioned above, citizens very often evaluate the effectiveness of the police based on such patterns of behaviour. In the context of a policing app, the police are expected to act in “cyber-neighbourhoods” (Williams *et al.*, 2013), which requires a completely different set of skills to that in other police work. Social media, such as Facebook and Twitter, are already used by a number of police forces worldwide (Verhoeven *et al.*, 2011), but these are more suited to dissemination, rather than receiving information from the public. An app specially designed for community policing represents a further technological advance as it can encompass features such as Internet access, GPS for precise location, and an option to upload photos and videos from a mobile device. Hundreds of such apps have already been implemented.

Not all community policing apps are developed by the police. For example, the *NeighborhoodWatch*, *SnapScouts*, and *iWatch* apps are

citizen-led initiatives. When interacting with the police using the Internet and mobile apps, citizens especially favour interactive tools, collective actions, improving social ties, fast distribution of information (Lewis and Lewis, 2012), and exposure to objective information (Ardanaz *et al.*, 2014). However, some citizens doubt whether the police would take app submissions they received from the public seriously and whether citizens will remain anonymous when sharing information (Lewis and Lewis, 2012). Although there is a very limited number of studies investigating citizens' perception of community policing technology, community app user reviews show 53% completely positive comments and 30% negative comments. Most users expect to see community policing apps on the market and these apps generally seem to reduce the fear of crime (D.4.1). It would also be expected that the interactive technology would improve perceptions of, and attitudes towards, the police.

One of the main aims of the CITYCoP project was to develop a community policing app that would be capable of being used throughout the European Union and to take into consideration the needs of both police forces and citizens. This chapter describes the research undertaken as part of the CITYCoP project to explore citizens' needs and expectations of community policing tools with the objective of identifying what will lower citizens' feelings of insecurity, increase feelings of security and increase the use of community policing tools. Another key objective of this research was to understand whether a smartphone app, with the functionalities being proposed, was likely to be downloaded and used by citizens.

This chapter describes a two-part qualitative study carried out to determine citizen reactions to the concept of a community policing app and subsequently to a prototype of said app. Full details of the methodology are given below. A discussion of the findings and the recommendations that were made as a result of these, follows.

2. Method

A key objective of this research was to understand the appeal and likely usage of a community policing smartphone app aimed at residents in European cities. The study adopted a two-phase qualitative approach, including face-to-face discussion groups and participant in-home testing of an app prototype. The objective of the first phase of the research was to establish reactions to the concept (including a list of functionalities) of the community policing app developed by the CITYCoP project.

The findings from the first phase fed into the development of the prototype which was the subject of the second phase of the study. The aims of the second phase were to determine whether the prototype meets citizen expectations in terms of ease of use and functionalities delivered.

2.1. Developing the CITYCoP App Features

The features of the community policing app proposition tested in this study were developed in consultation with representatives of law enforcement

authorities based in Bucharest, Florence, Hanover, Lisbon, Paris and Sheffield.

Also involved in the designing of the proposition was a team of technical developers which contributed to defining what a feasible functionality set for the app would be. After several discussions, a final app proposition description was drafted which was compatible with police back-end capabilities and the requirements of the technology. This proposition description (given in Section 2 below) was used to test research participants' reactions to the app concept and to what it would allow users to do vis-a-vis communicating with their local police and retrieving information.

2.2. Descriptions of the App Used as Research Stimulus

The app was presented to research participants using a series of five showcards, shown in Fig. 1 below. Initially Showcard 1 was presented and discussed to receive reactions to the concept of a community policing app. After this, the other four showcards were presented in succession (the order was changed across groups) and reactions to each functionality were noted and discussed in detail.

Showcard 1 – Concept description

A number of cities, including <CITY>, are considering ways in which you can help make your city safer.

A new app is being developed which would allow you to communicate with the police. You would use this app, for example, to communicate with the police about things like anti-social behaviour, litter problems and crime situations.

The app would also allow local police to communicate information to you that may be relevant to activities going on in your area and that would also be aimed at keeping you safe.

The app would be free and easy to install on your smartphone. You would also be able to uninstall it easily any time you wish to do so.

Showcard 2 – Emergency button

This button is intended for those situations in which you would need direct and immediate communication with emergency services.

It will initiate a phone call to the existing <999/112/LOCAL EQUIVALENT> services and will send an electronic signal to the authorities.

The app will also enter into an emergency status, meaning that the police will know that the user of the app is in an emergency situation until it is manually disabled.

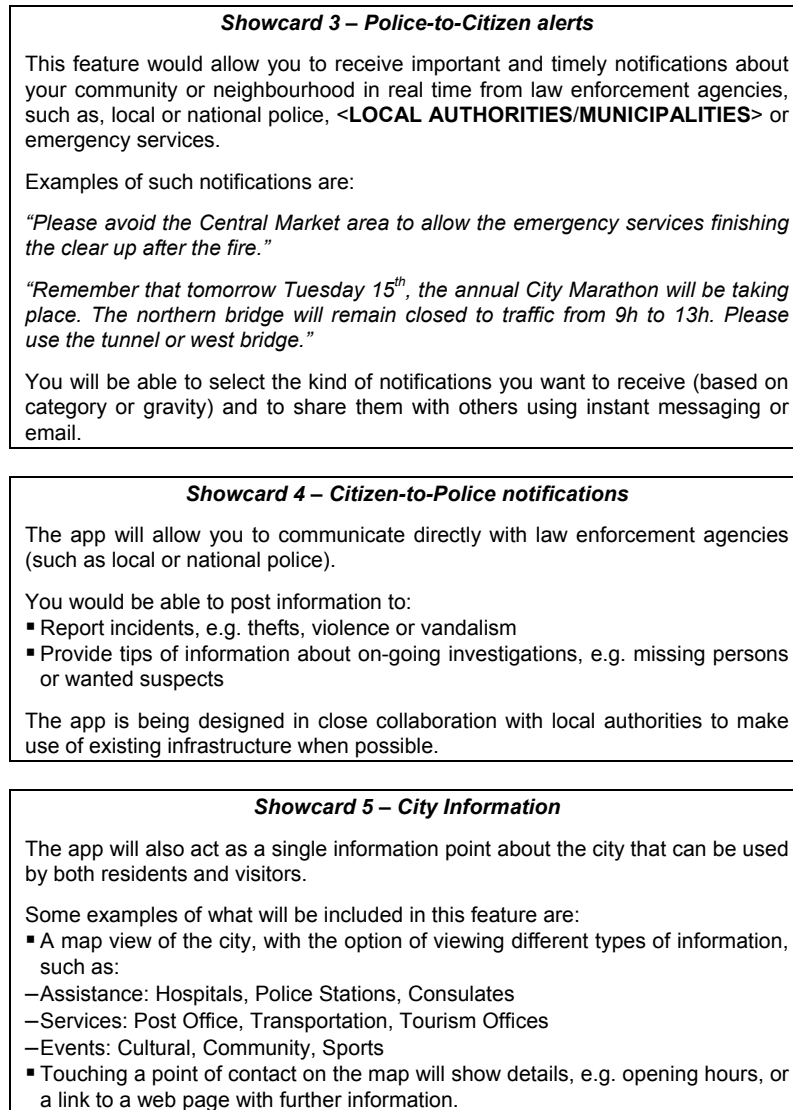


Figure 1: Showcards used to present the app proposition to research participants

2.3. Research approach

A series of three, 90-minute focus groups were held in six European cities. The six cities were:

- Bucharest (Romania)
- Florence (Italy)

- Hanover (Germany)
- Lisbon (Portugal)
- Lyon (France)
- Sheffield (United Kingdom)

The face-to-face discussion group setting was chosen to provide an environment conducive to exploring possible drivers to engage with community policing tools and concerns that may exist around this (such as fears around a lack of anonymity; vulnerability to possible retribution by third parties; threats to community cohesion, etc.). The group dynamic also enables the researcher to gauge the perceived relevance and strength of appeal of the proposition, encourages ideas for improvement and determines the likelihood to consider the app.

Local moderators conducted the sessions and all the discussion groups were carried out at centrally-located facilities which were easily accessible by public transport. Participants were recruited from within an approximate 30-minute travel radius of the facility.

The locations were chosen to mirror the degree of diversity across European city types by region, population size and city focus, such as cultural tourism in Florence vs the stronger focus on industry in Sheffield.

All materials – screener questionnaires, topic guides and showcards – were translated and used in the local languages by researchers based in the respective cities and all groups were audio/video recorded. The recordings were used to draw up detailed notes which were then utilised by moderators to carry out analyses and report writing.

2.4. Participant Recruitment and Group Compositions

Across all the cities, participants were recruited using locally-based, full-service market research agencies using a recruitment questionnaire.

All participants were informed of the purpose of the research, that it would be audio/video recorded and how the output of the discussions would be used. Considerations around confidentiality and data protection were also explained and all participants were asked to sign a 'consent form' to confirm their permission for the data to be used as described.

Each participant was incentivised following standard industry practices for the city concerned, i.e. using cash payments or shopping vouchers. These were paid out to participants at the end of each session. The recruitment criteria for the study were:

- **Gender:** Approximately equal split of male and female participants
- **Three age groups:** 18-30, 31-50, 51-65
- **Three life stages:** While this was not a set quota, the age groups were recruited to include the following three life-stages:
 - 18-30: Singles or couples without children living at home
 - 31-50: Single parents or couples with children under 18 living at home
 - 51-65: Singles/Couples/Widow/ers with or without children under 18 living at home
- **Two Socioeconomic groupings by key household earner:** An equal split of groups was recruited along the ABC1 and C2DE definitions,

Based on the UK Market Research Society (2010) definitions. The accepted industry-definitions for each grade are shown in summary in Table 1 below. These were adjusted to align with local guidelines where necessary.

Social Grade	Description
AB	Higher & intermediate managerial, administrative, professional occupations
C1	Supervisory, clerical & junior managerial, administrative, professional occupations
C2	Skilled manual occupations
DE	Semi-skilled & unskilled manual occupations, unemployed and lowest grade occupations

Table 1: Key occupational categories included in each social grade

- **Smartphone ownership and usage:**
 - All participants owned a smartphone with an operating system compatible with the beta prototypes i.e. iOS, Android or Windows
 - All had downloaded (autonomously or with the help of a family member or friend) at least one app over the previous twelve months.
- **Exclusions:** Participants who had an extreme distrust of LEAs were excluded from the study. This was identified using attitude statements in the recruitment questionnaire. Conversely, participants who had an atypically high level of engagement with the police were also excluded using the criterion of recent participation in police-led public debate. As per standard practice, individuals who may have atypical attitudes or reactions to the research approach or subject matter were also excluded. The criteria for exclusion were current employment in:
 - market research
 - law enforcement,
 - security services, and
 - the legal and judiciary sectors.

A total of 18 focus groups of between eight and ten participants each were carried out. A breakdown of all focus group profiles is shown in Table 2.

City	Age group		
	GROUP 1 18 – 30 <i>Mainly singles or couples with no children under 18</i>	GROUP 2 31 – 49 <i>Mainly singles or couples with children under 18 living at home</i>	GROUP 3 50 – 65 <i>Mainly singles or couples with no children under 18 living at home</i>
Bucharest	C2DE	ABC1	C2DE
Florence	C2DE	ABC1	C2DE
Hanover	C2DE	C2DE	ABC1
Lisbon	ABC1	C2DE	ABC1
Lyon	ABC1	C2DE	ABC1
Sheffield	ABC1	ABC1	C2DE
TOTAL	6	6	6

Table 2 Group profiles per city

2.5. Ensuring Consistency Across Cities

All local agencies were briefed individually to ensure a common understanding of the objectives and recruitment criteria.

To ensure that the recruitment criteria, topic guidelines and research stimulus were all fit-for-purpose, the first set of focus groups in Sheffield were used as ‘pilots’. Sheffield was chosen as the ‘pilot city’ with the objective of starting the research in an Anglo-Saxon culture which was closest to the idea of community policing and providing a basis for comparison for the rest of the cities.

3. Discussion of Results

In designing this research, it was felt to be important to understand participants’ perceptions of:

- Levels of safety in their neighbourhood
- Trust in, and effectiveness of, local police
- Communicating with local police via a smartphone app

These findings allowed us to determine the context within which the app would be introduced and any existing attitudes or perceptions that could influence take-up beyond the app’s functionality *per se*.

3.1. Perceptions of Safety in Local Areas and Attitudes towards Local Police

Perceptions of safety of local neighbourhoods across all cities were consistently positive. All of the research participants felt that their city was generally safe, with rare exceptions.

Participants distinguished between three types of crime-related threats. Those that:

1. pose a threat to one's personal safety, such as 'muggings', 'hate crimes', sexual violence, stabbings or other armed violence;
2. are relatively minor and often more akin to an 'annoyance' such as: bag-snatching and minor thefts or noisy neighbours; and
3. appear to be relatively 'contained' within certain groups and areas/streets, such as, drug dealing and gang-related violence.

The most common reaction to the first type of crime is avoidance i.e. participants will steer away from areas they believe to be dangerous or where they are likely to feel more vulnerable (e.g., city parks at night). Some also adopt behaviours like changing their route or calling a partner/spouse as they walk through a particular area.

When talking about the second type of 'minor' crime, participants generally agree that this can be minimised by staying alert and generally being aware of their surroundings. The common perception is that they are relatively successful at keeping this type of incident at bay but may, very occasionally, be caught unawares.

With the third type of crime, many say that they are aware of such activities but believe that they do not concern them and are not a direct threat to them personally. The large majority will turn a blind eye and avoid the area, if possible.

"It's a safe city with isolated incidents. You never feel scared in town but you do hear about stuff."

Sheffield, 18-30, ABC1

"I pay attention when I walk around with my handbag but I have no major fears."

Lyon, 18-30, ABC1

"It's a very safe city but I wouldn't walk through the park alone during the night."

Hanover, 18-30, C2DE

These findings support Killias's vulnerability hypothesis framework in which perception of risk is the product of interactions between exposure to risk, the level of control people feel they have over the situation, and the seriousness of consequences (Killias, 1990). Research participants across all cities felt their cities were safe, despite being well aware of the potential for being victims of crime. For all of the three types of crime-related threats described above, participants felt a measure of control in so far as they had developed behaviours that would reduce the risk of becoming victims of crime, mostly by avoiding dangerous areas. The impact of the seriousness of the consequences of various crimes in how threat level is

perceived is reflected in the three levels of crime-related threat that emerged from this research. Objectively, gang-related violence may be viewed as having potentially very serious consequences. However, as participants believe that such crimes can be avoided by steering away from known areas, these crimes do not have a major bearing on the perception of safety in the cities.

In this study, attitudes towards the local police are generally positive. This is fairly typical of attitudes towards local policing. For instance, a recent study about policing in England and Wales found that just over half of the more than 16,800 respondents in the study are satisfied overall with local policing and most participants agree that the police treat people fairly and with respect (Ipsos MORI, 2017). However, as mentioned above, this does not always translate into positive perceptions of police efforts in fighting crime (Beck, Boni and Packer, 1999).

Prevalent across all the cities are perceptions that police lack the resources – human and material – to do their job effectively. This was most often attributed to cuts in funding which meant that more officers were being “*sucked into doing desk work*”. There were also widespread perceptions that judicial systems often make it difficult for the police to have any real impact. Laws and/or legislative procedures are seen to be too onerous or too lax – thus requiring high expenditure of police resources in the first instance or the release of individuals who pose a potential threat in the second. Perceptions in Sheffield were slightly more positive, with many descriptions of the local police as helpful and friendly.

Overall, these considerations generate a considerable degree of sympathy for the police and an overriding perception that “*they are doing their best*”. This is even more marked amongst older participants who, in spite of reporting that they feel less safe than their younger counterparts, are more likely to attribute the ‘blame’ to restrictions placed on the police rather than to deficiencies intrinsic to the force itself.

These perceptions often lead to participants failing to report minor crimes if they feel that there will be no satisfactory resolution. A case in point is petty theft or pickpocketing where there is generally very little confidence that the stolen goods will be retrievable.

Participants in the ‘blue collar’ socio-economic category are generally less positive and more guarded in their dealings with the police. A very small minority feel that, should they report a crime, they may be implicated in the investigation. This is based on direct or third-party experience and is a barrier to interacting with the police via any channel.

Police patrolling the streets is seen as a very strong indicator that the local force is proactive about keeping the community safe. A key perceived benefit of having more police on street patrol is that the very presence of officers may deter criminal activity. Furthermore, should an incident occur, they are more likely to be at the scene of a crime, build relationships with the local community and act as positive role models for young people.

There is a sense that participants in all cities feel somewhat distant from their local police. They would like officers to be physically present and to be aware of local ‘goings-on’ simply by walking around the city. This

would also put the police in touch with the more vulnerable members of the community. This was particularly the case in Sheffield where the idea of the friendly 'bobby on the beat' was still quite prevalent and was most frequently mentioned by participants over 40.

"It's funding. There's not enough money for them. (...) Central government has made reductions which sucks police into support admin jobs."

Sheffield, 51-65, C2DE

"Sometimes they do not come, because they know their intervention is not going to change anything because of the legislation."

Florence, 31-49, ABC1

"The problem is that they want to act in certain ways but they can't. They don't have proper legislation to punish certain types of crime."

Lisbon, 51-65, ABC1

3.2. Reactions to the Concept of a Community Policing App

Participants immediately infer that the purpose of the app is to increase their level of personal safety (and that of their loved ones) and to bring the police within reach by adding a channel that is always accessible via their smartphone.

A community policing app may also have a positive influence on perceptions of the police overall. Its introduction is seen as a sign that the latter are proactively responding to changes in technology and communication behaviours. Many participants spontaneously draw parallels with police Facebook and Twitter accounts, which are generally viewed positively.

"The idea for the police to develop an app is great."

Lyon, 18-30, ABC1

"Good idea but you're going to give them more work."

Sheffield, 18-30, ABC1

"It's a lot easier to take a picture when you notice something wrong, as opposed to describing it or talking about it. With the app, you don't have to say anything, you don't have to make a call or talk to those people at the call centre."

Bucharest, 18-30 CD2E

"I am convinced that when people have access to this app, many more will have the courage to use it, compared to now. They would be more likely to call the police because, right now, there is too much bureaucracy [when making a call]"

Bucharest, 31-49 ABC1

While participants feel generally safe and confident of being able to manage low level threats in their city, a community policing app, such as the CITYCoP app, is well placed to meet two citizen needs:

(1) safeguarding their personal safety in cases of serious emergency and (2) improving their overall wellbeing by being alerted to disruptions in their city. These two messages are the most likely to grab attention and prompt potential users to consider downloading the app.

3.3. App Appeal and Perceived Benefits

Reactions to the app were consistent across all cities. There were no major differences in reactions to the app between participants in Sheffield and those in other cities. It had been hypothesized that people in Sheffield would be more receptive to community policing apps as the idea of community policing that the app embodies is more prevalent in Anglo-Saxon cultures. Results did not support this hypothesis. This may be because the app is seen as a tool promoting personal safety and the safety of loved ones. It is not a vehicle for supporting community policing. Indeed, the concept of community policing is foreign to the overwhelming majority of participants.

The most appealing functionality of the app is that it is most likely to benefit the individual (as opposed to the wider community). Police-to-citizen alerts provide real-time, region-specific, time-saving information to the user. Traffic updates are likely to be the most useful, but participants also expect information on, for instance, severe weather warnings. Previous research has also found that citizens view the provision of objective information as one of the key benefits of interacting with police on social media and using police apps (Ardanaz *et al.*, 2014).

The idea of an Emergency Button is particularly well received amongst participants aged 30 and over and those who are responsible for vulnerable persons, such as elderly parents and children. It would be used in situations of personal emergencies (such as car accidents, injuries, house break-ins, etc.) or even when witnessing a crime and wanting to report it to the police. The key benefit of this functionality is that by using geo-tracking it eliminates the need to communicate one's location which is particularly useful if the user is in an unfamiliar area.

"In case something happens we always have our mobile with us. Excellent idea!"
Lisbon, 31-50, C2DE

"If each citizen has this functionality on their smartphone, it may reduce crime. The next generation of smartphones should come pre-equipped with this!"
Lyon, 31-50, C2DE

Police-to-citizen alerts are the most likely to encourage repeat usage and discourage participants from uninstalling the app. This functionality is particularly well received amongst ABC1s and the under 50s in the study. The most common application of the functionality would be to monitor traffic issues. However, it is imperative that users can set their own preferences regarding the type and frequency of messages. Being able to share alerts easily with others on social media platforms would also be a welcome benefit.

“A push notification if there’s danger for human lives. No matter if it’s mine or others’.”

Hanover, 31-50, C2DE

“These notifications should be selected based on your interests – at city or national level. For example, if I am in one area of the city and the traffic is blocked in a totally different one, I am not interested in that information.”

Bucharest, 31-49 ABC1

Citizen-to-police notifications are seen as a novel approach to citizen reporting. It has wide appeal amongst participants although a minority are wary of the danger of the information being leaked to third parties. Previous research (Lewis and Lewis, 2012) has also found that some people have concerns about being identified as the source of information shared with the police through an app. Overall, however, participants would welcome being able to report minor crimes via an app but would need reassurance that the police would not be overwhelmed by the increased demand and that this would not negatively impact the efficiency of their response to more serious and urgent cases.

“Good but it needs to be private. I’ve grassed them up. I don’t want them to know.”

Sheffield, 31-50, ABC1

“When a situation is not worth calling the police for, I would use this app. For instance, if I see a group of people breaking windows at the bus stop.”

Lyon, 18-30, ABC1

The City Information functionality is appealing but is not a strong driver to downloading or using the app. This is generally because this information is easily available via other apps (e.g. *Google Maps* or *Trip Advisor*) and therefore could be seen as redundant. It is highly unlikely to be of interest in the users’ local area as they would already be familiar with the key points of interest. However, the functionality may be used by a small minority when travelling outside their own city.

“There are other ways to do the same thing. It would be better served from a council app. I would use Google if I’m travelling (...) this app wouldn’t be my first port of call. I will just generally google.”

Sheffield, 31-50, ABC1

Participants have key expectations of the app and a failure to meet these may lead to a decrease in usage or even to the app being uninstalled. Another potential fall-out would be a negative influence on perceptions of the police. The key expectations are that:

- the app must be simple to use and intuitive
- the police’s response to emergency alerts must be unfailingly prompt and no less timely than when calling the emergency number
- the Emergency Button should activate geo-tracking automatically
- all other functionalities should give the user the option to deactivate this

- any information submitted by the user is kept secure and confidential to safeguard participants from retribution by wrongdoers
- any communication sent to the police must be acknowledged and the user must be allowed to set message preferences

The proposition raises some concerns around the topics of: the usage of data, battery or memory consumption; whether it would be open to abuse or misuse; whether it would create a workload that the police are not able to handle; and/or whether it would make it difficult for the latter to prioritise cases due to a lack of detail in submitted reports.

Almost without exception, it is taken as a given that users would be asked to submit personal data on downloading the app. At registration, participants would be happy to provide their name, contact number and/or address. In a minority of cases, this may deter some users from submitting Citizen-to-Police reports.

While the great majority trusts that their information will be kept secure on police systems, a minority has reservations about this being passed on to third parties and would expect to be asked for their consent before this happens.

4. Conclusions

From the perspective of the participants, a community policing app has one, overarching purpose which resonates strongly with an existing need: to increase their level of safety, and that of their loved ones. The real-time communication and easy access that typify apps also add the benefit of making communication with local police easier and less intimidating. Importantly, for many, it will add a sense that the police are being brought closer to the citizen. While the app will not replace the reassurance of seeing more police on street patrol, and does not, in itself, make participants feel safer, it may assist in encouraging them to interact with their local police and encourage feelings of having access to a proactive local force.

The functionalities most likely to encourage the download of a community policing app are the Emergency Button and the Police-to-Citizen alerts. The Police-to-Citizen alerts are the part of the app which most likely ensure that it is not uninstalled as it delivers the benefits of time-saving and convenience on a potentially daily basis. There is an opportunity for developing this functionality to a high standard. It is clearly where a community policing app's value lies for the majority of participants in the study.

The Citizen-to-Police reporting functionality is likely to be used less frequently but is nonetheless thought to be useful and relevant within the overall purpose of the app. A minority of participants may refrain from using it because of perceptions that it may have unwanted repercussions – from the reported third party or even in the form of follow-up visits from the police. Explaining data confidentiality and police practices in such cases may reassure the more reluctant users. This is especially important for categories of people who are less engaged with the police.

The City Information functionality does not add value and is thought to dilute the purpose of the app (safety) and challenge the serious nature of what it delivers. It is unlikely to prompt consideration and there is scope for rethinking its inclusion in a community policing app.

Above all, the app must deliver: an easy and intuitive experience, a prompt police response in cases of emergency, the option of deactivating geo-tracking (this would activate automatically when using the Emergency Button), secure and confidential storage of personal data, the facility to 'tailor' the type and frequency of police communication, and an acknowledgement of receipt of any information submitted by users.

Reassurances need to be given concerning the amount of data, battery, and digital memory the app will use; security of personal data storage; and the fact that the police have the systems and expertise in place to cope with requests from this additional channel.

Almost without exception, users will expect to be asked to register their personal data on download. This would include name and contact number/address. Many may also be open to giving other information, such as tax or identity card numbers, blood group etc. The expectation is that this information would be used by the police to provide quicker and more targeted assistance in case of an emergency.

There is scope for any communications programme linked to the launch of such an app to consider informal channels active at a local level. The same channels by which news related to crime is shared may be tapped into to raise awareness of the app. Examples would be Facebook and Twitter posts from existing police accounts and links to YouTube videos explaining the app functionalities etc.

The key messages that are likely to prompt consideration to download are that the app helps safeguard participants' personal safety and improves their overall wellbeing by alerting them to events or incidents that may cause disruptions to their daily lives.

Promoting the benefit of an easier, quicker, and more user-friendly option for communicating with the police may help encourage less engaged participants to interact with law enforcement agencies (as long as other expectations are met).

The barrier to the usage of the Citizen-to-Police reporting functionality amongst a minority of participants who fear possible repercussions may be at least partially addressed by the police explaining data confidentiality and police standard practices following the submission of a report. This will reassure users that they will not be 'singled out' for unwanted police attention following the submission of a report.

Reassurances also need to be given to the effect that the police have the resources and expertise in place to cope with requests from this additional channel.

References

- Alfred, Z. (2014). Tweeting against corruption: fighting police bribery through online collective action, MA Thesis, Uppsala University, Disciplinary Domain of Humanities and Social Sciences, Faculty of Social Sciences, Department of Informatics and Media.
- Ardanaz, M., Corbacho, A. and Ruiz-Vega, M. (2014) *Mind the gap: bridging the perception and reality of crime rates with information*. Inter-American Development Bank.
- Beck, K., Boni, N., & Packer, J. (1999) 'The use of public attitudes surveys: what can they tell police managers?', *Policing: An International Journal of Police Strategies & Management*, 22, pp. 191–216.
- Blom, J., Viswanathan, D., Go, J., Spasojevic, M., Acharya, K. and Ahonius, R. (2010) 'Fear and the city – role of mobile services in harnessing safety and security in urban use contexts', *Proceedings of CHI 2010*, pp. 1841-1850.
- Blythe, M. A., Wright, P. C. and Monk, A. F. (2004) 'Little brother: could and should wearable computing technologies be applied to reducing older people's fear of crime?' *Personal and Ubiquitous Computing*, 8, pp. 402-415.
- Bradford, B. and Jackson, J. (2010) 'Different things to different people? the meaning and measurement of trust and confidence in policing across diverse social groups in London' *Policing: A Journal of Policy and Practice*, 4, pp. 241-248.
- Cheng, H. (2015) 'Factors influencing public satisfaction with the local police: a study in Saskatoon, Canada', *Policing: An International Journal of Police Strategies & Management*, 38, pp. 690–704.
- CITYCoP Project: Deliverable 3.1: report on the theoretical basis of community policing and integration of technology into community policing (2016).
- COPS (2014), Community policy defined, at: <http://www.cops.usdoj.gov/pdf/vets-to-cops/e030917193-CP-Defined.pdf>
- Cumiskey, K. M. and Brewster, K. (2012) 'Mobile phones or pepper spray? imagined mobile intimacy as a weapon of self-defense for women', *Feminist Media Studies*, 12, pp. 590-599.
- Davis (III), E. F., Alves, A. A. and Sklansky, D. A. (2014) 'Social media and police leadership: lessons from Boston', *New Perspectives in Policing*, 2014, pp.1-24.
- Donnelly, D. (2013) *Municipal policing in the European Union. Comparative Perspectives*. Basingstoke: Palgrave Macmillan.
- Hale, C. (1996) 'Fear of crime: a review of the literature', *International Review of Victimology*, 4, pp. 79–150.
- Henson, B., Reyns, B. W., & Fisher, B. S. (2013). 'Fear of crime online? examining the effect of risk, previous victimization, and exposure on fear of online interpersonal victimization', *Journal of Contemporary Criminal Justice*, 29, pp. 475–497.
- Hills, A. (2011) 'Policing a plurality of worlds: the Nigerian police in metropolitan Kano', *African affairs* 111(442), pp. 46-66.
- Hraba, J., Bao, W. N., Lorenz, F. O. and Pechačová, Z. (1998) 'Perceived risk of crime in the Czech Republic', *Journal of Research in Crime and Delinquency*, 35, pp. 225–242.
- Ipsos Mori (2017) *Public views of policing in England and Wales*. Available at: <https://www.ipsos.com/sites/default/files/ct/publication/documents/2017-12/public-perceptions-of-policing-in-england-and-wales-2017.pdf> (Accessed: 2 April 2018).
- Jackson, J. and Bradford, B. (2010) 'What is trust and confidence in the police?' *Policing: A Journal of Policy and Practice*, 4, pp. 241-248.

- John, C., Villaescusa, T., Tosco, L. and Powers, S. (1997) 'Attitudes toward police: an evaluation of community perceptions of safety', *Perceptual and Motor Skills*, 84, pp. 114–114.
- Kadar, C. and Pletikosa Cvijikj, I. (2014). CityWatch: The personalized crime prevention assistant. In *MUM '14*, November 25-28. Melbourne, Australia.
- Kanan, J. W. and Pruitt, M. V. (2002) 'Modelling fear of crime and perceived victimization risk: the (in) significance of neighborhood integration', *Sociological Inquiry*, 72, pp. 527–548.
- Karakus, O., McGarrell, E. F. and Basibuyuk, O. (2010) 'Fear of crime among citizens of Turkey', *Journal of Criminal Justice*, 38, pp. 174–184.
- Killias, M. (1990) 'Vulnerability: towards a better understanding of a key variable in the genesis of fear of crime', *Violence and Victims*, 5, pp. 97–108.
- Lewis, S. and Lewis, D. A. (2012) 'Examining technology that supports community policing', *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, ACM, pp. 1371-1380.
- Lorenc, T., Clayton, S., Neary, D., Whitehead, M., Petticrew, M., Thomson, H., ... & Renton, A. (2012) 'Crime, fear of crime, environment, and mental health and wellbeing: mapping review of theories and causal pathways', *Health & Place*, 18, pp. 757–765.
- Mesch, G. S. (2000) 'Perceptions of risk, lifestyle activities, and fear of crime', *Deviant Behavior*, 21, pp. 47–62.
- Miller, G. (2012) 'The smartphone psychology manifesto', *Perspectives on Psychological Science*, 7, pp. 221-237.
- Nasar, J., Hecht, P. and Wener, R. (2007) "Call if you have trouble": mobile phones and safety among college students', *International Journal of Urban and Regional Research*, 31, pp. 863-873.
- Oliver, W. M. (2000) 'The third generation of community policing: moving through innovation, diffusion, and institutionalization', *Police Quarterly*, 3, 367–388.
- Perro, J. (2018) 'Mobile apps: what's a good retention rate?', Localytics Blog, 22 March. Available at: <http://info.localytics.com/blog/mobile-apps-whats-a-good-retention-rate> (Accessed: 2 April 2018).
- Renn, O. (2008) *Risk governance: coping with uncertainty in a complex world*. Earthscan.
- Satchell, C. and Foth, M. (2011) 'Welcome to the jungle: HCI after dark', *CHI 2011*, May 7-12. Vancouver, Canada.
- Schafer, J. A., Huebner, B. M. and Bynum, T. S. (2006) 'Fear of crime and criminal victimization: gender-based contrasts', *Journal of Criminal Justice*, 34, pp. 285–301.
- Schuck, A. M., Rosenbaum, D. P. and Hawkins, D. F. (2008) 'The influence of race/ethnicity, social class, and neighborhood context on residents' attitudes towards the police', *Police Quarterly*, 11, pp. 496-519.
- Seagrave, J. (1996), 'Defining community policing', *American Journal of Police*, 15(2), pp. 1-22.
- Simonson, J. (2016) 'Copwatching', *California Law Review*, 104, pp. 391-446.
- Sjöberg, L. (2000) 'The methodology of risk perception research', *Quality and Quantity*, 34, pp. 407–418.
- Skogan, W. G. (2005) 'Citizen satisfaction with police encounters', *Police Quarterly*, 8, pp. 298-321.
- Skolnick, H. J. and Bayley, D. H. (1988) *Community policing: issues and practice around the world*. USA.

- Taylor, R. W., Fritsch E.J. and Caeti T.J. (1998) 'Core challenges facing community policing: the emperor still has no clothes', *Academy of criminal justice services today*, 17(1), pp. 1-5.
- Tilley, N. (2008) *Modern approach to policing, problem oriented and intelligence-led in the new burn handbook of policing*. Cullompton, Devon: Willan.
- UK Market Research Society. (2010) *Occupation Groupings: A Job Dictionary*, 7th ed.
- Van Craen, M. (2012) 'Determinants of ethnic minority confidence in the police', *Journal of Ethnic and Migration Studies*, 38, pp. 1029-1047.
- Verhoeven, F., Haring, A., van der Lugt, R., Vreekamp, L. and Zielhuis, M. (2011) Multifaceted design for persuasion: a case study about the design of a mobile safety watch.
- Wachinger, G., Renn, O., Bianchizza, C., Coates, T., De Marchi, B., Domènech, L., ... & Pellizzoni, L. (2010). Risk perception and natural hazards. CapHaz-Net WP3 Report, DIALOGIK Non-Profit Institute for Communication and Cooperative Research, Stuttgart.
- Webb, J. V. and Katz, C. M. (1997) 'Citizen ratings of the importance of community policing activities', *Policing: An international journal of police strategies & management*, 20, pp. 7-23.
- Williams, M.L., Edwards, A., Housley, W., Burnap, W., Rana, O., Avis, N., Morgan, J. and Sloan, L. (2013) 'Policing cyber-neighbourhoods: tension monitoring and social media networks', *Policing & society*, 23(4), pp. 461- 481.
- Yero, A., Othman, J., Samah, B.A., D'Silva, J.L. and Sulaiman, A.H. (2012) 'Re-visiting concept and theories of community policing', *International Journal of Academic Research*, 4(4), pp. 51-55.
- Youmans, W.L., York, G.C. (2012) 'Social media and the activist toolkit: user agreements, corporate interests, and the information infrastructure of modern social movements', *Journal of Communication*, 62, pp. 315-329.