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Police patrols and feelings of safety: addressing the influencing factors

Laura Sayer

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of MSc by Research Criminology

January/August 2018

Abstract

The reassurance policing model is based on increasing visible patrols and, in turn, increasing the public's feelings of safety. However, previous research has shown that the presence of police may not always be seen as reassuring. For example, research suggests that increased police patrols may have an adverse effect in areas where perceived risk of crime is already high. Furthermore, across the literature, many factors that affect feelings of safety in the presence of police patrols have been discovered. Age, gender and previous victimization are amongst the factors that have been investigated, as well as external factors such as street lighting. The present study aimed to address the effect that three different patrol types, namely the police helicopter, foot patrol and police cars, have on feelings of safety through a questionnaire among 531 participants (18-81 years, 73.8% female). Furthermore, the relevance of location and time of day were also investigated. Several demographic variables, such as employment status and ethnicity, were also recorded to address any impacts that these may have on feelings of safety. The questionnaire presented the participants with hypothetical scenarios and asked them to gauge how they might feel in those situations. Results showed that, overall, gender had little effect on feelings of safety across the scenarios. However, several age differences were uncovered. Furthermore, factors such as media consumption, previous victimization and perceived level of crime were also identified as causal factors influencing feelings of safety. The discussion addresses the potential for future research.

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Acknowledgements

First of all, I would like to express my deepest thanks to my thesis supervisor, Dr Jason Roach, for his continued, patient support and reassurance throughout my time writing this research. I consider myself to be extremely privileged to have such a knowledgeable and encouraging supervisor, who inspired me to undertake and complete this project. My thanks also go out to the other members of staff at the University of Huddersfield who aided my enquiries in my supervisor's absence. In particular I would like to thank my second supervisor, Dainis Ignatans, for his guidance throughout the analysis of this work.

I would also like to express thanks to Lauren Wray at the Office of the Police and Crime Commissioner, West Yorkshire, for her belief in the project and for supporting my request to use the PCC's social media accounts to aid the recruitment of participants. This allowed me to reach a further audience that I would not have been able to achieve without her help.

I must also express my gratitude to my partner, Matthew, for his non-stop support and for always believing in my ability. I cannot express thanks enough for his patience throughout the ups and downs of this project.

Finally, I would like to thank the School of Health and Human Sciences at the University of Huddersfield, for their support throughout my undergraduate degree which consequently allowed me to achieve the scholarship I needed to be able to undertake this project, and for the opportunities that being part of this school has presented me.

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Introduction

As Flanagan (2008) demonstrated in his Independent Review of Policing report, there are numerous problems facing policing in the present day. Not least of these is a lack of public confidence in policing and, in turn, the inherent fear of crime that appears to have developed. Yet, there has been some disagreement in the literature regarding the definition of fear of crime and how it has been measured. Some researchers have referred to the matter as a physiological and emotional response to threats in the environment (for example, Fattah and Sacco, 1989), though much of the research tends to focus solely on the emotional responses. As Farrell and colleagues (1997) discussed the issues facing fear of crime measurement as it became more prevalent across the literature, they suggested that the way in which we perceive fear of crime is a product of the way that it has been investigated, rather than the way it truly is. In that, Hale (1996) attributed conflicting findings in fear of crime research to the confusion around its definition and lack of empirical instruments used to test it. This is important to bear in mind when considering the research that has been completed on the matter, and on any additional contributions to the topic.

Nevertheless, fear of crime is a well-studied phenomenon across the research and Hale (1996) addressed the research thus far. In this review, Hale recognised that since the mid-20th century, fear of crime has been an area for major growth amongst policy initiatives and academic researchers alike. In that, he estimated that “in the last thirty years over two hundred articles, conference papers, monographs and books have been written on some aspect or other of fear of crime” (Hale, 1996, p. 1) and, some twenty years later, fear of crime continues to be a prevalent area of investigation. Fear of crime and reassurance are particularly important in terms of academic investigation because by gaining a better understanding on what factors affect feelings of safety in relation to reassurance, more can be done to improve it. This is, sequentially, invaluable to policy makers in terms of putting those findings and recommendations into practice in the real world. The findings of academic research may also allow police forces to modify their policing strategies, allowing themselves to become more accessible and reassuring to the public. By the same token, as Flanagan (2008) detailed in his Independent Review of Policing report, that a national standard for the neighbourhood policing model will not work as no two communities have the same concerns regarding crime and safety. For that reason, academic research in the area is beneficial to better understand concerns, both across and between communities, so that feelings of safety may be improved across the board.

Another significant stimulus for the increase in research on fear of crime was the realisation that fear of crime far outweighed crime itself (Hale, 1996). It has been recorded that in recent years the number of crimes committed, along with the number of victims of those crimes, are in fact decreasing while fear of crime is at a constant (Office of National Statistics, 2017). That being said however, it is also pertinent to use fear of crime and reassurance research alongside crime statistics such as that Crime Survey for England and Wales. Using the two parallel to each other would allow the crime statistics to inform research aims and to investigate whether effects are true to the facts. For example, investigating whether feelings of safety are lower in areas where crime is high, as per the statistics.

Numerous factors have been seen to influence feelings of safety and fear of crime. Not least of these are age, gender, previous victimisation and perceived levels of crime in certain areas (such as that surrounding the home). Most recent of these was presented by Doyle *et al.* (2015) who investigated the effects that various patrol types, including police officers and security guards, have on feelings of safety in perceived safe and unsafe scenarios. Their findings revealed numerous age and gender differences that were all dependent upon situational facts and this is something that will be investigated in greater details in the subsequent sections.

There have also been numerous pieces of research that address the impact of mass media consumption on fear of crime. Although there is a discrepancy between their findings, this is still extremely useful for academics and policy makers alike, especially in the wake of high profile crime events such as terrorism. For example, after the Manchester Arena bombing in May 2017, it is fair to suggest that widespread feelings of safety decreased. The implications of this stem far and wide and may, in some cases, lead to deep rooted fears. Roach, Pease and Sanson (2015) also explained this effect in relation to proximity from crime events, i.e. the closer people are to an event the more likely it is to increase their fear of further crime events. This is something that is also extremely important for policy makers and police officers as they aim to improve feelings of safety.

Notwithstanding the above, there is little previous research that addresses various police patrols in terms of reassurance across numerous areas and situations and compares them with each other in the light of other individual factors, such as age and so forth. This is an important and noteworthy gap in the literature because by investigating the effects that different patrols have across different locations, policies may be better informed in terms of increasing feelings of safety in the wake of any notable findings. Given that, the present study aims to not only address what personal factors influence feelings of safety, and the size of those effects, but also how patrol types may vary in their elicited feelings across a range of scenarios. Namely, on the participants' street, in their nearest town and in a location that is unfamiliar to them. It is the view of the present study to, should any significant findings arise, make suggestions that may at least inform further research and at most advise policy initiatives.

The hypotheses for the present study are as follows. First, that there will be a statistically significant gender differences in the scores of feelings of safety across all scenarios. Next, it is predicted that there will be a statistically significant difference between feelings of safety based on the participants' age. Additionally, based on previous research in the area, it is anticipated that there will be a statistically significant relationship between perceived levels of crime surrounding a participant's home and their feelings of safety. The penultimate hypothesis states that there will also be a statistically significant difference between experience of previous victimization and feelings of safety. Finally, consumption of media relating to crime will have a statistically significant relationship with feelings of safety.

These hypotheses were investigated using a questionnaire comprised mostly of closed-ended questions using a 4-point Likert scale. The questionnaire and sections within it will be discussed in more depth in the methodology section. In that, the thesis will be laid out in the following sections: literature review; methodology; results; discussion; and conclusions. The literature review will be an in-depth

analysis of the literature that has been completed thus far regarding feelings of safety, fear of crime and what factors may affect these. This section will end by detailing the purpose of the present study and presenting the hypotheses for it with relation to the relevant evidence in the literature thus far. The methodology section will then go on to discuss the appropriateness of the research method and instrumentation used to collect the data for the present study. This will outline any ethical considerations involved in the study as well as detailing the variables that are being tested. Furthermore, this section will also present the findings of the pilot study and explain the rationale for the adopted method. The results section will be split into the various hypotheses, with a further subsection for other tests that were completed in addition to those testing the hypotheses. These findings will then be discussed in greater detail in terms of what they mean in relation to feelings of safety and public reassurance, and how they sit within the research that has already been completed. This section will also identify the strengths and limitations of the present study, and detail the implications of the present study for future research. Finally, the conclusion will summarise what has been investigated and why it is important, what it means for the subject area moving forward and what the findings represent in the real world.

Literature review

Fear of crime has been noted across the literature, for many years, as a “major social problem” (Box *et al.*, 1988, p. 340) and, since the beginning of the 21st century, has been well documented in its correlation to physical and mental health problems (Baum *et al.*, 2009; Dolan and Peasgood, 2007; Stafford *et al.*, 2007, for example). Moreover, affects such as an increase in stress levels (Jackson and Stafford, 2009) and a diminished quality of life and well-being (Dolan and Peasgood, 2007) have also been widely observed across the literature. Hale (1996) conducted a comprehensive review of the fear of crime literature thus far and noted that fear of crime may also contribute to a reduction in a person’s activity range. That being, people tend to stay indoors at night more where fear of crime is high than in areas where it is relatively low. This is something that ought to be particularly noteworthy for policy makers as numerous studies have displayed the negative effects that may come with fear of crime and this is something that needs to be addressed. On the contrary, in general terms, feelings of safety are defined as a wide-ranging cognitive response, reflecting the sense of being protected against danger, that may be caused or threatened by human actions (see Kanan and Pruitt, 2002). The literature surrounding feelings of safety and fear of crime, and how they may be impacted by various external stimuli, is plentiful and vast. This also includes various policing techniques, such as problem-orientated policing and the National Reassurance Policing Policy (see Quinton and Tuffin, 2007), and how they may impact feelings of safety. The following review aims to address the literature with specific interest as to how police presence may affect feelings of safety in the general public and how that has been explained in psychological terms. Firstly, the review will concentrate on the overarching perspectives addressing how crime is interpreted, trends in crime statistics, and theoretical explanations of fear with specific regard to fear of crime. The review will then go on to address specific studies regarding how feelings of safety may be affected by various external stimuli. In that, police presence of varying types will be discussed as well as literature that refers to a range of perceived safe and unsafe situations. Literature that addresses demographic factors such as age, gender and ethnicity will also be examined in the hope to investigate the effects that these may have. The following review aims to uncover any gaps in the literature thus far and will display the aims, objectives and hypotheses of the present study.

Crime statistics and the 2008 review of policing

Crime statistics are a useful tool as they provide necessary insight into how crime may be increasing or decreasing, to identify ‘hot spots’ and to distinguish which crime types are particularly prevalent in certain areas. Gaining an understanding of the national picture is especially valuable when addressing what may be done to improve feelings of safety and reduce fear of crime, and therefore this is the most logical place to start this review. The Office for National Statistics (2017) have revealed that the year ending June 2017 saw a 9% reduction in crime compared to the previous year, meaning that there were 5.8 million incidents in total across England and Wales. However, the number of offences recorded by police in the same year appears to have increased over the majority of crime categories, with violent crime up by 19% compared with the previous year. Incidents of violent crime are particularly noteworthy as research such as that completed by Brooks (1974) argued that crime of a violent nature has a

significant impact on public anxiety in the United States, significantly increasing feelings of fear. This is important as it is necessary to know what types of crime elicit a greater fear of crime in the public and therefore assemble policies that may inhibit these reactions. Additionally, there was a 11% increase in recordings of theft by June 2017, despite estimates showing a significant reduction in theft offences. Furthermore, the Office of National Statistics also recorded that the number of victims of crime saw a percentage decrease across all crime categories in the year ending June 2017 compared to previous years. These findings indicate that although overall crime has been observed to be decreasing, offences that get recorded appear to be on the increase. In terms of feelings of safety, it is important to note that despite reported crimes continuing to increase, victimization appears to be decreasing as well as the observed reduction in crimes committed. This may indicate that confidence in policing has also increased and people are more willing to report crimes that they previously may not have done, and indeed in the most recent ONS Crime Survey for the year ending September 2017, it was shown that the number of matters that were actually being dealt with by the police has steadily increased over recent years (ONS, 2018).

On the subject of crime statistics, it is also worth mentioning Flanagan's (2008) Independent Review of Policing report. This detailed problems that policing faces and saw the importance of fear of crime in that, making recommendations to decrease it. This is important because, as mentioned above, crime figures have been seen to be falling in recent years yet if the public cannot feel that decrease, and maintain a strong worry of crime, it could lead to social, or even, mental health problems, as researchers such as Baum and colleagues (2009) have pointed out. This report is also noteworthy as it reveals fear of crime as a legitimate threat to the future of policing and establishes ways in which it may be improved in all forces across the UK. Amongst those recommendations for improvement was the request for forces to focus on high risk areas in terms of improved productivity. Similarly, the report recognised that neighbourhood policing should be laid out differently in every community, as no two are the same, and developed three components for ensuring effective delivery. Namely, these were: an increased, visible and locally known police force, including accessible officers; neighbourhood involvement in solving community related problems; and the strengthening of relationships with local authorities and other partners. Furthermore, Recommendations 16, 27 and 30 refer to forces reviewing their Neighbourhood Policing model to ensure that it works on a practical level, integrating external agencies to develop a national standard as well as a method that works across communities, and continuing to fund the programme appropriately. This is important as it sets guidelines for improvement to ensure that the Neighbourhood Policing model works for everyone on the community level. As a result of these, the review presents a series of suggestions and options for change, based on the findings of focus groups. Contained in these potential changes is the strengthening of police and local authorities, and the relationships between them, which would allow police and authorities to work more efficiently together in reducing crime and making communities safer. The strengthening of authorities such as the police and crime commissioners would also involve giving responsibility to police forces to conduct surveys containing information on public attitudes. This would allow forces to better determine the attitudes of the people within them and could help to maximize public confidence and victim satisfaction. In turn, this would decrease fear of crime as experiences, both positive and negative, are noted on a community

level and acted upon suitably. To achieve these changes effectively, Flanagan recognised that forces must adopt a more flexible method to performance measurement that appropriately acknowledges the activity and consequences of neighbourhood policing to overcome the 'cultural hurdles' of traditional policing. From this, it can be seen that a citizen-focused approach to policing is at the heart of Flanagan's recommendations (Flanagan, 2008) and this is particularly noteworthy when addressing fear of crime as citizen-focused policing is seen as "a way of working in which an in-depth understanding of the needs and expectations of individuals and communities is routinely reflected in decision-making, service delivery and practice" (Home Office, 2006). As communities are given more of an involvement in identifying the problems that affect their lives, the reassurance from an increased police presence would grow. This appears to have been implemented in West Yorkshire as the West Yorkshire Community Safety Partnership Forum comprises of a collaborative effort, going beyond regular duties to identify and strengthen shared priorities as well as work towards reducing crime and disorder¹. This indicates that the recommendations laid out by Flanagan (2008) have been implemented to a certain extent in the time since the report, in an effort to increase feelings of safety, and this is especially important in the current economic climate where austerity has become commonplace.

Theoretical explanations for fear of crime

Before addressing explanations for fear of crime, it is imperative to first understand the function of fear in itself. Sidebottom and Tilley (2005) recognised that people, just as any other species, have become known as we do now as a result of successfully overcoming the adaptive trials, including threats to survival and reproduction, of the species' evolutionary past. These adaptations have been investigated across the evolutionary psychology literature and researchers have identified manifestations of such in areas such as the capacity to learn language quickly (Pinker, 1994) and the prevalence of incest avoidance across numerous different cultures (Brown, 1991). Furthermore, evolutionary psychologists explain emotion as an "affective partner to behavioural adaptations, activating, nullifying or attuning where appropriate, survival-supportive responses to adaptive problems" (Sidebottom and Tilley, 2005). This means that emotions such as fear, in particular fear of crime, are inherent responses derived from our need to survive. With regard to the Crime Survey for England and Wales as mentioned above, one of the questions that can be identified to gauge fear of crime is 'how safe do you feel walking alone in this area after dark'? Cosmides and colleagues (2000) would propose that the emotions that questions such as these relate to, are more likely to tap into ancestral hardwiring and the consequences of survival than an accurate estimate of the actual risks presented in that environment. Additionally, the question of evolution in this scenario is not how well the respondent can approximate their risk of victimization but how the response to that situation may be seen as adaptive in terms of survival. Support for this comes from Cook and Mineka (1990) who demonstrated that Rhesus monkeys take certain threat-relevant cues, such as snakes and spiders for example, more easily than threat-neutral cues, such as flowers. These threat-relevant stimuli were also seen to be more deeply instilled than those that are

¹ Information retrieved January 2018 from: <https://www.westyorkshire-pcc.gov.uk/partnership/partnership-working/westyorkshire-community-safety-partnership-forum.aspx>

neutral. Despite the effect in this case being studied in monkeys and the generalisation to humans being questionable, it is still important to take this research into consideration as it presents a capacity to rapidly make inferences from potential, or actual, threats, and for these to be deeply instilled regardless of change. In terms of this research, this is particularly noteworthy as it infers that people may also have instilled negative ideologies regarding the presence of police in given locations, opposed to their absence. More recently, Ohman and Mineka (2001) investigated this effect in humans and demonstrated that participants can learn and associate relevant cues in the same manner. Once more, this is relevant to this research as it may indicate that people with a lived experience of crime have different feelings when it comes to police presence than those who have only experienced crime in the media.

The evolutionary psychology of fear of crime has also been discussed in terms of gender differences. In a study completed by Fetchenhauer and Buunk (2005) it was concluded that females were significantly more fearful when posed with situations, both crime and non-crime related, that may result in physical injury than males. These differences were seen in spite of other social factors. In terms of evolution, this would suggest that biology may predict inherent gender differences in fear and fear responses.

Fear of crime in itself has numerous definitions across the literature. For example, Garofalo (1981) defined fear of crime as “emotional reaction characterized by a sense of danger and anxiety... produced by the threat of physical harm... elicited by perceived cues in the environment that relates to some aspect of crime” (p. 840). Later it was described by Ferro and LaGrange (1987) as “the negative emotional reaction generated by crime or symbols associated with crime” (p. 73). Ferraro (1995) then defined fear of crime as “emotional response of dread or anxiety to crime” (p. 23) and Warr (2000) defined as “an emotion, a feeling of alarm or dread caused by an awareness or expectation of danger” (p. 453). It is this lack of a dynamic definition for fear of crime that some authors have identified as the main limitation in fear of crime research (Lim and Chun, 2015). In addition to its numerous definitions, fear of crime has also been measured in a number of ways. More recently, as outlined by Lim and Chun (2015), researchers have developed questions that adequately distinguish between fear of crime and perceived risk. That is, despite the two being strongly correlated, they are different and more recent research has attempted to add perceived risk of crime as a measure in fear of crime research (for example, Wilcox *et al.*, 2007). Lim and Chun (2015) argued that this improved the validity and reliability of measuring fear of crime as it allows fear of crime to be measured more precisely. Furthermore, Farrall and Gadd (2004) asked participants numerous questions to examine the various aspects of fear of crime in their research. These included: whether they are worried about victimization, how much and how often they are worried. This allowed their research to address the intensity of fear of crime, once again improving fear of crime validity and reliability. Lim and Chun (2015) discussed the tendency for research in more recent times to have moved away from dichotomous single-item questions and towards questionnaires using Likert scales (for example, May *et al.*, 2010) and detailed that this has allowed for more effective fear of crime research. The method for the present study will be discussed in the following chapter.

Across its many definitions, fear of crime is often described as irrational (see Sparks, 1992). For that reason, the signal crimes and disorders perspective, established by Martin Innes and his colleagues, aims to capture the disproportionate impact that particular types of crime and disorder have on fear of crime, and capture how meaning is elicited from those crime types (Innes *et al.*, 2002). The perspective argues that members of the public perceive specific crime events as 'warning signals' about the levels of risk to which they are actually, or potentially, subjected. What's more, Innes contended that 'signals' may vary in value, in that weak signals may stem from minor public disorder such as anti-social behaviour while strong signals are generated by more high profile, serious events, such as terrorist attacks. Nevertheless, over time the effect of weak signals may become just as damaging as strong signals to the public's feelings of safety. For example, a group of people behaving anti-socially on your street may be considered to be a minor problem when taken in isolation, but the same event occurring on consecutive nights over a period of time may be damaging to your own feelings of safety. In addition to this, people from different cultures will interpret signal events in varying ways, attributing different signal strengths to crimes or events constructed on a variety of factors such as gender, age or ethnicity and the lived experiences they may have incurred (Innes *et al.*, 2002; Innes 2004; Innes 2005). This is important as it states that problems considered significant to one age group may not to another and vice versa. Furthermore, Innes (2004) also identified that while people have their individual concerns about the key problems in their neighbourhood, there is substantial variation between areas for the signals that influence public insecurity. The implication of this being that if police officers can target specific locations that are deemed to be 'hot' on crime then they can improve public safety as well as increasing the public's feelings of safety (Innes, 2005), corroborated by the recommendations in Flanagan's 2008 review.

The role of police patrols in influencing feelings of safety

The aforementioned theory also allows the public to contribute to defining signals and the important problems in communities. This concept underpins what has become recognised in more recent years as 'reassurance policing', which aims to identify and target 'signals', and involve the public in finding solutions for community related issues (Scaramella *et al.*, 2011). Reassurance policing goes further than traditional problem solving policing in that it not only target problems but prioritises crimes and disorder that communities identify as having the greatest impact (Millie, 2010). The policy also centres around a more visible police presence (Wakefield, 2007). However, this may not always be possible in a time of austerity and public spending cuts. For example, in 2015/16 police forces across the UK faced 5% budget cuts², and so increased police patrols may not always be a possibility. The implication of this being that where budget cuts are rising, little can be done about reassurance as resources are needed elsewhere.

Nonetheless, with regard to reassurance policing, governments and police forces alike have identified the strengthening of feelings of safety as an important matter (for example, Boers, 1994; Gibson *et al.*,

² Information retrieved December 2017 from: <http://www.bbc.co.uk/news/uk-31771456>

2002), with many governments across the world launching efforts precisely aimed at increasing feelings of safety (for example, John Howard Society of Alberta, 1999). As Boers (1994) contended that fear of crime predominately effects individuals who are the most vulnerable in a social, physical and/or psychological sense. This is something Hale (1996) later corroborated and that Boers has explained in earlier works as the 'vulnerability hypothesis' (Boers, 1991). Furthermore, this study suggested that almost half of the population in Germany make the decision to not leave their house after dark for fear of crime, with a particular effect on females. This issue has also been noted more recently by Tuffin and colleagues (2006) in their evaluation of the National Reassurance Policing Programme (NRPP). This evaluation demonstrated that in areas where the NRPP was trialled, there was a significant increase in people who felt safe walking alone after dark. This suggests that the NRPP trial was successful in reducing fear of crime. As a result, one of the most utilised methods in police forces to increase feelings of safety is to increase the amount of visible police patrols in communities (Tuffin *et al.*, 2006). This is also something that has met public appeals in that many communities have been recorded to have expressed their desires for an increased, more visible police presence (Tuffin *et al.*, 2006). Likewise, numerous research has shown uniformed police patrols to provide notably higher feelings of reassurance than other patrol types, such as neighbourhood wardens, proving police presence to have a positive influence on the public (Rowland and Coupe, 2013). This is important when considering the effects of reassurance policing on feelings of safety, as research has recorded a positive effect and surveys have demonstrated a real desire for an enhanced police presence across communities.

In addition to Flanagan's (2008) review, Gill *et al.*, (2014) conducted a similar review addressing community-oriented policing in the United States. On the whole across the literature they addressed, their review found that community-oriented policing had positive effects on civilian satisfaction with police and their feelings towards police legitimacy as well as their perceptions of disorder. These findings are aligned with the goals of community-orientated policing as this method hopes to improve the relationship between the public and the police. However, they found that it had limited effects on crime and fear of crime. This shows that despite community-orientated policing having a positive impact on feelings such as satisfaction and police authority, it appears to do little to help people's fear of crime. This may relate to an instilled feeling of police presence as a reaction to a negative event, opposed to proactive patrolling.

Affordance theory

The above mentioned effects of police presence may be explained in terms of 'affordance'. Gibson (1966) first coined the term affordance in relation to cognitive psychology in stating that a person's perception of the environment inevitably leads to some course of action, whether it be emotional or behavioural. It can be argued that this theory relates to evolutionary psychology as the consequent actions are direct and immediate with little sensory processing, and this theory was influential in changing the way visual perception is studied. Affordance theory was later developed by Donald Norman some years later who contended that affordances emerge as a relationship that holds between a given object and the individual that is acting upon it and gives the example that when an individual

approaches a closed door they can afford that a handle is for pulling and a plate is for pushing by way of illustration (Norman, 1998). In more recent years, other researchers have developed the implications of the affordance theory to reflections of how a person's perceived actions are inhibited by what they suppose others may do in certain situations (Pease, 2006). For example, if a person perceives a certain neighbourhood to be precarious then the consequent span of possible actions available (i.e. afforded) is expected to be more limited than if the area was observed to be perfectly safe. Pease (2006) also recognised that previous research regarding affordance failed to explain how affordance is transformed into action. In that, people may react differently to their environment as well as differing in their ability to control their consequent emotions and behaviours (Shonkoff and Phillips, 2000). For that reason, it can be suggested that affordance is very subjective as it relies on individuals making judgements then acting upon those, rather than being based on facts such as crime statistics. This is important to note as people's perceptions of their environments are unique, as is their available range of consequent emotions and behaviours. Therefore, how one person reacts to a given circumstance another may not, for example one may feel unsafe if crime is high in their home town where another does not feel the same way.

With regard to crime and disorder, Pease (2006) clarified affordances as merely the range of behaviours that a person might contemplate if they perceive a situation in certain ways. For example, the 'Broken Windows' hypothesis (Wilson and Kelling, 1982; Kelling and Coles, 1995) was established on the notion that a neglected, damaged property, such as a building or a bus shelter, will afford destruction in a way that an intact one does not. With regards to fear of crime, Abdullah and colleagues (2015) demonstrated that 'collective efficacy' facilitates the relationship between fear of crime and a person's perception of disorder in that area. These findings corroborate earlier research completed by Gibson *et al.* (2002) in that markers of neighbourhood disorder diminish social control and therefore increase fear of crime. The implications of this are important for law enforcement as it is worthwhile to note that the main predictor of fear of crime is not always potential, or actual, victimization.

Research, such as that of Zimbardo (1973; 2007), can be seen to suggest a clear link between reassurance policing, the broken windows hypothesis and affordance theory. In this research, it was observed that the perception of a vehicle with an absent wheel afforded criminal damage and theft opportunities that a complete vehicle did not, which was also deemed to be dependent upon the area in which the vehicle was left (Zimbardo, 1973). In terms of area, this is particularly relevant as it demonstrates that locational factors, and a person's perception of those, are just as important as the appearance of the relevant stimuli (in this case the damaged car) when affording behaviour. These examples led Pease (2006) to propose that affordance may be characterised as the psychology which ties a predisposition to a given environment. In that, Roach, Alexander and Pease (2012) suggested that 'signal policing' should be used together with 'signal crimes' as their pilot study established that people are ready and willing to make varying inferences about the reasons for the presence of a police vehicle outside assorted types of dwellings. That is, different dwelling types seem to afford different explanations for police presence. For example, when people sighted a police car outside of a home they afforded their presence as a supportive role, i.e. that the occupant must have been a victim of

crime. However, when the police were seen outside of a flat block it was assumed that they must be there in a reactive role, i.e. in order to arrest someone. Furthermore, this study also concluded that the different inferences people drew from police presence were more likely to increase fear of crime than diminish it. With relation to fear of crime, this is important as people may make different inferences for the presence of police in areas they deem to be high in crime rates compared to one they deem to be relatively low, regardless of the actual statistics. One real world example of how this effect may be seen is the recent heightened security and police presence at arenas, such as the deployment of armed police. It is possible that people make negative inferences regarding their presence, decreasing their feelings of safety, rather than seeing them to be reassuring. However, as previously mentioned, people make different inferences and thus some may find armed police presence reassuring in the time after a major terror occurrence.

What affects fear of crime and feelings of safety?

Fear of crime and resulting feelings of safety is something that has been widely investigated across the literature with regard to how it is affected and what the outcomes of it may be. Authors such as Hale (1996) have revealed that fear of crime may be influenced by a range of factors such as demographics, previous experience of victimization, and a person's perception of society in its entirety. In his review of the literature, Hale suggested that the factors influencing fear of crime may be split into two main groups: those which refer to vulnerability, including physical and psychological vulnerabilities, and those which relate to crime experience, such as victimization and mass media. He concluded that fear of crime may stem from a person's sense of vulnerability, which may be connected to factors such as gender, age and social class. Equally, he identified the link between fear of crime and direct or indirect (from the media and word of mouth, for example) victimization, however loose that relationship may be. Other research has also compared the link between victimization risk and fear of crime and discovered that although fear of crime and crime rates increase simultaneously, the same is not true when crime rates decline (Taylor and Hale, 1986). It has equally been established that there is no clear relationship between fear and actual crime rates, as Lewis and Salem (1986) determined that areas with the highest crime level did not also have the highest levels of fear. However, this may also relate to social identity theory (Tajfel, 1970; 1974) in that people who live in areas of high crime may be less worried about it as they identify themselves as the 'in-group' whereas someone who lives just outside of that area may find themselves to be more worried about their victimization risk. Nonetheless, this would indicate that the issue of fear of crime is more complex than it being merely a case of environmental factors.

Other researchers have also evidenced that feelings of fear and worry may also be developed where perceived disorder is high (Robinson *et al.*, 2003) and may be intensified if confidence in policing is also lowered (Hinkle and Weisburd, 2008). Boomsma and Steg (2014) also investigated the effect that time of day has on feelings of safety and this is something that has also been addressed in the literature regarding the necessity of street lighting. Their research discovered that, although people generally felt less safe where there was lower lighting, with a particularly negative effect on women, they mostly accepted lower lighting levels when social safety was not threatened, i.e. in already perceived safe

situations. This develops previous research completed by Rowland and Coupe (2013) in that it indicates that higher street lighting levels facilitates increased feelings of safety in perceived unsafe situations. More recently, Zhao *et al.*, (2015) demonstrated fear of crime to be significantly affected by a person's proximity to incidents of crime and disorder. In addition, their research suggested that different types of crime, such as violent crime and property crime, have similar influences on fear. This is particularly noteworthy as it suggests an overarching, fundamental fear of crime, no matter of crime type. Furthermore, it also shows proximity to crime and disorder to be a significant factor in fear. This effect can also be seen in research conducted by Roach, Pease and Sanson (2015). Their results showed that people felt less safe in their hometown after a terrorist attack had happened in their region than when one had happened in a different region or country, indicating no reliable differences between genders, ages or ethnicities. This demonstrates that proximity to crime events is an important factor when considering fear of crime and feelings of safety and is important when considering the wider implications of feelings of safety in the face of terror. For example, when the Manchester Arena was bombed in May 2017, it is a great possibility that people in the rest of the UK, and especially in Yorkshire due to its proximity, felt increased fear for their own safety, in comparison to the same time after events frequently seen on the news such as the devastations of the Syrian war. Also, as Roach, Pease and Sanson's (2015) research discovered no difference between age, gender or ethnicity, it is fair to say that this is something that affects people of all backgrounds and experiences. Another implication of this is that people may lose confidence in policing and governments as they fail to keep us safe, and this is something that would be greater felt the closer an event is to home. From this, it is fair to deduct that there are many factors that have been recorded to have an impact on feelings of safety and/or fear of crime, with some having a greater effect than others.

The ironic effect of police patrols

Reassurance policing, however, seems to take the comforting effect of police presence as given, which some research has contended may not be the case (Roach *et al.*, 2012; Rowland and Coupe, 2013). For instance, the sights and sounds accompanying emergency service deployments are likely to be the public's most frequent indicator of disorder, as policing is largely reactive rather than proactive (Rubinstein, 1980) and are, in themselves, far from being reassuring as most people associate them with reacting to negative event. This may be another thing that stems from austerity as when resources are low, the opportunity for proactive patrols lessens.

In their research, Rowland and Coupe (2013) used pictures of police officers, PCSOs, community safety officers and private security guards in interviews with members of the public in shopping centres in order to compare the recognition, and effectiveness, of these patrolling groups. Their results revealed that police presence did increase the worry of crime as well as uncovering gender and age differences in feelings of safety. However, they discovered that police presence was also the most likely to inflict feelings of reassurance amongst members of the public compared with the other patrolling groups. This is particularly noteworthy as it evidences that there is a discrepancy regarding the way in which varying patrol types affect feelings of safety, with some inflicting feelings of fear more than others. Similarly,

van de Veer *et al.*, (2012) studied the effects of police presence on males' and females' feelings of safety and demonstrated that police presence in environments that are generally considered to be safe lead to lower feelings of safety in males compared to the same environment without police presence. Thus, evidencing the ironic effect that police presence may have on feelings of safety. On the matter of gender, it is fair to deduct that there is an abundance of research evidencing that feelings of safety are affected differently in the presence of varying patrol types. The affect is particularly interesting in that males appear to feel less safe in the presence of police patrols in already perceived safe situations, whereas no affect is seen in females. On the contrary, females report feeling safer in the presence of police patrols in perceived unsafe situations.

In addition to this, Doyle (2015) also examined if, and how, the presence of uniformed persons and a police car was related to an increase in people's feelings of safety. It was concluded that people do not feel safer by the presence of uniformed people and a police car as compared to having no uniformed presence at all in already relatively safe situations, for example on a busy high street through the day. Moreover, it was observed that people generally felt safer in the presence of foot patrolling police officers than they did in the presence of the police vehicle. It is important for policy makers to understand effects such as these in the presence of varying patrol types in the effort to increase feelings of safety. Additionally, the public's perceptions of varying patrol types in terms of feelings of safety/anxiety has been seen to depend on the correct recognition of their uniforms and the way that relates to confidence (Jackson and Sunshine, 2006; Jackson and Bradford, 2009) and the safety and reassurance members of the public associate with the roles that uniform represents. For example, PCSOs have been seen to have a lesser effect on feelings of safety than police constables (Rowland and Coupe, 2013). This could be helped by giving the public more information regarding the role and powers of the PCSO so that they do not need to rely on police constables as heavily for minor disorders.

In summary, the afore mentioned studies suggest that the presence of police, both on foot or in patrol cars, decrease feelings of safety as people make inferences around the purpose for their being there which ought to be of particular interest to policy makers. However, there is little research that addresses what factors, with the exception of age and gender, affect feelings of safety in the presence of varying patrol types. For example, with the exception of Hale (1996), the research that investigates participants' previous experiences of crime is scarce, as well as that which regards if their home lives (for example who they live with and if they have children) has any effect on feelings of safety. Furthermore, there has been little investigation into the impact that the police helicopter as a patrol type has on feelings of safety, which is particularly noteworthy since police helicopters are involved in high profile patrols and serious crime reduction³. This is important for police and policy makers as they may gauge a better understanding of the effects that helicopter patrols have on feelings of safety and make sure to inform the public appropriately of its use.

³ Information retrieved June 2017 from: <http://www.npas.police.uk/what-we-do>

The majority of literature surrounding fear of crime, including the studies detailed above, seem to suggest that women are generally more fearful of crime, despite evidence that women are significantly less likely to be violently victimised than men (Callanan & Rosenberger, 2015). This has been justified by authors such as Pain (2001) by attributing this difference to women's heightened sense of vulnerability to crimes such as those of a sexual nature, which are significantly more likely to happen to a woman than a man, or because they feel less capable of defending themselves should they be victimized, hence increasing fear (Parker & Ray, 1990). The same is true even for studies that provide a control for vulnerability across gender groups (for example, Schafer et al., 2006). However, in the literature to date there is scarce evidence relating to why gender groups may have different feelings of safety in varying situations, such as at night or in an unfamiliar location. Yet, this may be explained given the above arguments relating to female vulnerability and capability to defend themselves.

Furthermore, this is something that has been justified by numerous authors as a result of females being more commonly depicted as victims of crime in the media (Bjornstrom *et al.*, 2010; Paulsen, 2003) and the effect of the media is also something that has been discussed across the literature in regard to feelings of safety. Sacco (1982) detailed numerous reasons for the effects that mass media has on crime perceptions. Most notable of these is that most people only know certain crimes, such as extremely violent crimes, as they are presented in the media, since they do not have direct experiences of them themselves. For that reason, people only experience these crimes as they are dramatized on the television, and that in itself may be detrimental to feelings of safety at home. In that, Boers (1994) contended that mass media tends to embellish and exaggerate the extent to which violent crimes are a problem in Germany and this has a significant impact on the worries of individuals in that population. However, these effects were not observed across the whole sample. It can be seen from this research that individuals in West Germany worried considerably less about violent and sexual crimes than the residents of East Germany. This would suggest that locational factors may have also contributed another level to these feelings of unsafety and worry. In more recent literature, Chadee and Ditton (2005) explored the effect of crime representations in televised dramas on fear of crime in Trinidad and saw no significant relationship.

As well as media consumption on the whole, specific kinds of media have also been shown to have an effect on feelings of safety. With specific regard to social media, numerous authors have discovered that consumption is significantly related to fear of crime, but that this relationship varies by perceptions of safety (Intravia *et al.*, 2017). That being, where perception of safety was lower, social media consumption increased fear of crime more significantly. Similarly, Romer *et al.* (2006) studied the effects of increased television news consumption in America and discovered that viewing local news is related to increased fear and concern of crime regardless of actual local crime rates. This demonstrates that media consumption on a local level has a negative impact on fear of crime regardless of actual levels of crime nearby. These effects have also been studied across different ethnic groups. Callanan (2012) discovered that local television news consumption increased perceptions of risk and fear of crime across people of white, Latino and African American backgrounds alike. She detailed that realistic content about crime on television was most influential on perceptions of risk and fear compared to

content in newspapers. It is particularly noteworthy that the affects appeared to be similar across different ethnic groups despite some research, such as that by Innes and colleagues (2004; 2005) suggesting that different ethnic groups interpret crime 'signals' in different ways compared to their feelings of safety.

Purpose and hypotheses of the present study

Given the research that has already been completed regarding reassurance policing and feelings of safety, the overall purpose of the present study is to examine what impact varying patrol types, including the police helicopter, have. If one was to take into consideration the reassurance policing model, then it would be fair to suppose that patrol types of all kinds produce feelings of reassurance in the public. However, as discussed, there is evidence across the literature to suggest the opposite to be true, that police patrols in fact facilitate feelings of worry in the general public. Equally, as previously discussed, there is evidence across the literature that differences in these feelings may stem from personal factors such as the age, gender and ethnicity of participants. Furthermore, there is a body of work highlighting the importance of previous victimization and perceived crime levels that must be taken into consideration. For those reasons, the present study will address three independent variables as well as a series of demographic variables. The independent variables stemmed from those that previous literature has demonstrated to be linked to feelings of safety/fear of crime and are listed below.

Patrol type related to three different types of patrol that may influence feelings of safety. These were: two police officers on foot; two police officers in a marked police vehicle; and the police helicopter. As previous research has suggested, a variety of patrol types may influence feelings of safety in many different ways across varying locational situations (Rowland and Coupe, 2013). In that,

Location was presented as the area that the police patrol was observed in, in relation to the proximity of that event to the participants' own home. For the present study three locations were used: on the participants' street; in their nearest town; and in a place that was unfamiliar to them. Finally,

Time of day was presented to the participants as whether the police presence was observed either in the day time, or in the evening. Previous research has evidenced that time of day and location have an impact on feelings of safety, both with and without the presence of police (Doyle *et al.*, 2015).

The aim of this research is to combine the above three factors and address the impact they have on feelings of safety. The hope is that this may present recommendations to inform policy makers regarding the effectiveness of each patrol type and highlight ways in which they may increase the feelings of safety associated with those. Additionally, the present study aims to address if there is a difference in the types of patrol and subsequent feelings of safety/worry that are connected to those. Furthermore, these affects will be addressed in terms of proximity of the patrol to the participants' home and at different times of the day. Finally, the present study aims to address whether there are any other factors, as well as age and gender, such as lived experience, previous crime victimization and so forth that affect feelings of safety in the given scenarios. The hypotheses for the present study are as follows:

Hypothesis one states that there will be a statistically significant gender difference in the scores of feelings of safety across all scenarios.

Hypothesis two predicts that there will be a statistically significant difference between feelings of safety based on the participants' age. These two hypotheses are derived from previous research that demonstrates gender and age differences in the presence of police and at varying times of day by authors such as Rowland and Coupe (2013), and hopes to extend these findings with regards to different types of police patrols.

Hypothesis three is that there will be a statistically significant relationship between perceived levels of crime surrounding a participant's home and their feelings of safety.

Hypothesis four is that there will also be a statistically significant difference between experience of previous victimization and feelings of safety. These hypotheses are drawn on research completed by writers such as Hinkle and Weisburd (2008) who evidenced the relationship between previous direct and indirect victimization and fear of crime. Research has also shown that an individual's perceived level of exposure to crime in the area surrounding their home effects their feelings of safety in that environment (for example, Robinson *et al.*, 2003). The aim of the latter of these hypotheses is to investigate the effect that perceived levels of crime, whether factual or otherwise, has on feelings of safety in other environments, as well as in the area surrounding their home.

Hypothesis five states that consumption of media relating to crime will have a statistically significant relationship with feelings of safety. Although researchers such as Chadee and Ditton (2005) have addressed the affect that media consumption has on fear of crime in other countries such as Trinidad and found little or no relationship, it continues to be recognised as an important factor in determining feelings of safety and therefore it will be beneficial to gauge the relationship between these two factors in the UK 13 years after Chadee and Ditton's study. This is particularly noteworthy as mass media may be the public's first and only information source following major events, such as that of the Manchester Arena bombing in May of last year.

Research methodology

Appropriateness of the research design

In the present study, a quantitative research design was adopted. It was felt that an experimental approach, opposed to a qualitative approach, was necessary in order to access and determine the relationship between variables in the study (Robson, 1993). In addition, as quantitative data is analysed using statistical analysis software that is based on the principles of mathematics, the approach is viewed as scientifically objective and rational (Carr, 1994; Denscombe, 2010). This also means that the hypotheses can be tested, and relationships between variables can be determined. Furthermore, the quantitative design better lends itself to replication than qualitative research as is it based on measured values, meaning that the present study could be repeated with ease to determine its effects in numerous further conditions (Antonius, 2003).

Variables

In addition to the three independent variables listed in the section above, a series of demographic variables were also tested. These included: *age, ethnicity, employment status, disability, how frequently they travel alone, previous victimization, who they reside with, how high they perceive crime to be, and where they get information about crime.*

Finally, the dependent variable for the present study is the participants' feelings of safety. This was operationally defined as participants measured how safe they would feel in the various scenarios incorporating the independent variables on a 4-point Likert scale, where 1 denoted very safe and 4 denoted very unsafe.

Participants

The aim was to recruit participants aged 18 and older that would represent a varied sample and participants were recruited using an opportunity sample. In that, posters that contained information about the study and a link to the questionnaire were displayed around the university and a link to the questionnaire was posted on numerous local forums that the researcher is a member of on Facebook© in an attempt to recruit participants. Furthermore, the Office of the Police and Crime Commissioner for West Yorkshire was contacted and they posted the link to the questionnaire on their Twitter© account. Participants were also encouraged to share the questionnaire on with people they know as a virtual snowball technique in order to access further populations than that of the distribution method (see Baltar and Brunet, 2012). All participants answered the same questions. In cases where the questionnaire was not completed correctly, for example where a section was missed out ($n = 12$), or demographic information was missing ($n = 4$), the data was excluded from analysis. After the exclusions, 531 participants between the ages 18-81 completed the survey (median = 37 years, $SD = 14.99$).

Instrumentation

A structured questionnaire was developed for the present study and was distributed using Qualtrics®⁴ (the full questionnaire, information sheet and consent form can be seen in Appendix 2). It was deemed that a questionnaire method would be most appropriate for the present study as responses could be collected efficiently and on a large scale, and that was important as the study aimed to gauge widespread opinion (Cohen, Manion and Morrison, 2000). The online method was chosen opposed to paper copies of the questionnaire as it meant that the responses could not be misplaced and were kept on a secure device. The questionnaire in the present study was comprised of demographic questions such as the participants' age and ethnicity where participants could enter their own answer into the box. Secondly, there were also demographic questions that had predetermined answers such as who the participant lives with and their employment status. Sections two and three of the questionnaire were comprised of 4-point Likert scale questions. As mentioned above, for section two 1 indicated very safe and 4 was very unsafe. Section three related to how high participants felt crime is across various locations and 1 was very high and 4 was very low. As discussed previously, a 4-point scale, rather than the traditional 5-point scale, was adopted as numerous authors have found that eliminating the mid-point decreases the likelihood of bias in the study (Garland, 1991). However, Lozano *et al.* (2008) also concluded that the optimum number of responses is between four and seven to ensure the reliability and validity of the study. Specifically in relation to fear of crime research, May *et al.* (2010) used a 4-category Likert scale (i.e., 1 = "Strongly Disagree" to 4 = "Strongly Agree") to measure fear of crime. It has been argued that this method helped obtain more information than dichotomous single-item questions used in research before it and that this has helped improve the reliability and validity of fear of crime research (Lim and Chun, 2015). The final section of the survey related to where participants obtain information about crime. This part of the questionnaire contained a 5-point Likert scale where 1 was very often and 5 was never. The 5-point scale was deemed necessary in this section as media consumption in terms of time is a complex issue and therefore participants would have more choice when providing their answers.

Pilot study

Prior to data collection, a pilot study was conducted. The pilot questionnaire was completed using Qualtrics®⁵ and included all of the same questions that the intended questionnaire would as well as a text box for participants to write feedback regarding any modifications the participants felt were necessary. The pilot questionnaire was filled out by 5 students at the University of Huddersfield, 3 females and 2 males, and was live for one week in February 2017. It was decided prior to the pilot that a 4-point Likert scale would be used in order to eliminate the 'neutral' option as researchers such as Garland (1991) have evidenced that removing the mid-point reduces social desirability bias. In this, 1

⁴ The final research questionnaire can be found at:
https://huddersfieldbss.eu.qualtrics.com/jfe/form/SV_1NR8qXCzCQlfpfD

⁵ Pilot questionnaire can be viewed at: https://huddersfieldbss.eu.qualtrics.com/jfe/form/SV_9nKOD1FxzBewTBP

indicated the 'very safe' option and 4 was 'very unsafe'. The pilot demonstrated that the 4-point Likert scales worked well and it was decided that the final questionnaire would adopt the same method. Feedback from the pilot study addressed the decision to not include PCSOs as a patrol type, however it was felt that the questionnaire was already lengthy with 3 different patrol types and to add another would deter participants from completing the questionnaire. Furthermore, when investigating previous research regarding reassurance policing, it has been found that police officers instilled greater feelings of safety, with PCSOs having a lesser affect (see Rowland and Coupe, 2013, for example). It has also been evidenced across the literature that members of the public and police officers alike feel that the role of a PCSO is to free up the work load of police constables, therefore indicating that they are not seen as respected police officers in their own right (O'Neill, 2015). Finally, participants in the pilot mentioned that 'have you ever been a victim of crime?' can be seen to be ambiguous as it does not ask about how serious a crime they were involved in and so forth. However, it was decided to leave the question the same in the final questionnaire in the interest of ethical considerations.

Ethical considerations

Ethical approval was required in order to undertake this project in terms of distributing the questionnaire and the potential risks that may pose to participants. The necessary permissions were obtained from the School Research Ethics Panel (SREP) preceding data collection and these permissions can be found in Appendix 1. Moreover, the necessary permissions were also obtained by the Office of the Police and Crime Commissioner West Yorkshire, allowing the questionnaire to be posted from their Twitter© account. It was important that the study presented no psychological harm to the participants as it asked for information regarding personal experiences of crime. From this, the SREP panel deemed that the questionnaire would present no such risk to participants and that the questions were appropriate. Furthermore, as per the ethical requirements of the British Psychological Society for conducting research, participants were given a full information sheet and consent form at the start of the study. They were asked whether they understood that they had the right to withdraw their data at any time and that they were not obliged to take part in the research.

Procedure

As previously mentioned, the questionnaire was distributed to participants predominantly using social media. Participants were asked to take part in the study at their leisure and the advertisements briefly explained the aims of the study and what would be expected from the participants (see Appendix 3). There was a full information sheet and consent form preceding the questionnaire on the Qualtrics® link. The questionnaire could also be completed from mobile devices to allow participants to partake at the moment they saw the advertisement. The study was deemed to be at minimal risk of psychological harm to participants by the SREP panel as the questionnaire was to be filled out where the participant saw fit and, for that reason, was incorporated into their daily routine leading to no discomfort. The questionnaire was initially accessible via Qualtrics® for four months from February to June 2017, however this was extended by a further six weeks until August 2017 in order to collect a more representative sample.

Results

Descriptive statistics

73.8% of respondents to the questionnaire were female (n = 392) and 26.2% male (n = 139). Furthermore, 95.9% of participants described themselves as White British (n = 509) with a further 0.6% (n = 3) describing themselves as White Irish, 0.8% (n = 4) as Asian British and 1.3% (n = 7) as Mixed Race. There was one participant for each of the following ethnicities: White Russian, White Italian, Chinese and Black British and two participants that described themselves as British Indian and White Polish. Moreover, 91% of participants stated that they did not have a disability (n = 439).

Additionally, 13.56% (n = 72) of participants stated that they were in full- or part-time education, 73.82% (n = 392) were employed in some way, 8.66% (n = 46) being self-employed. 10.73% (n = 57) were retired and 6.78% (n = 36) were unemployed. Participants that stated themselves to have more than one occupation are included in the statistics for each. Finally, 52.35% (n = 278) of participants reported that they had never been a victim of crime. Table 1 above lists the descriptive statistics for different scenarios in the questionnaire across all participants.

Hypothesis one – Gender differences

An independent samples t-test was conducted to compare feelings of safety across all the scenarios between males and females. The t-test method was elected as it allows researchers to compare the mean scores of two different groups where one variable is categorical and the other continuous (Pallant, 2013). There was a statistically significant difference between males' ($M = 2.13$, $SD = 0.90$) and females' ($M = 1.97$, $SD = 0.80$) feelings of safety in the presence of the police car, during the day time in the unfamiliar location ($t(531) = 1.96$, $p = 0.05$, two-tailed, $d = 0.19$). This means that males indicated that they would feel less safe in the presence of the police car during the day in an unfamiliar location than females. The independent samples t-test between males and females presented no other statistically significant results. Therefore, we accept the null hypothesis as there was only one statistical significance between groups and Cohen's d discovered that the size of this effect was relatively small (less than 0.2) (Cohen, 1969; 1994).

Table 1: descriptive statistics for average feelings of safety across the sample for each location

Variable combination	Street location		Town location		Unfamiliar location	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Foot patrol in the day	1.55	.683	1.70	.731	1.89	.806
Car patrol in the day	1.80	.770	1.79	.768	2.01	.829
Helicopter in the day	2.47	.811	2.37	.844	2.65	.847
Foot patrol at night	1.62	.761	1.74	.774	1.95	.849
Car patrol at night	1.87	.864	1.84	.789	2.07	.886
Helicopter at night	2.65	.841	2.50	.863	2.86	.831

Hypothesis two – Age

Table 2: descriptive statistics for age of participants

Group	Min.	Max.	N	Percentage
1 (18-30)	18	30	190	35.78
2 (31-43)	31	43	139	26.18
3 (44-56)	44	56	123	23.16
4 (57-69)	57	69	63	11.86
5 (70-81)	70	81	16	3.01

A one-way between groups analysis of variance was conducted to explore the impact of age on feelings of safety. Participants were divided into five groups (table 2 refers) according to their age (group 1: 18-30, group 2: 31-43, group 3: 44-56, group 4: 57-69 and group 5: 70-81). Participants were separated in this way as the groups each contained age ranges of twelve years, with the exception of group 5 that contained an eleven year age range. The one-way ANOVA method was adopted because the dataset contained three or more (in this case, 5) levels grouped by one independent variable (age) and this was to be tested against one continuous, dependent variable (Pallant, 2013). There was a statistically significant difference at the $p < 0.05$ level in feelings of safety scores in the presence of police officers

on foot, on the participants' street during the day ($F(4, 527) = 4.26, p = 0.002$). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for group 1 ($M = 1.69, SD = 0.65$) was significantly lower than group 3 ($M = 1.38, SD = 0.63$), suggesting that 18-30 year olds felt safer in this scenario than 44-56 year olds. However, where police were present on foot on the participants' street at night the opposite was found in that group 3 ($M = 1.41, SD = 0.65$) reported feeling more safe than group 1 ($M = 1.74, SD = 0.65$) and group 2 ($M = 1.68, SD = 0.79$) at the $p < 0.05$ level ($F(4, 527) = 4.13, p = 0.003$). Similarly, in the presence of the police helicopter on the participants' street at night group 3 ($M = 2.47, SD = 0.85$) reported that they would feel safer than group 1 ($M = 2.77, SD = 0.77$) at the $p < 0.05$ level ($F(4, 527) = 3.09, p = 0.016$). There was also a statistically significant difference for feelings of safety scores between groups for the presence of the police helicopter in the nearest town in the day time ($F(4, 527) = 2.54, p = 0.039$) in that the mean scores for group 1 ($M = 2.27, SD = 0.76$) were significantly lower than group 5 ($M = 2.81, SD = 0.91$), suggesting that 18-30 year olds would feel more safe in the presence of the helicopter in their nearest town than 70-81 year olds.

Table 3: ANOVA results for feelings of safety in unfamiliar scenarios

Scenario		df.	Mean square	F	Sig.
Foot patrol at night	Between groups	4	4.56	6.59	0.000
	Within groups	527	0.69		
Car patrol at night	Between groups	4	3.64	4.77	0.001
	Within groups	527	0.76		
Helicopter at night	Between groups	4	2.39	3.53	0.007
	Within groups	527	0.68		
Foot patrol in the day	Between groups	4	3.86	6.18	0.000
	Within groups	527	0.63		
Car patrol in the day	Between groups	4	2.45	3.63	0.006
	Within groups	527	0.67		
Helicopter in the day	Between groups	4	2.69	3.83	0.004
	Within groups	527	0.70		

Table 4: descriptive statistics for feelings of safety for group 1 and 3 in unfamiliar scenarios

Scenario		Mean	Std. Deviation
Car patrol at night	Group 1	2.27	0.88
	Group 3	1.89	0.82
Helicopter at night	Group 1	2.98	0.77
	Group 3	2.66	0.86
Foot patrol in the day	Group 1	2.08	0.77
	Group 3	1.64	0.75
Car patrol in the day	Group 1	2.16	0.81
	Group 3	1.80	0.80

Table 3 refers to the statistical significances found in the unfamiliar location scenarios. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for group 1 ($M = 2.17$, $SD = 0.82$) was higher than group 2 ($M = 1.89$, $SD = 0.83$), group 3 ($M = 1.73$, $SD = 0.81$) and group 5 ($M = 1.56$, $SD = 0.81$) for the unfamiliar location in the presence of police officers on foot at night, suggesting that 18-30 year olds felt least safe in this scenario and the 70-81 year olds that participated felt most safe. Furthermore, the post-hoc tests revealed that group 1 reported higher scores for feelings of safety than group 3 for the police car at night, helicopter at night, foot patrol in the day and police car in the day scenarios, showing that 18-30 year olds felt less safe than 44-56 year olds in all of these scenarios (table 4 details descriptive statistics). Finally, the post-hoc tests revealed that the mean scores for group 3 ($M = 2.43$, $SD = 0.89$) were significantly lower in the presence of the police helicopter during the day in this location than group 1 ($M = 2.72$, $SD = 0.79$) and group 5 ($M = 3.13$, $SD = 0.89$), suggesting that 44-56 year olds reported that they would feel safer in this scenario than 18-30 and 70-81 year olds. Therefore, the null hypothesis was rejected as significant differences between groups have been discovered.

Hypothesis three – Perceived levels of crime

Analysis on this hypothesis began by recomputing the four answer choices on this question into two values (group 1, where crime was perceived to be relatively high (answers 1 and 2 on the questionnaire) and group 2, where crime was perceived to be relatively low (answers 3 and 4 on the questionnaire)). In this case, Pearson's correlation coefficient was used to assess the relationship between these two quantitative variables. Analysis uncovered a weak, negative correlation at the $p < 0.05$ level between perceived levels of crime on the participants' street and feelings of safety in the presence of foot patrols (day: $r = -0.093$, $n = 531$, $p = 0.032$, night: $r = -0.092$, $n = 531$, $p = 0.034$) with group 1 ($M = 1.65$, 1.72 , $SD = 0.70$, 0.83 respectively) reporting that they would feel less safe in these scenarios than group 2 ($M = 1.51$, 1.57 , $SD = 0.68$, 0.76 , respectively). Next, there was a weak, negative correlation at the $p < 0.05$ level between perceived levels of crime in the participants' nearest town and feelings of safety in the presence of the police helicopter during the day in the town ($r = -0.087$, $n = 531$, $p = 0.045$) in that group 1 ($M = 2.42$, $SD = 0.87$) reported that they would feel less safe in these scenarios than group 2 ($M = 2.27$, $SD = 0.79$). No correlation was identified between perceived levels of crime in the participants' nearest city, county and in the UK and feelings of safety. Therefore, the null hypothesis was rejected as significant differences between groups have been discovered depending on the distance of police patrols and perceived crime levels to the participants' home.

Hypothesis four – Previous victimization

Investigation on this matter began by dividing participants into groups based on whether they stated that they had or had not been a victim of crime. An independent samples t-test was then conducted to

compare feelings of safety across all scenarios between those who had and had not previously been a victim of crime. There was a statistically significant difference between groups for both of the unfamiliar location foot patrol scenarios (night: $t(529) = -2.06$, $p = 0.040$, two-tailed, $d = 0.17$) (day: $t(529) = -2.09$, $p = 0.037$, two-tailed, $d = 0.19$) in that those who had previously been a victim of crime reported that they would feel safer in these situations (see table 5 for descriptive statistics).

Then, those who stated that they had were divided further into those who had been a victim within the past 5 years (group 1) and those who had been a victim longer ago (group 2) and this uncovered further differences. First, with regard to the unfamiliar location scenarios similar findings to the above were discovered in that there was a significant difference between groups for both of the foot patrol scenarios (night: $t(251) = 1.99$, $p = 0.048$, two-tailed, $d = 0.25$), (day: $t(251) = 2.75$, $p = 0.006$, two-tailed, $d = 0.36$).

Table 5: descriptive statistics for feelings of safety and previous victimization in unfamiliar scenarios

Have you ever been a victim of crime?		N	Mean	Std. Deviation
Foot patrol in the day	Yes	253	1.87	0.79
	No	278	2.03	0.89
Foot patrol at night	Yes	253	1.82	0.77
	No	278	1.96	0.83

Table 6: descriptive statistics for feelings of safety and previous victimization by time where group 1 have been victims of crime in the past 5 years and group 2 were victims longer ago

Group		N	Mean	Std. Deviation
Street foot patrol in the day	1	130	1.65	0.70
	2	123	1.41	0.60
Street foot patrol at night	1	130	1.65	0.70
	2	123	1.46	0.66
Street helicopter in the day	1	130	2.64	0.82
	2	123	2.41	0.83
Town police car in the day	1	130	1.89	0.80
	2	123	1.65	0.72
Town foot patrol in the day	1	130	1.82	0.83
	2	123	1.51	0.66
Town helicopter in the day	1	130	2.53	0.90
	2	123	2.32	0.80
Unfamiliar foot patrol in the day	1	130	1.97	0.78
	2	123	1.77	0.79
Unfamiliar foot patrol at night	1	130	1.95	0.77
	2	123	1.68	0.75

The same was true of the street scenarios in that there was a significant difference between groups in the presence of foot patrols at both times of the day (night: $t(251) = 2.32$, $p = 0.021$, two-tailed, $d = 0.28$), (day: $t(251) = 2.91$, $p = 0.004$, two-tailed, $d = 0.37$). However, there was also a statistically

significant difference between groups in feelings of safety in the presence of the police helicopter during the day ($t(251) = 2.16, p = 0.031$, two-tailed, $d = 0.28$). Next, regarding the town scenarios, there was a statistically significant difference between groups for all three patrols in the day (car: $t(251) = 2.52, p = 0.012$, two-tailed, $d = 0.32$), (foot patrol: $t(251) = 3.20, p = 0.002$, two-tailed, $d = 0.41$), (helicopter: $t(251) = 1.99, p = 0.048$, two-tailed, $d = 0.25$). Across all of these findings, this meant that those who had been a victim of crime more recently reported that they would feel less safe in these scenarios than those who stated that they had been a victim longer ago (see table 6 for descriptive statistics). Therefore, the null hypothesis was rejected as significant differences between groups have been discovered, with moderate effect sizes as revealed by Cohen's d .

Hypothesis five – Media consumption

Table 7 highlights the descriptive statistics for media consumption as a whole across all of the participants. The investigation of this hypothesis began by recomputing the variables into an overall average score for media consumption relating to crime as a whole, and this was then recoded into two groups: group 1, averages of between 1 and 2.5 (high media consumption); and group 2, averages of between 2.6 and 5 (low media consumption). No statistically significant relationships were identified using Pearson correlation coefficient between average media consumption relating to crime and feelings of safety.

Table 7: descriptive statistics for total amount of media consumption

Media	Mean consumption	Std. Deviation
National news (TV)	2.10	1.12
Local news (TV)	2.10	1.09
National radio stations	2.87	1.24
Local radio stations	2.95	1.33
National newspapers	3.38	1.30
Local newspapers	3.28	1.36
National news apps/websites	2.75	1.39
Local news apps/websites	3.01	1.35
Word of mouth	2.40	1.07
Social media	1.88	1.07
West Yorkshire Police website	3.69	1.37
Community groups	4.30	1.08

The relationship between media consumption and feelings of safety was then investigated using Pearson correlation coefficient and identified a weak, positive relationship between media consumption on the local level and feelings of safety in the unfamiliar setting in the presence of the police car at night ($r = 0.088, n = 531, p = 0.042$). This meant that group 1 ($n = 141, M = 1.94, SD = 0.92$) reported that they would feel safer in this scenario than group 2 ($n = 390, M = 2.12, SD = 0.87$). No other significant relationships were identified with relation to local media.

However, with regard to national media consumption, numerous significant relationships were discovered and these are detailed in table 8 (see table 9 for descriptive statistics). These results show that there is a weak, positive relationship between media consumption and feelings of safety in that group 1 reported that they would feel safer in the presence of police in these scenarios than group 2. Therefore, the null hypothesis was rejected as significant differences between groups have been discovered, especially regarding the consumption of media on a national level.

Table 8: Pearson correlation for feelings of safety and national media consumption

Scenario	N	Pearson Correlation	Sig. (2-tailed)
Street foot patrol in the day	531	0.097*	0.025
Street police car in the day	531	0.100*	0.022
Town police car in the day	531	0.095*	0.028
Unfamiliar foot patrol at night	531	0.088*	0.042
Unfamiliar police car at night	531	0.092*	0.035
Unfamiliar helicopter in the day	531	0.124**	0.004

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 9: descriptive statistics for feelings of safety and national media consumption where group 1 is high media consumption and group 2 is low media consumption

Group	N	Mean	Std. Deviation
Street foot patrol in the day	1	221	1.48
	2	310	1.61
Street police car at night	1	130	1.80
	2	123	1.93
Town foot patrol in the day	1	130	1.62
	2	123	1.76
Unfamiliar foot patrol at night	1	130	1.86
	2	123	2.02
Unfamiliar police car at night	1	130	1.98
	2	123	2.14
Unfamiliar helicopter in the day	1	130	2.53
	2	123	2.74

Discussion

The overall purpose of the present study was to investigate what factors (both demographic and situational), if any, have an impact on feelings of safety in the presence of varying police patrols, given the supposed reassuring affects that police patrols are thought to produce. As discussed in the literature review, relevant research has identified many factors that may influence feelings of safety in the presence of police patrols. Hale (1996) suggested that these factors may be split into two main groups: those which refer to vulnerability, including physical and psychological vulnerabilities, and those which relate to crime experience, such as victimization and mass media. Taking this into consideration, the present study has identified factors that fall within both of these groups and offers valuable insights from the findings. Something that differentiates this study from previous research that has been completed in the area (except Doyle *et al.*, 2015) is the comparison of patrol types in their individual impacts on feelings of safety. This provides the insight necessary to develop the fear of crime picture. The present study also addresses the effect of police patrol together with vehicles, namely police cars and helicopters. Previous research, such as that of van de Veer *et al.* (2012) has demonstrated that police vehicle patrols can have an adverse effect on feelings of safety and one explanation of this is because they are predominantly seen as emergency deployments in reaction to a negative event (see Doyle *et al.*, 2015). For that reason, it is not surprising that police vehicles are seen across the literature to reduce feelings of safety rather than increase them. The present study also investigated the effect that the police helicopter has on feelings of safety which is something that has scarcely been addressed prior to this. On the whole, the police helicopter did not elicit any more negative effects on feelings of safety than any of the other police patrol types. In fact, from the findings of this study it could be deduced that police foot patrols are the greatest indicator of differences in feelings of safety. These findings will be discussed in greater detail below.

First, the hypothesis that there would be a significant difference between participants' feelings of safety based on their gender was not supported. There was only one statistically significant difference between groups identified, in the unfamiliar location during the day in the presence of the police car, whereby males reported that they would feel less safe than females given the circumstances. Thus, it can be concluded that gender has little or no effect on feelings of safety. Interestingly though, this finding contradicts previous research that has stated females feel less safe in police presence of all types than males (Rowland and Coupe, 2013; Doyle *et al.*, 2015). However, similar findings were in fact discovered by van de Veer *et al.* (2012) in that males in their study reported lower feelings of safety in the presence of police where an environment was considered to be safe compared to the same environment without police presence. It is fair to suggest that participants may have interpreted the unfamiliar location to be relatively safe in the day time and this may explain the findings of the present study. Nevertheless, one implication of this finding is that police presence may have ironic consequences, especially for males as they reported that they would feel less safe in this scenario and this is something that needs to be taken into consideration by policy makers as it demonstrates that police presence may not always be seen as reassuring.

The hypothesis that there would be a significant difference in feelings of safety scores dependent on participants' age was supported. Hale's (1996) review identified that the consensus across the literature is that fear of crime increases as people grow older, however this cannot be said for the findings of the present study. In the street scenario, results indicated that 18-30-year olds reported that they would feel safer than 44-56-year olds in the presence of two police officers on foot during the day. However, in the presence of the same patrol and location at night 44-56-year olds reported that they would feel safer than 18-30 and 31-43-year olds. Similarly, 44-56-year olds reported that they would feel safer in the presence of the police helicopter at night on/above their street than 18-30-year olds. This is particularly noteworthy in that the opposite result has been observed in the same location and patrol, but at a different time of day and would therefore infer that time of day has an important impact on feelings of safety across age groups when investigating patrols that are nearest to people's homes. Comparable results can also be seen in the scenarios that are further away from the participants' home. In the presence of the police helicopter during the day in the nearest town participants aged 18-30 reported that they would feel safer than 70-81-year olds.

However, when in the unfamiliar location 18-30s and 70-81s reported that they would feel remarkably less safe than 44-56-year olds at the same time of day and in the presence of the police helicopter. This indicates that proximity to home and knowledge of a certain location factors into feelings of safety for the youngest of the age groups. This may also indicate that the police helicopter has a noticeable impact on feelings of safety and this may warrant more in depth future investigation. More research in this area should address why the police helicopter has such an impact on feelings of safety and aim to make suggestions for policy makers. It is fair to recommend from this research alone that informing people of the reasons behind the helicopter deployments would go some way towards improving their feelings of safety if not their confidence in policing in its entirety. Research may also investigate the impact of regular, routine deployments versus sporadic, reactive deployments. In the same way, in the unfamiliar location at night in the presence of two police officers on foot 70-81-year olds stated that they would feel safer than 18-30-year olds. This is the opposite effect to the town, daytime, helicopter scenario indicating that the police helicopter has a more adverse effect on feelings of safety in the oldest age group than foot patrols do, and that foot patrols may be seen as being more reassuring to this age group than 18-30s in areas they do not know. Another explanation for age differences relates to socio-economic factors as authors such as Jaycox (1978) demonstrated that the elderly appear to be more fearful of crime in areas where crime is high. One implication of this is that there are great differences between age groups for feelings of safety in varied police presence, and that this may equally depend upon individuals' socio-economic background. When considering policy making, this is important to understand as it may be useful to inform police patrol strategy. For example, in neighbourhoods that contain people who are mostly below 43 routine, reassurance police patrols may need to be delivered different to those in communities where the population is older on average in order to facilitate increased feelings of safety.

The hypothesis that there will be a statistically significant relationship between perceived levels of crime surrounding a participant's home and their feelings of safety was supported. Analysis exposed

differences across groups in the presence of foot patrolling officers on the participants' street scenarios in that higher perceived levels of crime led to diminished feelings of safety compared to those who perceived crime to be less severe. As Lewis and Salem (1986) established that there is no clear relationship between fear and actual crime rates, these findings are noteworthy regardless of whether perceived crime levels reflect crime statistics. This relates to Innes signal crimes perspective (Innes 2002; 2004; 2005) as people perceive crime events as warning signals to the level of risk to which they actually or may be exposed. The fact that those who deemed crime to be a bigger problem in their area felt less safe in the presence of police indicates that they are using their perception of crime as a warning signal and assuming the police presence to be a reaction to an event. This also agrees with Hinkle and Weisburd's (2008) findings that perceived social disorder has a strong impact on fear of crime. When referring to the Neighbourhood Policing model, this fits with Flanagan's (2008) recommendations that forces should focus on high potential areas and adjust their model to ensure it works on a practical level. This may improve confidence in policing and ensure police presence does not have an ironic effect on the public. Furthermore, this also corroborates Roach, Alexander and Pease's (2012) suggestion that signal crimes should be used together with signal policing as people make inferences for the purpose of police patrols. In this scenario, participants are making inferences based on their existing perceptions of crime levels in a given area and taking that to infer the reasoning behind patrols in that area. This also relates to the affordance theory as people's perception of a given environment leads to some form of action. In this case, it may be that seeing police patrols leads to worrying about their reason for being there. These theories are very subjective in that they rely on how a person sees an area in their own lived experience, rather than being based on the crime statistics and so forth. However, it still makes an interesting point when regarding policy making as it might be useful to gauge public opinion regarding crime in their area and working towards aligning that with the facts and statistics. Additionally, it is also quite possible that the reason for this effect is because of the participants' consequent perceived risk of victimization, given the supposed crime level surrounding their home. However, as these relationships were relatively weak, further investigation in this area may be warranted.

The hypothesis that there will also be a statistically significant difference between experience of previous victimization and feelings of safety was supported. Hale (1996) detailed the previous literature and evidenced the, somewhat loose, link between previous victimization and fear of crime. Additionally, previous research such as those of Taylor and Hale (1986) discovered that although fear of crime and actual crime rate increase simultaneously, the same cannot be said as crime rates decrease, evidencing an instilled fear of crime based on perceived victimization risk. Although there were limited statistical significances between those that had and had not previously been victims of crime, there were numerous differences between those who had been victimized more recently. This is particularly noteworthy when considering the safeguarding of victims after crime events and implementing policies to ensure that their experiences do not have a long lasting negative effect. In spite of the large body of work covering reassurance policing, there has been little research conducted regarding the effects that recent victimization may have on people's feelings of safety and reassurance policing. For that reason, moving forward, these findings may be interesting to investigate further in order to better implement the

Neighbourhood Policing strategy. Future research may wish to deeper investigate the impact of direct (the individual themselves) and indirect (a neighbour or relative) victimization in order to better understand the link between these and the ironic effect of reassurance policing.

The hypothesis that consumption of media relating to crime will have a statistically significant relationship with feelings of safety was supported. Previous research, such as that completed by Chadee and Ditton (2005), has investigated the impact of media consumption of fear of crime in other countries such as Trinidad and found a lack of connection between the two. In the present study, despite media consumption on the whole having no statistically significant impact on fear of crime, it seemed that once media consumption was broken down into regional levels some significant effects were exposed. On the national level, it is fair to say that higher media consumption increased feelings of safety in the presence of police during the day in the more familiar locations, yet in the unfamiliar scenario these participants estimated that they would feel safer at night, with the exception of the police helicopter. Similarly, media consumption on a local level facilitated feelings of safety in the presence of the police car at night in the unfamiliar location. As Sacco (1982) explained, there may be numerous reasons for this finding. For example, it is plausible that high media consumption effects people's view of the real world through the dramatization of police presence. As previously stated, the police helicopter is used in the occasion that serious crime reduction must take place and it is possible that participants attributed feelings of unsafety in its presence in the unfamiliar condition because of the sensationalized nature of its portrayal in the media. However, as people who consumed media relating to crime on a national level more reported that they would feel safer across all scenarios it is possible that this is because they are better informed regarding the reasoning behind police patrols. Furthermore, as Boers (1994) recognised, locational factors do have a part to play in feelings of safety and media consumption. In this study it was found that while crimes of a violent nature worry residents in East Germany, they have less of an observable effect on the residents of West Germany. These findings may be corroborated in the present study in the way that media on the national level effects feelings of safety both in the participants' neighbourhoods and further away from home. The implications of this are important as police may wish to better inform people about the use of the police helicopter and be more mindful of the way in which media consumption effects peoples' feelings of safety in their presence.

The factor of ethnicity was also considered in the data analyses. As there is scarce literature that investigates the differences between ethnicity in feelings of safety a hypothesis was not constructed around this issue. The findings of these analyses uncovered many interesting differences between groups. Namely, that participants who described themselves as Asian British reported that they would feel significantly less safe across three scenarios in the street condition than White British respondents. However, the extent to which these findings can truly be generalised to the general population is questionable as the population of White British respondents vastly outweighed the Asian British respondents. Nonetheless, these findings do carry many important implications that warrant the need for future research. Firstly, it would be interesting to further investigate the root of why the Asian British respondents reported decreased feelings of safety in the presence of police patrols. This is also worth mentioning with regard to reassurance policing as these findings suggest that White British people view

police patrols as more reassuring than other ethnicities, and this may be a cause for concern in policy making.

In sum, the findings of the present study are valuable in terms of investigating fear of crime and reassurance policing in the present day. Key areas of improvement for policy developers have also been identified with regard to the findings of this study which is important as police budget cuts are on the increase. These findings have also been considered briefly in terms of the potential directions of future research, although this will be discussed in greater depth in the following section.

Strengths, limitations and implications for future research

The present study made some interesting and valuable developments on the topic of fear of crime, feelings of safety and reassurance. Furthermore, the present study also filled some existing gaps in the literature. For example, the effect of crime related media consumption on feelings of safety is something that was scarcely addressed in the literature, especially regarding its effects in the UK. However, the present study has indicated, by splitting media consumption into local and national levels, significant differences in feelings of safety between groups. This contribution helps develop a better understanding of the complex issue of feelings of safety and fear of crime. Secondly, the study addressed perceived levels of crime and discovered numerous significant relationships between these and feelings of safety. Most notable of which was the difference in feelings of safety and perceived crime levels in the presence of police foot patrols on the participants' street. When considering this compared to the lack of relationship between perceived levels of crime in the county or the UK, it suggests a heightened fear of crime closer to home. This is important for policy makers to consider as it demonstrates that more needs to be done in the way of improving people's feelings of safety around the areas in which they live.

Furthermore, another strength of the present study was the large sample size as the final number of participants available for analysis after incomplete questionnaires were discarded was 531. Guildford (1954) advised that samples should contain no less than 200 participants and there was more than two and a half times as many respondents in the survey for the present study. This means that the findings of the present study may be generalised to the wider population. Furthermore, the use of social media to recruit participants was a great help in obtaining a large sample, in particular, local forums on Facebook[©] acquired numerous responses. Also, the snowball effect of this was invaluable as participants were asked to share the questionnaire with their friends. Additionally, the help of the Police and Crime Commissioners was equally valuable as it allowed the questionnaire to reach populations that it otherwise would not have been able to.

In addition to this, the census conducted in 2011 revealed that the median age for people in Yorkshire and Humberside is 39 and the median for the present study was 37. For that reason, it is fair to say that, to a certain extent, age was represented authentically in the present study, meaning that the findings are may be have high external validity and can be generalised to the wider population (The Office of National Statistics, 2012).

The main limitation of the present study is the use of the questionnaire design in itself. As the questionnaire asked participants to imagine themselves in situations and address how they may feel given the different circumstances. Moving forward, future research may benefit from using a field experiment design whereby participants are actually in the environments instead of imagining themselves to be so. A more natural environment would better gauge how people may truly feel in a given scenario, and this would be advantageous as people often predict that they may feel one-way but behave entirely differently when actually presented with the scenario in real life.

The methodological design also provided some limitations. First of those being that opportunity sampling was used, as opposed to other sampling methods such as random sampling. Opportunity sampling does not always provide a truly representative sample as people participate because they choose to and want to, and that may be because they already have an interest in the subject. On the other hand, random sampling eliminates sampling bias and accurately represents the target population. However, a truly random sample is incredibly difficult to achieve and, given the time and resources, an opportunity sample was deemed to be most appropriate for this study.

Secondly, as the survey was fairly long and contained quite a few questions, it is possible that there was an element of response bias in the results, therefore affecting the validity of the research. In order to adequately combat this, future research may wish to order the questions in a different way so that locations are separated and therefore each question may be responded to in its own right. A shorter survey combined with interviews may also have been a more appropriate method as results showed a number of people abandoned the questionnaire before completion, presumably because of its length. Furthermore, it would be interesting to see the affect that widening the scale would have on the question responses. For example, using a 6-point Likert scale rather than a 4 to allow for a more precise indication on feeling may go further to uncover differences across groups.

The final methodological limitation was the issue of attributing causation from questionnaire research. That being that this research cannot say for sure that any certain factor affects fear of crime or feelings of safety. For that reason, future research may use interviews alongside questionnaires to gain more in depth information regarding why participants feel as they do, what might affect their feelings of safety and how this may be improved. The implications of more detailed findings could be applied together with the Crime Survey for England Wales to inform law enforcement across the UK in terms of adapting their reassurance policing models.

Furthermore, the 2011 census showed that the population of Yorkshire was made up of 86.8% White British people, 6.2% Asian, 1.4% Black and 1.5% Mixed Race (The Office of National Statistics, 2012). Although the present study endeavoured to represent the population adequately, based on these statistics, as mentioned above, it is fair to say that the Asian community in West Yorkshire was vastly underrepresented as 0.8% ($n = 4$) of participants that completed the survey defined themselves as such. Additionally, 95.5% ($n = 509$) of participants described themselves as White British, with a further 0.6% ($n = 3$) describing themselves as White Irish, this would suggest that the white population has been overrepresented by the present study. For that reason, future research should address these

statistics and aim to investigate the affects that police presence has on people from minority ethnic backgrounds. By the same argument, it is also fair to say that women were overrepresented in the present sample as the census determined that 51% of the population was female yet 73.8% of the participants in the study were. Future research may wish to obtain a more representative sample to ensure findings may be adequately generalised to the general population.

Next, future research may also wish to examine what it is exactly about police patrols that reassures people in different ways. Furthermore, it would be interesting to include PCSOs into the list of patrol types as previous research such as that conducted by Rowland and Coupe (2013) have shown them to have a lesser effect on feelings of safety than police constables. However, in more recent times people have been better informed regarding the role of the PCSO and up to date investigation in this area may detect a different effect for that reason.

Finally, it is important to note that the present study did not link patrol types with specific crimes, such as burglary for example. Much as it has been demonstrated across the literature that police officers have a tendency to overestimate offender-offence homogeneity (e.g. Roach, 2012), it is possible that individuals may overestimate reasons for police patrols in the wake of a series of burglaries in their local area. This may consequently have a greater impact on their own feelings of safety at home than a different crime type, for example. This relates to the affordance theory (see Pease, 2006) in that people make inferences regarding the reasons behind police presence in their area and associate those with their own feelings of safety. Future research may wish to investigate the effect of varying crime types alongside police patrols, thus agreeing with Roach, Alexander and Pease's (2012) suggestion to use 'signal crimes' together with 'signal policing', to better ascertain the effect that this may have.

Conclusions

This work began by identifying the importance of fear of crime/feelings of safety when addressing reassurance policing. As previously discussed, the issue of fear of crime has been extensively investigated across the literature as the implications of it stretch far and wide. In that, numerous factors have previously been identified and most of those have been subject to much deliberation across the previous research. The present study aimed to address the difference in patrol types and subsequent feelings of safety that are connected with those. Moreover, these effects were also investigated in terms of proximity of the patrols to the participants' home and at different time in the day. The study also aimed to explore any other factors that affect feelings of safety, such as age, gender, previous victimization and so forth. Finally, the present study aimed to make recommendations in order to inform policy makers regarding the effectiveness of each patrol type and highlight ways that feelings of safety may be increased with regard to so called reassurance policing. These aims were addressed by the creation of a questionnaire surrounding the issues of feelings of safety. After incomplete datasets were excluded, 531 participants took part in the study and the analysis uncovered many significant differences between participants for feelings of safety in different conditions.

The issue of gender, although widely discussed in previous research, was seen to have only a small effect on feelings of safety. Age, however, presented numerous interesting results for feelings of safety. As stated in the aforementioned section, these findings are particularly interesting with respect to policy initiatives across communities regarding the practicality of potential policy implementations. Furthermore, perceived levels of crime also appears to have an effect on feelings of safety, but only regarding the areas that were closer to home. This has wide implications as it suggests that the perceived level of crime relating to distance from a person's dwelling is a significant factor in determining an individual's feelings of safety. It was speculated that this may be because of their perceived risk of victimization, and that this had a greater intensity because of the proximity to home. In that, the issue of previous victimization also presented some interesting findings. While it is fair to say that there was little difference between those that had previously been victimized versus those that had not, numerous differences were uncovered depending on how long ago victimization occurred. The results showed that those who had been victimized most recently had the lowest feelings of safety, in comparison to those that had been subjected to victimization longer ago. It is likely that this is because their feelings of safety were already low due to this recent victimization. Yet, the implications of this are massive with regard to policy initiatives as it highlights the potential for more to be done by way of reassurance after a crime event. Finally, media consumption equally displayed some interesting findings. In particular, that media consumption on a national level seemed to create differences in feelings of safety between those that stated that they consumed frequently and those that did not. That being, participants who reported that they consumed more crime related media on a national level reported that they would feel safer in the presence of police than those who consumed this media type less.

Interestingly, although the lack of previous research in the area meant that there was no hypothesis derived from the matter, ethnicity did appear to play a part in differences of feelings of safety in the

present study. The finding that White British participants felt significantly safer than their Asian British counterparts is particularly interesting and this is an area that warrants much further investigation as a consequence. For that reason, it is fair to say that the present study achieved its aims in identifying which factors have an impact on feelings of safety in the presence of varying police patrol types and suggesting the possible reasons behind that. Furthermore, the research makes a valuable input to the topic thus far and discussed possible directions of future research that would shed further light on the matter.

In sum, based on the results from the present study, and that of past research in the area, it can be suggested that there are many factors that influence people's feelings of safety. Regarding these results, further investigation is necessary as there is still a long way to go before we properly understand what effects police patrols have and how changes to the Neighbourhood Policing model may be implemented to aid increased feelings of safety. However, the results go some way towards a basic understanding of which police patrols have more of an effect than others and the reasons for those. As discussed in the previous section, the present study is not without its limitations and this is something that may need to be attended to when completing future research in order to elicit a better understanding of the issue of fear of crime and reassurance policing. This study would benefit from being tested in real situations, and from gaining more in depth understanding from the use of techniques such as interviews. Further investigation would also benefit from investigating further patrol types such as PSCOs since research that has already been completed in this area is fairly outdated.

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Appendices

Appendix 1 – SREP permissions and risk assessment

THE UNIVERSITY OF HUDDERSFIELD School of Human and Health Sciences – School Research Ethics Panel

APPLICATION FORM

Please complete and return via email to:

Kirsty Thomson SREP Administrator: hhs_srep@hud.ac.uk

Name of applicant: Laura Sayer

Title of study: Police presence in feelings of safety

Department: Health and Human Sciences

Date sent: 13/02/2017

Please provide sufficient detail below for SREP to assess the ethical conduct of your research. You should consult the guidance on filling out this form and applying to SREP at <http://www.hud.ac.uk/hhs/research/srep/>.

Researcher(s) details	Laura Sayer (u1253996)
Supervisor(s) details	Jason Roach
All documentation has been read by supervisor (where applicable)	YES
Aim / objectives	The aims of the proposed study are to investigate the role that police presence has on feelings of safety. Also, the study aims to find out if any personal factors such as whether the participant has children affects their feelings of safety.
Brief overview of research methods	The proposed study will use a questionnaire that will be given to members of the general public and a modified version to be given to members of the police force. The questionnaire will be available both as a hard copy and online via Qualtrics, in order to maximise distribution potential.
Project start date	19/09/2016
Project completion date	18/01/2018

Permissions for study	<p>Please find attached below permission from the PCCs office.</p> <p>Classification: NOT PROTECTIVELY MARKED</p> <p>Hi Jason, Sorry for the delay, just spoken to our deputy who is happy for us to promote the survey on our social media but unfortunately as we've done quite a lot of our own surveys/consultations lately and have some more planned soon, we won't be able to put it on our website. Nevertheless we do have a good social media footprint so if this is OK with your team I can formally agree to that? If so could you just send us a few one-liners and "tweet" sized comments/links to it and we can get our digi guy on with it? Hope this is OK Follow us on Twitter - @WestYorksOPCC Like us on Facebook - 'Office of the Police and Crime Commissioner West Yorkshire' Office of the Police and Crime Commissioner for West Yorkshire Ploughland House, 62 George Street, Wakefield, WF1 1DL Visit: www.westyorkshire-pcc.gov.uk for more information. Help for victims and witnesses Independent, informed and impartial www.helpforvictims.co.uk</p> <p>At this point, I would like to test on members of the general public and submit an amended form when permission from the WYP is received, if possible.</p>
Access to participants	<p>Participants will be obtained via an opportunity sample. This will involve emailing the questionnaire to the university's School of Health and Human Science, asking students in lectures to complete the questionnaire, sending the questionnaire to the researcher's colleagues at work and in her volunteering group. Also the WYPCC office will be helping by distributing the online link to the questionnaire. This should obtain a representative sample across numerous age groups.</p> <p>Please also see the above attached email.</p>
Confidentiality	Data will be stored onto a secure university network computer and will be deleted at the end of the research period.
Anonymity	Participants will remain anonymous throughout the study. Questionnaires will be marked with a research code, known only by the researcher.
Right to withdraw	Participants will be given the right to withdraw at any time. The code on their questionnaire will be linked to a database of their information so that their questionnaires can be easily located and destroyed if they wish to withdraw their data.
Data Storage	The data from the online questionnaires will be kept on a password protected computer and the data from the hard copy questionnaires will be kept in the researcher's office until they are analysed.
Psychological support for participants	Psychological support for participants will be provided in the debrief.
Researcher safety / support (attach completed University Risk Analysis and Management form)	(See attached form)
Information sheet	(See attached questionnaires)
Consent form	Consent will be inferred by the participants' completion of the questionnaire after reading the information sheet. However, consent will be sought explicitly from interviewees.

Letters / posters / flyers	N/A
Questionnaire / Interview guide	(See attached questionnaires)
Debrief (if appropriate)	
Dissemination of results	The results of the questionnaire will be published alongside the interview findings.
Identify any potential conflicts of interest	One potential conflict of interest is using some participants that the researcher knows. This will be avoided by not talking about what the research hypotheses are before completion of the questionnaires.
Does the research involve accessing data or visiting websites that could constitute a legal and/or reputational risk to yourself or the University if misconstrued? Please state Yes/No If Yes, please explain how you will minimise this risk	No
The next four questions in the grey boxes relate to Security Sensitive Information – please read the following guidance before completing these questions: http://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2012/oversight-of-security-sensitive-research-material.pdf	
Is the research commissioned by, or on behalf of the military or the intelligence services? Please state Yes/No If Yes, please outline the requirements from the funding body regarding the collection and storage of Security Sensitive Data	No
Is the research commissioned under an EU security call Please state Yes/No If Yes, please outline the requirements from the funding body regarding the collection and storage of Security Sensitive Data	No

<p>Does the research involve the acquisition of security clearances?</p> <p>Please state Yes/No</p> <p>If Yes, please outline how your data collection and storages complies with the requirements of these clearances</p>	<p>No</p>
<p>Does the research concern terrorist or extreme groups?</p> <p>Please state Yes/No</p> <p>If Yes, please complete a Security Sensitive Information Declaration Form</p>	<p>No</p>
<p>Does the research involve covert information gathering or active deception?</p> <p>Please state Yes/No</p>	<p>No</p>
<p>Does the research involve children under 18 or participants who may be unable to give fully informed consent?</p> <p>Please state Yes/No</p>	<p>No</p>
<p>Does the research involve prisoners or others in custodial care (e.g. young offenders)?</p> <p>Please state Yes/No</p>	<p>No</p>
<p>Does the research involve significantly increased danger of physical or psychological harm or risk of significant discomfort for the researcher(s) and/or the participant(s), either from the research process or from the publication of findings?</p> <p>Please state Yes/No</p>	<p>No</p>

Does the research involve risk of unplanned disclosure of information you would be obliged to act on? Please state Yes/No	No
Other issues	-
Where application is to be made to NHS Research Ethics Committee / External Agencies	-
Please supply copies of all relevant supporting documentation electronically. If this is not available electronically, please provide explanation and supply hard copy	

All documentation must be submitted to the SREP administrator. All proposals will be reviewed by two members of SREP.

If you have any queries relating to the completion of this form or any other queries relating to SREP's consideration of this proposal, please contact the SREP administrator (Kirsty Thomson) in the first instance – hhs_srep@hud.ac.uk

THE UNIVERSITY OF HUDDERSFIELD: RISK ANALYSIS & MANAGEMENT

ACTIVITY: Questionnaire distribution			Role: Researcher	
LOCATION: University of Huddersfield			Date: 10/02/2017	Review Date:
Hazard(s) Identified	Details of Risk(s)	People at Risk	Risk management measures	Other comments
Psychological well being	Psychological issues that may arise from the questionnaire topic	Participants	If the participant experiences psychological distress they will be directed to suitable contacts in the debrief	Outlined in participant information sheet
Loss of data	Protection of data and personal equipment	Researcher and participants	Data will be recorded on a secure laptop. Personal information from the participants will be in a password protected file. All hard copies of the questionnaires will be kept in a secure, locked cabinet.	
Sending questionnaire via email	Sending questionnaire to the wrong destination	Researcher and participants	Double checking questionnaire is being sent to the right address	

Police presence and the public's feelings of safety
Laura Sayer (Postgraduate Researcher - u1253996)

Information sheet

The following study aims to investigate what factors affect people's feelings of safety. Please take some time to read the following information thoroughly and decide whether you would like to participate. Feel free to ask any questions if anything you read is unclear, or if you require more information. For further information about the research please contact either the researcher (laura.sayer@hud.ac.uk) or the supervisor (j.roach@hud.ac.uk) and we will do our best to answer your enquiries.

What will I have to do?

For this stage of the study, you will be required to complete a questionnaire based on your feelings of safety. The questionnaire will take no longer than 15 minutes to complete. You will be presented with a series of statements which you will mark on the scale of 1 to 4, though each question will be thoroughly explained at the start of each section of the questionnaire. We ask that you complete all of the questions to the best of your ability. The questionnaire will ask some questions about your personal experiences of crime. If you are uncomfortable answering any of these questions, please leave the question blank. However, if you feel that you do need further support, please contact the Victims' Information Service for more information about help services. The second stage of the research will involve semi-structured interviews and there will be a section in the debrief where you may leave your email address if you wish to be considered to take part in the interview stage. You do not have to leave your email address.

Do I have to take part?

Participation is up to you. By completing the questionnaire after reading this information sheet, your consent will be inferred. However, you are free to withdraw until the publication of the findings, without giving a reason. In order to withdraw, please contact the researcher via email as soon as possible. The results from the study will be published in a report, if you would like a copy of the findings please indicate this in the debrief. All information that is gathered from you will be kept strictly confidential and your personal data will not be published anywhere.

Section one: About you

Gender: Male Female

Age:

Ethnicity:

Do you consider yourself to have a disability?: Yes No Prefer not to say

Employment status (please tick all that apply):

Self-employed Full or part time employment Unemployed Student Retired

Who do you currently live with? (please tick all that apply):

Alone/No-one Child(ren) 0-5 years Child(ren) 6-16 years Child(ren) 17+ years
 Spouse/Partner Friend/non-relative(s) Other family member(s) Parent(s)
 Other(s) (please specify):

How often do you travel alone? (i.e. to work/university etc., please tick one)

Always Often Sometimes Rarely Never

Have you ever been a victim of crime?: No Yes (please give more information below)

Less than six months ago 6-12 months ago 1-5 years ago 5 years +

Section two: Feelings of safety

The following section requires you to tick one of the given boxes based on how safe you would feel on average in different situations. Please mark the scale where (1) is very safe and (4) is very unsafe.

How safe would you feel if you...	(1)	(2)	(3)	(4)
	Very safe			Very unsafe
1. ...saw two police officers walking down your street during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ...saw two police officers in a marked police car on your street during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. ...saw two police officers walking down your street during the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. ...saw two police officers in a marked police car on your street in the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ...heard/saw a police helicopter above your street in the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. ...heard/saw the police helicopter above your street during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ...saw two police officers in a marked police car in your nearest town/city during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. ...saw two police officers walking in your nearest town/city during the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. ...saw two police officers in a marked police car in your nearest town/city in the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. ...heard/saw the police helicopter above you during the evening in your nearest town/city?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. ...saw two police officers walking in your nearest town/city in the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. ...heard/saw the police helicopter above you in your nearest town/city during the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. ...were in an area that is unfamiliar to you in the evening and saw two police officers there?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. ...were in an unfamiliar area during the evening and saw two police officers in a marked police car?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. ...heard/saw the police helicopter above you while you were in an unfamiliar area during the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. ...were in an unfamiliar area saw two police officers walking around during the evening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. ...were in an unfamiliar area during the evening and saw two police officers in a marked police car?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. ...heard/saw the police helicopter above you while you were in an unfamiliar area in the day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section three: Crime in your local area

The following questions refer to the area that you live in, please tick one answer for each question where (1) is very high crime/high anti-social behaviour rate and (4) is very low.

How high do you believe crime/anti-social behaviour to be in the...	(1) Very high	(2)	(3)	(4) Very low/none
19. ...area surrounding your house?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. ...nearest town to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. ...nearest city to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. ...county in which you live?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. ...UK?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section four: Where you get information about crime

Finally, we would like to find out where you get your information about local and national crime. In the table below, please tick the box that relates to how frequently you use each of the following sources to gather information about crime. If you think we have missed out any that you do use, please tell us by writing in the space next to "other(s)".

	(1) Very often	(2) Often	(3) Sometimes	(4) Rarely	(5) Never
24. National news (TV)	<input type="checkbox"/>				
25. Local news (TV)	<input type="checkbox"/>				
26. National radio stations	<input type="checkbox"/>				
27. Local radio stations	<input type="checkbox"/>				
28. National newspapers	<input type="checkbox"/>				
29. Local newspapers	<input type="checkbox"/>				
30. National news apps/websites	<input type="checkbox"/>				
31. Local news apps/websites	<input type="checkbox"/>				
32. Word of mouth	<input type="checkbox"/>				
33. Social media (e.g. Facebook, Twitter)	<input type="checkbox"/>				
34. West Yorkshire Police website	<input type="checkbox"/>				
35. Community/group meetings	<input type="checkbox"/>				
36. Other(s):					

Appendix 3 – social media participant recruitment

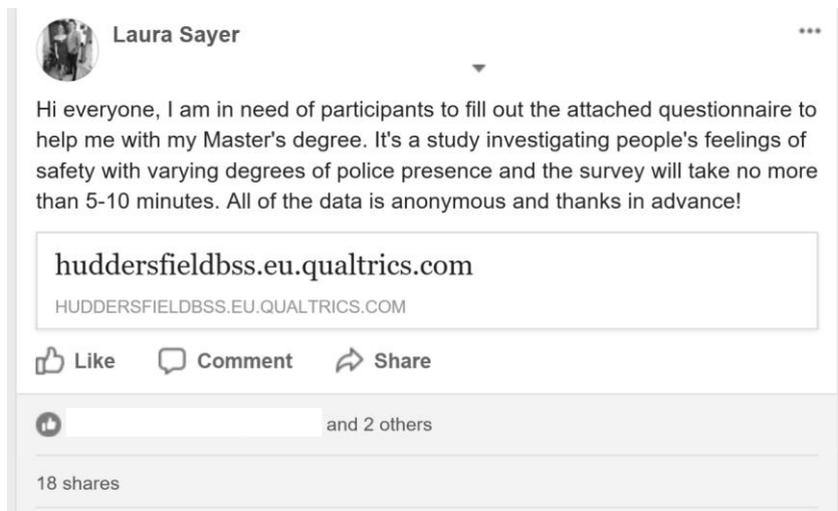


Fig. 1: Example of the advertisements placed on Facebook©.

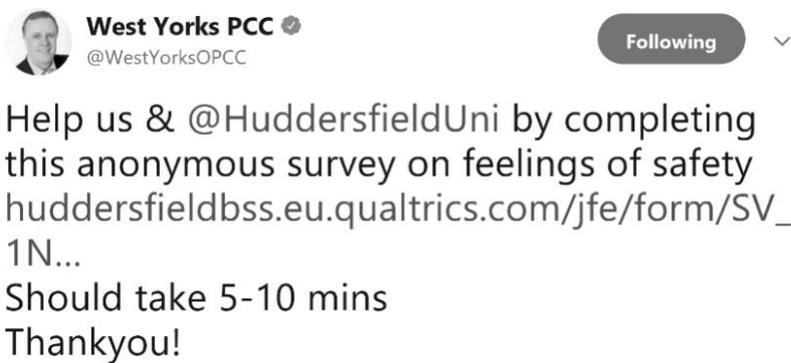


Fig. 2: Advertisement of questionnaire placed on the Twitter© account of the West Yorkshire Police and Crime Commissioner.