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Investigating the effect of social media consumption, neuroticism, attitudes towards police and gender on fear of crime in adults.

Michael Maddison

**Report Title:** Investigating the effect of gender, social media, personality and attitudes towards police on fear of crime in adults.

### **ABSTRACT**

Fear of crime (FOC) is a compelling research topic, receiving great interest from psychologists and criminologists alike for many years. Such fear has been associated with low subjective well-being, making it important to understand what constitutes ones FOC. The present study aims to investigate the relationship between gender, social media use, attitudes towards police, neuroticism and FOC. 179 participants were recruited via opportunity sampling, with an age range of 18-83 (Mean = 37.58). The participants each completed a questionnaire, comprised of a collection of modified and replica versions of pre-existing measures, aimed to assess each variable. Following a multiple regression and Pearson correlational analysis, it was found that gender, social media use and neuroticism were significantly correlated with and predictive of FOC, however, attitudes towards police was not. Moreover, an independent t-test found that females had significantly higher levels of FOC than males. The current study supports previous literature looking at contributory factors to FOC, apart from that which considers attitudes towards police. The potential reasons for these findings is discussed.

<b>KEY WORDS:</b>	<b>FEAR OF CRIME</b>	<b>GENDER</b>	<b>SOCIAL MEDIA</b>	<b>NEUROTICISM</b>	<b>ATTITUDES TOWARDS POLICE</b>
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## Introduction

Fear of crime (FOC) has been a regularly occurring research topic since the late 1970's and continues to initiate debates on both; how it should be defined and how it should be measured (Reyns, 2012). Ferraro and LaGrange (1987) suggest that FOC is an emotional response to crime or crime-related stimuli, resulting in a state of dread or anxiety. Earlier literature looked at FOC as being an individual's perceived risk of crime, with measures asking individual's their estimated risk of victimisation (Lagrange and Ferraro, 1989). For example, the American General Social Survey asked participants whether there is any specific locations "where you would be afraid to walk alone at night?" (Callanan and Rosenberger, 2015), suggesting they might feel at greater risk of victimisation in one area more than another. Despite such information being useful, it fails to measure the actual dread and anxiety associated with being a victim of crime (Callanan and Rosenberger, 2015). As a result of this, the majority of subsequent research either; distinguishes the difference between perceived risk and FOC, such as Eschholz et al. (2003), or more commonly, chooses not to measure perceived risk at all (see Dowler, 2003). Therefore, Hale (1996) proposes that FOC is the fear of becoming a victim of crime, regardless of the probability of victimisation.

FOC has been measured through a variety of different means, with literature dominated by large-scale quantitative surveys (Innes, 2015). However, qualitative research has led to the identification of common themes associated with FOC and the role they play in mediating such fear in individuals. For example, large groups of young people has been a reoccurring factor promoting FOC (Lorenc et al., 2013). Nevertheless, the most popular way of measuring FOC remains through quantitative methods and statistical analysis of surveys. This is due to such measures having produced accurate and reliable results (Jackson, 2005). Moreover, through statistical analysis, it allows us to look at factors which may predict FOC levels amongst different individuals.

Although FOC has the potential to have a positive effect, in the idea it encourages individuals to act in ways to minimize the risk of criminal victimisation (Jackson et al., 2009), FOC is predominantly viewed negatively. It is seen as an experience of adverse emotions which may be detrimental to the health and wellbeing of an individual. Pearson and Breetzke (2014) found that increased FOC had a significant negative impact on the physical and mental wellbeing of participants. Similarly, Hanslmaier (2013) found that a greater FOC had a significant negative effect on life satisfaction. This suggests that it is important to understand what causes FOC, in order to reduce its respective levels. In turn, this could increase life satisfaction and increase wellbeing.

Previous research has shown that FOC is not simply a response to high crime rates (Hale, 1996). Therefore, a vast amount of research has been conducted to help understand and explain FOC, focusing on a wide range of contributory factors. For example, much of the previous research compares gender differences in FOC (Callanan and Rosenberger, 2015), considers influence of media (Callanan, 2012), looks at ways attitudes towards police may affect FOC (Williams et al., 2015) or compares personality differences in FOC (Ellis and Renouf, 2017).

## Gender and Fear of Crime

There is an extensive amount of research providing evidence to suggest that gender is the most significant demographic variable associated with FOC (Callanan and Rosenberger, 2015). Research has found that despite the fact that females are statistically less likely to be victims of crime (except for sexual assault), they consistently have higher levels of FOC compared to males across the globe (Hale, 1996; Chui et al., 2013; Callanan and Rosenberger, 2015). This phenomenon has been coined 'the fear of crime paradox' (Cops and Pleysier, 2011). Because such relationship exists between gender and FOC, it is important for it to be considered when looking at which factors are most influential in predicting FOC.

One of the reasons suggested for this relationship is the idea that males display social desirability bias when expressing their FOC. The suggestion that males answer questions in a way which presents them in a more masculine manner, by downplaying their FOC (Sutton and Farrall, 2005). This was tested using a lie-scale which aimed to identify socially desirable answers. Sutton and Farrall (2005) found that males are affected by social pressures and downplay their FOC as a result. Therefore, suggest this is reason for females having consistently higher FOC levels across studies. This is supported by Cops and Pleysier (2011) who looked at FOC and gender as a social construct. Their study found that participants who reported more feminine behaviours were more fearful of crime than those who reported more masculine behaviours, regardless of their gender. Suggesting that "fear of crime can be seen as a feminine attitude" (Cops and Pleysier, 2011:71), which many males do not wish to exhibit. Further implying that low FOC is associated with masculinity.

An alternative explanation which is more commonplace in FOC literature is the 'shadow hypothesis' (Warr, 1984). This is the idea that females' intense fear of sexual assault, leads to the fear of victimization of other crimes. For example, females are more likely to be fearful of burglary or theft as they associate the possibility that such crimes may involve sexual assault (Hilinski, 2009). As men are less fearful of sexual assault, and less likely to make the association between other crimes and sexual assault, they therefore are less fearful of crime (Warr, 1984).

### **Social media and fear of crime**

The association between media and FOC is one which has been subject to mass research. Such research has suggested that there is a positive relationship between high levels of media consumption and high levels of FOC (Dowler, 2003; Kohm et al., 2012). This relationship has been investigated looking at various forms of media. Callanan (2012) looked at the effect of television news, crime dramas, crime reality programmes and newspapers on FOC in adults. The results found that media consumption consistently increased FOC levels across all forms of media tested.

Gerbner et al. (1980) proposed two theories to try and explain the relationship between media on FOC; the substitution thesis and the resonance thesis. The substitution thesis suggests that individuals who lack experience of victimisation of crime, will use the media portrayal of crimes to establish their opinions. The resonance thesis on the other hand, suggests that those who have personal experiences of crime, will have their opinions on crime reinforced by the media.

Despite the plethora of research looking at FOC and media, and the majority of adults receiving news from social networking sites (Gottfreid and Shearer, 2016), very few studies have looked at social media consumption and its effect on FOC. The study conducted by Intravia et al. (2017) looking at how social media use

affected FOC in young adults claims to be the only published research looking at such association. Social media consumption was measured in three ways; overall social media use, general news consumption and crime stories consumption. Results indicated that increased overall social media use was significantly related to increased FOC, whilst both general and crime news consumption was found to have an insignificant effect on FOC. Additional research must be conducted to corroborate these findings and investigate the relationship further. As suggested by Intravia et al. (2017) research comparing young adults with other age groups must also be conducted.

### **Attitudes towards police and fear of crime**

In comparison to gender and media, the association between attitudes towards police and FOC is much less documented. Many studies focus on the impact of community policing on FOC (Roh and Oliver, 2005; Roh et al., 2013), without considering how attitudes towards police may be influential. The reassurance model as proposed by Bahn (1974), is the idea that increased police patrol, will provide reassurance for the public. In turn, this should reduce FOC.

Building on the reassurance model, Williams et al. (2015) conducted a study to investigate whether those who perceive the police to be ineffective and hold negative attitudes towards them will have higher levels of FOC. Results found that there was a significant relationship between attitudes towards police and FOC. Such results indicated that negative attitudes of police bias and ineffectiveness were predictive of high levels of FOC. This relationship is not restricted to the western world, Alda et al. (2017) found that confidence in police was significant in explaining FOC levels in Caribbean region countries. This therefore suggests the importance of perceptions of police in mediating FOC.

Jang et al. (2010) found that countries with higher homicide rates had significantly lower confidence in police and did not view their communities as being safe. According to Ferraro (1995) the reason for the identified relationship between attitudes towards the police and FOC is due to individuals identifying their communities as safer places if they believe the police are effective at controlling crime. Because of this, they will feel at less risk of criminal victimisation and subsequently have lower FOC.

### **Neuroticism and fear of crime**

The majority of FOC literature has been from a criminological perspective, looking at social demographic characteristics as contributory factors and as a result, limited research has looked at FOC in a psychological context (Ellis and Renouf, 2017). Personality has consistently been an effective predictor of subjective well-being (Boyce et al., 2013), and as previously suggested, high FOC has been associated with lower life satisfaction (Hanslmaier, 2013). Goldberg (1993) proposed five domains of personality known as the Big-five; agreeableness, openness to experience, extraversion, conscientiousness and neuroticism. Suggesting personality is made up of where an individual's characteristics are located on each domains spectrum.

The personality factor which has often shown to be related to worry and fear is neuroticism (Servaas et al., 2014). This would therefore suggest that high neuroticism is related to high FOC. As part of Klama and Egan's (2011) study

investigating contributory factors for attitudes towards punishment, they looked at the possible relationship between the big-five personality domains and FOC. Following a correlational analysis, a significant positive correlation was observed between FOC and neuroticism. Providing evidence for the suggested link between FOC and neuroticism. However, as this study was not primarily focused on investigating factors associated with FOC, it did not control for confounding factors such as prior victimisation, which has been found to have a significant influence on FOC (DeLisi et al., 2014). Therefore, supplementary research would be required to explore the suggested relationship further.

In addition, neuroticism is regarded as a “personality trait dimension representing the degree to which a person experiences the world as distressing, threatening and unsafe” (Kwon and Weed, 2007:619). As mentioned, FOC has been shown to be associated with feeling safe and at low risk of victimisation (Ferraro, 1995). Therefore, if an individual feels threatened and unsafe due to their personality, this will manifest itself in a greater FOC.

## **Rationale**

Past research has highlighted various potential contributory factors to FOC and the present study will look to facilitate our understanding. It will look to build on the limited research supporting the link between FOC and attitudes towards police. As Intravia et al. (2017) found a significant relationship between FOC and overall social media use in young adults, the present study will look at such effect in adults of all ages, in addition to comparing the level of influence that social media has on young adults and older adults (for the purposes of this study,  $\leq 30$  = young adults and  $> 30$  = older adults). Moreover, it will build on the suggested link between FOC and neuroticism (Klama and Egan, 2011), by controlling for past victimisation, and focusing on the influence of neuroticism on FOC. In addition, the study will look at how such factors compare in relation to gender, which has consistently proved to be a significant demographic predictor of FOC. By comparing the influence each of the variables, the study will look to explore which is the most important in predicting FOC in adults.

The following hypotheses have been tested:

- H1 - Females will have higher FOC than males
- H2 - Social media use will predict FOC scores
- H3 - Neuroticism will predict FOC scores
- H4 - Attitudes towards police will significantly predict FOC scores
- H5 - Social media will have a greater effect on FOC scores for young adults than older adults

## **Method**

### **Design**

The study implemented a web-based questionnaire design which was delivered via Qualtrics. The questionnaire was made up of modified or replica versions of pre-existing measures. A correlational analysis was conducted with FOC being the criterion variable. Social media use, attitudes towards police, neuroticism and gender were the four predictor variables used. Additionally, linear regressions were performed to measure the impact of social media on FOC across age groups,

meaning age was also an independent variable. Mean FOC scores were also compared across gender groups.

## Participants

Participants were recruited via an opportunity sample for adults aged 18 and over, resulting in a total sample size of  $N = 179$ . The sample comprised of 66 males and 113 females. Participants were provided with a hyperlink, shared via Twitter and through Manchester Metropolitan University's research participation pool, which then took them to the questionnaire. By using both distribution channels it allowed access and recruitment of a wider demographic and range of ages. Participant ages ranged from 18-83, with a mean age of 37.58 ( $SD = 15.85$ ). According to Green (1991) this is a good sample size, based on the formula  $N > 50 + 8m$ , in this case,  $m = 4$ . Therefore, an appropriate sample size would be  $N > 82$ , which is exceeded.

## Materials

The questionnaire was created and delivered using Qualtrics (see Appendix I), comprising of; a participant information sheet (see Appendix C) and demographic questions (Age and gender). Along with measures of; neuroticism, FOC, social media consumption and attitudes towards police. Which preceded a debrief (see Appendix D). Participants who had been a victim of crime within the last year were ineligible to participate. The types of crimes were specified in the invitation letter (see Appendix B) and participant information sheet.

**Neuroticism questionnaire** - taken from the Big Five Inventory – 44 (BFI – 44; Goldberg, 1993) (see Appendix E)

Originally, the BFI – 44 was designed to assess the big five dimensions of personality (Goldberg, 1993); extraversion, agreeableness, conscientiousness, openness to experience and neuroticism. However, the only dimension investigated in this study was neuroticism, therefore, the 8 statements assessing neuroticism were taken from the 44-item scale. Each statement was preceded by 'I see myself as someone who' and ranked on a likert scale from 1-5, where 1 represented strongly agree and 5 represented strongly disagree. The measure included 3 statements which required reverse scoring so that 1 represented strongly disagree and 5, strongly agree. These statements were; 'Is relaxed, handles stress well', 'Is emotionally stable, not easily upset' and 'Remains calm in tense situations'. Results would suggest a higher score, indicated a less neurotic personality.

Previous research has found the BFI – 44 to have high internal consistency reliability. Fossati et al. (2011) found that the BFI – 44 achieved  $\alpha > .70$  consistently across three different samples ( $\alpha = .78, .81$  and  $.76$ ). As  $.70$  is the regarded as the minimum acceptable level, this shows the BFI – 44 meets such requirements. Additionally, in an unpublished report investigating the relationship between personality and worry proneness as part of my second-year studies, the neuroticism scale achieved a Cronbach's alpha value of  $\alpha = .83$ , showing high levels of internal consistency. Therefore, the scale was deemed appropriate for use in this study.

**Social media consumption** (Appendix F)

Previous research has found that where the relationship between specific news consumption and FOC has been non-significant, overall social media use has been found to be a significant predictor of FOC (Intravia et al., 2017). Therefore, overall



social media consumption was the only measure used to assess social media use in this study. This was calculated using the question 'In a typical day, how often do you use social media (such as Facebook, Twitter, Instagram, Snapchat and Reddit)?', where participants had to rank on a 6-point likert scale, ranging from 'never' to '241 mins or more'. This measure is similar to that used by Intravia et al. (2017), however the question was modified, looking at daily social media use as opposed to weekly social media use.

### **Perceptions of police scale (POPS; Nadal and Davidoff, 2015) (Appendix G)**

The POPS was designed to measure attitudes towards police as a unidimensional scale, combining broad perceptions of the police with attitudes towards police bias and discrimination (Nadal and Davidoff, 2015). Allowing the study to look at attitudes towards police as a whole, rather than in sub-constructs - making it suitable for this study. The scale is comprised of 12 statements, where participants rank their attitudes on a likert scale of 1-5, where 1 corresponded to strongly agree and 5 to strongly disagree. Statements included; 'Police officers are friendly', 'I like the police' and 'The police do not discriminate'. This would indicate that a greater score corresponds with a negative attitude towards police.

The POPS has been found to have high internal consistency reliability with a Cronbach's alpha value of  $\alpha = .94$  (Nadal and Davidoff, 2015). This exceeds the .70 threshold which is deemed to be acceptable in psychological literature (Coolican, 2014). This high reliability score provides evidence to suggest that this is an appropriate measure for use in this study.

### **Fear of Crime – Crime Survey for England and Wales (2015) (Appendix H)**

The Crime Survey for England and Wales (CSEW) (formally known as the British Crime Survey), was first administered in 1982 to investigate crime trends across the UK and is used by the Government Statistical Service (Tilley and Tseloni, 2016). One of the key trends it looks at surrounding crime is FOC. 8 questions were taken from the CSEW (2015) to assess FOC in adults, with an additional 2 questions added based on current affairs, looking at fear of terrorism and acid attacks. Following the phrase 'I see myself as someone who', participants were asked to rank the statements on a 5-point likert scale ranging from strongly agree to strongly disagree. With lower scores indicating higher FOC. The following statements required reverse scoring in line with previous research so that 1 represented strongly disagree and 5 represented strongly agree: 'feels safe walking alone during the day' and 'feels safe walking alone at night'.

The CSEW is regarded as a "gold standard survey of its kind" (Flatley, 2014:199) and therefore appropriate for questions investigating FOC to be taken from such questionnaire.

### **Procedure**

Prior to distribution of the questionnaire, ethical approval was required to ensure the study met ethical guidelines used in psychological practice by the British Psychological Society and Manchester Metropolitan University (see Appendix A). Thereafter, the questionnaire was designed using Qualtrics, an online project tool. The questionnaire was distributed via Manchester Metropolitan's research participation pool and the social media site Twitter. It implemented the questions and

scales above, along with the participant information sheet, where participants were advised of the aims and purposes of the study and either agreed or disagreed participation. Participants were advised of their right to withdraw before the 16/03/18, as this was the date where data analysis took place.

As part of the questionnaire, participants were required to create a unique identity code using the last two letters of their postcode, followed by the day of the month which they were born and the final two digits of their mobile phone number. As responses were anonymous, this code would be used to differentiate between participants, should anybody wish to withdraw. Moreover, participants were provided with an on screen debrief once the questionnaire was completed. This provided contact details of the researcher if they wish to receive more information, as well as the Samaritans service should they wish to seek advice about the issues raised.

The data was exported and downloaded as an SPSS file, the programme used to statistically analyse the data. The neuroticism questions taken from the BFI – 44 (Goldberg, 1993) contained 3 items which were reversed scored prior to analysis, these were Q4.2, Q4.5 and Q4.7. Similarly, the FOC scale contained 2 items which also needed to be reverse scored prior to analysis, such items were Q7.2 and Q7.3. Moreover, in line with the other measures used, where 1 represented high levels of the variable and 6 low levels, social media use had to be reversed scored so that. The first analysis performed was creating descriptive statistics of gender and age. This allowed the number of males and females to be compared along with the mean, range and standard deviation of ages to be analysed.

Following this, an internal consistency analysis was conducted to assess the reliability of the scales used in the questionnaire. Such analysis found that each of the scales exceeded the criteria of  $\alpha > .70$  and therefore, each scale was deemed appropriate for analysis and did not need to be modified.

The data was analysed to ensure the findings met the assumptions of parametric tests. The following five assumptions were tested: Absence of outliers, multicollinearity, homoscedasticity and independent errors. Absence of outliers was tested using standard residuals, multicollinearity was assessed by looking at Tolerance and VIF scores, in addition to independent errors being assessed using the Durbin – Watson test. As there is no statistical test for homoscedasticity, this was tested through visual assessment of a scatterplot.

Independent t-tests were conducted to compare the mean FOC scores of males and females in order to look for a statistically significant difference, effect sizes of such difference were then calculated using Cohen's *d*. A Pearson correlational analysis was performed to investigate the relationship between social media use, attitudes towards police and neuroticism on FOC in adults. Followed by a multiple regression analysis on the same variables to identify whether such variables could predict a FOC in adults. In addition, 2 linear regressions were performed, comparing the effect of social media use in adults aged  $\leq 30$  and  $> 30$  on FOC. This utilised the selection variable 'if' rule, which split the file. Effect sizes were then calculated using Cohen's  $R^2$  method, for both age groups in order to determine whether a difference between the two groups existed.

## **Results**

### **Reliability Analysis**

An internal consistency analysis was computed using Cronbach's alpha to determine the reliability of each scale. Results indicated that reliability for the 'neuroticism' measure was greater than satisfactory,  $\alpha = .78$ . Similarly, 'attitudes towards police' had high reliability,  $\alpha = .91$ , in addition to 'fear of crime' which also had high reliability,  $\alpha = .92$ . These measures can be considered appropriate for use in this study as  $\alpha \geq .70$  is satisfactory (Coolican, 2014). Age, gender and social media were single question measures, and therefore, not subject to an internal consistency analysis.

### Descriptive Statistics

Independent t-tests were conducted to investigate H1 and compare the mean FOC scores of males and females. The mean FOC scores for males ( $M = 38.40$ ,  $SD = 7.70$ ) were higher than females' mean FOC scores ( $M = 31.69$ ,  $SD = 7.00$ ). The difference in means was statistically significant  $t(177) = 5.97$ ,  $p < .001$ . The effect size (mean difference = 6.71, 95% CI: 4.43 to 9.00) was large (Cohen's  $d = 0.91$ ), as Cohen's  $d > 0.8$  represents a large effect size (Coolican, 2014). These findings support H1 as higher scores indicate a lower FOC, and therefore, females have significantly higher levels of FOC than males.

### Pearson correlation analysis

Prior to regression analysis, each variable was subject to a Pearson correlation analysis (see Table 1). As can be seen from Table 1, there was a significant positive correlation with FOC for both social media use ( $r(179) = .25$ ,  $p < .001$ ) and neuroticism ( $r(179) = .46$ ,  $p < .001$ ). A significant correlation between gender and FOC was also observed ( $r(179) = -.41$ ,  $p < .001$ ). However, a significant correlation was not observed between attitudes towards police and FOC ( $r(179) = -.04$ ,  $p < .32$ ).

Table 1  
Summary of correlational analysis

Variable	Fear of crime	Neuroticism	Attitudes towards police	Social media use	Gender
Fear of crime		.46**	-.04	.25**	.41**
Neuroticism			-.13*	.33**	-.17*
Attitudes towards police				-.23*	-.36**
Social media use					.16*
Gender					

Note. \* indicates  $p < .05$ , \*\* indicates  $p < .001$

### Multiple regression analysis

Prior to performing the multiple regression analysis, tests were conducted to ensure the data met the required criteria for parametric tests. Absence of outliers,

multicollinearity, independent errors, homoscedasticity and linearity of data were the assumptions examined. As there is no statistical test to measure linearity of data, a scatterplot was used as visual representation to ascertain whether the data meets the assumptions of homoscedasticity and linearity of data, as can be seen below in Figure 1.

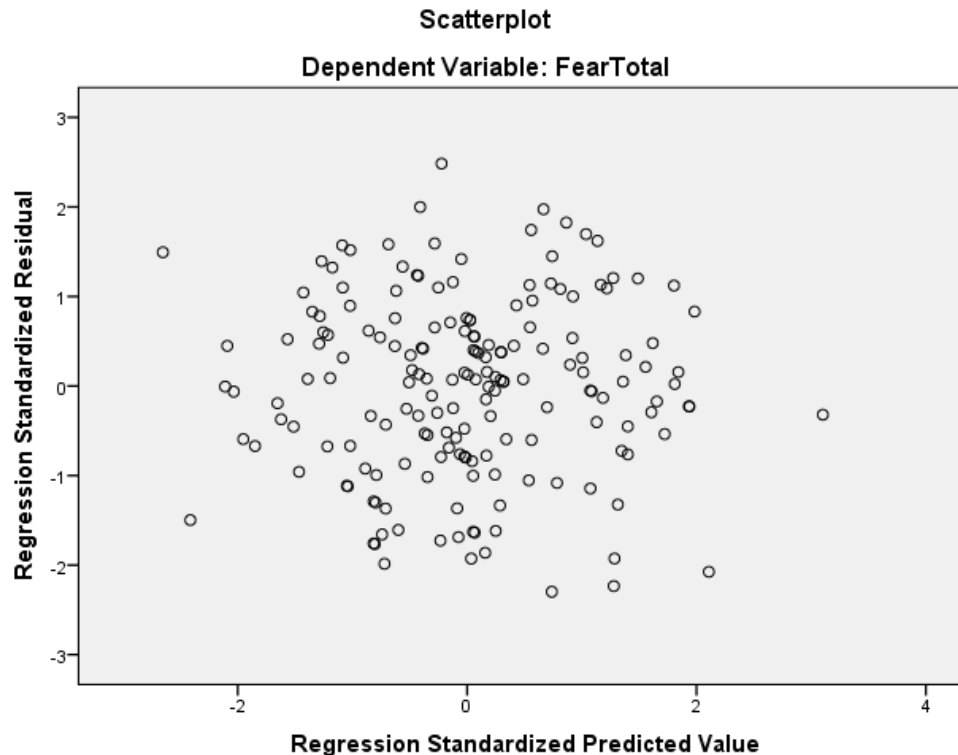


Figure 1: Scatterplot of standardized residuals

Figure 1 shows an equal spread of values across both axes, meaning that the data met the assumptions of homoscedasticity and linearity of data. Furthermore, the analysis of standard residuals found that the data contained no outliers (Std. Residual Min = -2.30, Std. Residual Max = 2.49). Similarly, the collinearity tests showed that the data met the assumption of no multicollinearity as VIF was less than 10 for each variable (Lorch and Myers, 1990) and Tolerance was greater than 0.2 (Mennard, 1995) (Social media use, Tolerance = .83, VIF = 1.21; Neuroticism, Tolerance = .82, VIF = 1.22; Attitudes towards police, Tolerance = .82, VIF = 1.22; Gender, Tolerance = .80, VIF = 1.25). Finally, the data also met the assumption of independent errors (Durbin – Watson = 2.27).

A multiple regression analysis was then conducted to investigate whether social media use, neuroticism, attitudes towards the police and gender were able to predict FOC in adults, testing H1, H2, H3 and H4. Using the enter method, the ANOVA found that the model appears significantly predictive of FOC as  $F(4,174) = 25.01, p < .001$ . There was a moderate relationship between the variables ( $R = .60$ ), with the model being able to account for 37.5% of the variation in FOC scores ( $R^2_{adj} = 35\%$ ).

Table 2

Summary of regression analysis for predicting fear of crime

Variable	<i>B</i>	<i>SE B</i> (std. Error)	$\beta$ (beta score)
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Constant	31.54	4.98	
Social media use	1.16	.40	.19*
Neuroticism	.50	.11	.31**
Attitudes towards police	-.12	.08	.10
Gender	-6.99	1.11	.43**
Note: $R^2 = .38$			

Note. \* indicates  $p < .05$ , \*\* indicates  $p < .001$

As can be seen in Table 2, neuroticism was found to be a strong predictor of FOC scores,  $\beta = .31$ ,  $t(174) = 4.56$ ,  $p < .001$ . This supports H3 and indicates that higher levels of neuroticism can predict higher levels of FOC in adults.

Gender was also found to be a strong predictor of FOC scores,  $\beta = .43$ ,  $t(174) = -6.3$ ,  $p < .001$ . This supports H1 as gender significantly predicts FOC in adults. As males are coded as 1, and females as 2, this supports the findings from the  $t$  test - as gender increases, so too does FOC.

Social media use was found to be a significant predictor of FOC scores in adults,  $\beta = .19$ ,  $t(174) = 2.93$ ,  $p = .004$ . These findings support H2, indicating that the greater time spent on social media, the greater the FOC in adults.

However, attitudes towards police did not significantly predict FOC in adults,  $\beta = .10$ ,  $t(176) = -1.54$ ,  $p = .13$ . Therefore, rejecting H4 and suggesting that attitudes towards police are not important in predicting FOC in adults.

### Linear Regression analyses

In order to test H5, two linear regressions were performed to investigate whether social media would have a greater effect on FOC on young adults (Age  $\leq 30$ ) than older adults (Age  $> 30$ ). Social media was able to significantly predict FOC in both young adults ( $\beta = .34$ ,  $t(73) = 3.12$ ,  $p = .003$ ) and older adults ( $\beta = .24$ ,  $t(102) = 2.49$ ,  $p = .015$ ). Using effect sizes proposed by Cohen (1988), where  $R^2 = .02$  is a small effect size,  $R^2 = .13$  equates to a medium effect size, and  $R^2 = 0.26$  is a large effect size, effect sizes were computed to compare the influence of social media on each group. The effect size for young adults was closer to a medium effect size ( $R^2 = .12$ ), whereas the effect size for older adults was small ( $R^2 = .06$ ). This indicates that social media consumption accounts for a greater variance in FOC scores in younger adults, than older adults. Therefore, appearing to support H5. All SPSS output can be found in Appendix J.

### Discussion

The present study investigated the proposed links between gender, social media use, attitudes towards police, neuroticism and FOC. Independent t-tests found a significant difference between male and female FOC scores, in which females had higher FOC, supporting H1. Similarly, it found that gender significantly correlated with FOC, in addition to being the most significant predictor of FOC in adults compared to the other predictor variables. Thus, providing further evidence to support H1. Such results are consistent with findings across previous FOC literature, which has found males to have lower levels of FOC compared to females (Chui et al., 2013; Callanan and Rosenberger, 2015) and supports the idea of 'the fear of crime paradox' (Cops and Pleysier, 2011). A reason for such findings may be that,

as females have been found to be consistently more fearful of sexual offences than males (Hale, 1996), the one sexual statement used in the FOC measure - “worries about being raped”, may have excessively increased overall FOC levels for females. Therefore, this could be a reason for the difference observed. However, it would be unwise to assume that the reason for the difference is solely down to this statement as its effect was not examined.

A more appropriate reason for the observed relationship could be due to the social desirability bias of males answering in a way that presents them in a more masculine manner, which has been suggested by Sutton and Farrall (2005). Alternatively, it may be due to the shadow hypothesis (Warr, 1984), which assumes that females associate sexual assault with the crimes mentioned in the other statements. As males may not have made the same association, this results in them having lower levels of fear. Again however, the former reason was not examined using a lie-scale (Sutton and Farrall, 2005), nor was the shadow hypothesis assessed using the model proposed by Fisher and Sloan (2003). Hence, it cannot be assumed the reason for such findings is due to either theories. This suggests that future research looking at gender and FOC, must consider implementing measures to test the presence of the shadow-hypothesis and social desirability bias. Inferences could then be made on what is the most likely cause for males having higher FOC than females.

The study also found that there was a significant positive relationship between social media use and FOC, suggesting increased social media consumption, increases FOC. In addition, social media was found to be a significant predictor of FOC, therefore, supporting H2. This supports Intravia et al. (2017) which found overall social media use played a significant role in mediating FOC levels in young adults. This can be extended to not only be apparent in young adults, but adults of all ages, as findings from this study suggest. Although social media consumption played a larger role in the influence of FOC in young adults, supporting H5, caution must be taken with such findings. Effect sizes should only be used as a rule of thumb and are not definitive, suggesting future research could consider investigation into this relationship further. Ultimately, the study finds that social media consumption plays a significant role in both groups, supporting the notion that overall social media use plays an important role in arbitrating FOC for individuals of all ages.

The reasons why this relationship exists are currently unclear. A plausible suggestion may be that many people use social media as their outlet for news in recent years as opposed to TV and newspapers (Gottfried and Shearer, 2016). Therefore, social media is working in the same way as newspapers, through the substitution and resonance theories (Gerbner et al., 1980). However, Intravia et al. (2017) found that general news consumption and crime news consumption via social media was not significantly related to FOC. Appearing to reject this suggestion, as people are not engaging with news stories via social media, meaning it cannot be used to reinforce or establish opinions on crime (Gerbner et al., 1980). Therefore, a possible reason for the study’s findings could be a result of social and psychological problems generating fear. Kross et al. (2013) found that high Facebook use was associated with an increase in worry and a decline in life satisfaction, which could potentially lead to an intensified FOC. Suggesting this could be the reason for the observed relationship with FOC and social media consumption.

It would be interesting for future research to build on the findings of Intravia et al. (2017) and see if such research can corroborate the finding that general news and crime news consumption via social media has little influence on FOC. Future research could also consider how different social media platforms contribute, for example, comparing FOC in Facebook users with Twitter users. This would allow us to gain further understanding on how social media influences FOC.

Regarding neuroticism and FOC, a significant correlation was observed between the two variables, in addition to neuroticism being a strong predictor for FOC in adults which supports H3. This is in line with Klama and Egan's (2011) findings, whilst controlling for previous victimisation. As neuroticism is in itself a feeling of distress and unsafety (Kwon and Weed, 2007), it seems coherent that high levels will correlate with high levels of fear, implying this is the reason for the existing relationship. The study finds that neuroticism plays a key role in influencing FOC in adults, and by attempting to control the occurrence of neurotic tendencies, it could lead to a lower FOC and subsequently a better quality of life. Future research into personality and FOC could compare the influence of each personality domain of the big five, and not just neuroticism. Although it would be expected that neuroticism be superior, it would be interesting to see how agreeableness, extraversion, openness to experience and conscientiousness influence FOC. Furthermore, it would be intriguing looking at how the domains interact with each other to affect FOC.

The results looking at attitudes towards police and FOC is not supportive of previous literature. It was found that attitudes towards police was not correlated with FOC, nor was it significantly predictive, rejecting H4. Suggesting that perceptions of police as a whole, do not play a significant role in determining an individual's FOC. This is contrary to findings of Williams et al. (2015) and Alda et al. (201) which suggested that negative attitudes towards police were associated with high FOC.

One possible explanation for such findings could be due to instrument used to measure attitudes towards police, the POPS (Nadal and Davidoff, 2015). The scale implemented questions regarding both police efficacy and police bias. While each aspect has been found to increase FOC, it has been found they operate independently (Williams et al., 2015). For example, if an individual has the negative perception that police are biased towards a certain demographic group, they may still hold the positive perception that they provide safety. This would suggest, in line with Williams et al. (2015), that future research should consider separate scales for measuring attitudes towards police, rather than one which attempts to unify different dimensions of perceptions of police. Moreover, future research could consider whether the effect of police perceptions on FOC differed in age groups, as this study did with social media. This would provide further understanding into what influences FOC.

The study is not without its limitations nonetheless. Albeit the sample size can be considered appropriate, the number of males (N = 66) and females (N = 113) differed quite largely. As reported, gender plays a significant role in determining FOC, with females consistently having higher FOC than males. This could have potentially skewed the data by increasing the samples overall FOC levels. Suggesting a consideration for future research must be to achieve a sample which has a more similar number of male and female participants. Secondly, due to the sampling method, the study neglected to investigate demographic variables such as ethnicity or location which have shown to affect FOC (Luo et al., 2016). Future

research could then consider how the independent variables considered in this study differ between different demographic groups. In addition, as location was not considered in this study, FOC levels could not be compared to actual crime rates which would allow a broader perspective on determinants of FOC.

The use of a self-report survey is always open to criticism. Those who complete questionnaires face problems in; misunderstanding questions, under and over-estimating responses and self-judging the connotation of questions (Sudman et al., 1996). Each of these problems may have influenced the study's findings. Additionally, as the study is a cross-sectional design, it cannot assess causality. In order to investigate this, a longitudinal study may be more appropriate. This would allow investigation into the stability of FOC, looking at whether it fluctuates, and if so, what causes fluctuations. It also provides the possibility to collect a combination of qualitative and quantitative data, which is suggested to be important in truly understanding what influences FOC (Lorenc et al., 2013). Therefore, providing a more holistic understanding of factors influencing FOC.

## **Conclusion**

The findings support previous FOC literature for the most part, with the exception of the influence of attitudes towards police. The study looks at a range of factors which may not have previously been related but for their influence on FOC. By comparing these contributory factors in one study, it has allowed a greater insight into what plays a significant role in the make-up of FOC in adults. Nevertheless, FOC is a complex phenomenon and it would be misguided to assume that gender, neuroticism, and social media consumption are the only factors involved in creating FOC. It is therefore important that research into FOC continues. This will provide us with a greater understanding on how to reduce FOC in adults, which can potentially lead to greater life satisfaction and a better quality of life.



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