Article

Understanding the Effects of Crime on Women: Fear and Well-Being in the Context of Diverse Relationships

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Abstract: The risk-fear paradox, whereby people who experience the least criminal victimisation report the greatest fear of crime, has been established in the extant literature. That this paradox is gendered, notably that women report greater fear yet are less likely to experience crime, has also been consistently identified. However, there remains a largely unanswered call to explore further the distinctive experiences of women and men. There are likely to be substantial within-group differences as well as between-group differences in experiences of crime and reported fear of crime. For instance, women may experience fear differently by relationship type. Specifically, women in non-traditional families, notably same-sex couples and single, divorced and widowed women may be more fearful. Therefore, for women, the risk-fear paradox may not function equivalently across relationship types. What is more, the impact of experiencing crime may have broader effects on women's well-being, with those in families with complex needs shouldering a greater burden. We apply 2012 European Social Survey data to investigate reports of experiencing crime, feeling unsafe and anxious and sleeping restlessly for a sample of European women (*n* = 28,768). Our results demonstrate that single, separated and divorced women are more likely to experience crime than married women. Divorced and widowed women, as well as those who experience crime, are more likely to report feeling unsafe. Single women, compared to married women, who experience crime are more likely to feel anxious and sleep restlessly. Our results indicate that crime has differential effects on women by relationship type particularly regarding well-being. These findings offer important nuance to the experiences of women.

1. Introduction

Despite the significant amount of research exploring the fear of crime and its relationship to gender, a detailed explication of women's crime and fear experiences is conspicuously absent. Moreover, the homogenizing assumptions that underpin most of the research on women's experiences of crime and fear of crime have been critiqued rather than countered [1,2]. There is a comparatively small but compelling evidence base which demonstrates that women report diverse levels of fear of crime; moderated by crime type, family circumstances, previous experiences of victimization and age [3]. There is also a growing body of work which explores the effect of relationships on fear of crime. While this literature does not typically explore in detail the unique experiences of women, it does indicate that fear of crime is both a social and individual phenomenon. Relationship status and family measures such as the presence of children in the household have an effect on fear of crime. More specifically, fear of crime may be individual fear—fear for oneself—and/or altruistic fear—fear for someone else [4,5]. However, this literature is limited by its narrow focus on heterosexual relationships [6]. Taken together, the research evidence highlights three issues: first that experiences of crime and fear of crime are not uniform for all women. Second, comparing the experiences of men and women may obscure the distinctive, varied and poorly understood experiences and effects of crime and fear on women. Third, the relationship circumstances that women are experiencing may impact on their likelihood of experiencing crime, their reported levels of fear of crime and their resultant wellbeing.

What is more, the bulk of research on crime and fear focuses on single-country samples (see [7–9]). These studies do not explicitly model fear of crime by family status, especially vulnerable populations including same-sex couples and single and divorced women who have experienced crime. While these single-country samples provide great insight into experiences of crime and the risk-fear paradox, they lack a comparative component and cannot speak to broader patterns of inequality [10]. Further, these studies include marital status as a demographic control but are unable to capture numerically small yet vulnerable groups such as same-sex couples and crime victims by marital status. We address these limitations by exploring the impact of crime on women by marital status across a range of groups including single, separated, divorced, widowed, cohabiting and same sex partners. By pooling our sample for all European countries, we are able to estimate these effects for a more representative sample of European women in diverse relationship types. Indeed, alternative family forms are proliferating in Europe and thus estimating women's experiences in these family types is essential [11,12].

Finally, the majority of the crime and fear literature focuses on the risk-fear paradox in general, age or gender gaps in fear of crime more specifically, or conceptual and methodological challenges associated with measuring fear of crime. Yet, the experience of crime is consistently shown to have broader psychological and health effects see [13–17]. Indeed, psychological research demonstrates that experiencing a crime has immediate effects on mental health including levels of anxiety [16], but little is known about how family type is associated with health and wellbeing. Single women who experience crime may be more vulnerable to negative psychological and health outcomes than married or partnered

women as having a partner in the home may buffer women from some of these negative effects. Our models assess these relationships cross-sectionally to provide some insight into these associations.

This paper addresses three important research questions for a sample of European women. First, we ask: are married women less likely to experience crime and more likely to report fear than those in other family types, including the most vulnerable groups (divorced, widowed, same-sex attracted women)? To this end, we assess whether, for women, the gap between experiences of crime and fear of crime is related to marital status. Second, we ask: is fear of crime motivated exclusively by those who experience crime, estimating separate effects by marital status? This allows us to determine whether marital status is associated with women's greater vulnerability. Finally, we ask: does experiencing crime have broader effects for women on anxiety and sleep, estimating separate effects by marital status? This allows us to determine whether marital status structures the longer-term health and well-being of women who experience and/or fear crime. To determine these effects, we apply data for a pooled sample of European women aged 18 and older from the 2012 European Social Survey (ESS; *n* = 28,768) [18]. By pooling our sample to Europe, we are able to compare crime, fear, anxiety and sleep experiences for theoretically important yet small groups, including same-sex couples, and experiencing crime by marital status. Thus, while we are unable to make strong country-to-country comparisons, we are able to determine how relationship status structures women's complex experiences of crime, fear and well-being in diverse family structures, thereby responding to the call to explore variations within gender groups.

2. Literature Review

The paradox surrounding fear and anxiety about crime and its uneven relationship with risk of criminal victimisation has been well established across theoretical and empirical literature. This paradox has come to be regarded as a criminological truism [1,3]. From this broad base, fear of crime research has moved through several empirical moments. After establishing a disjunction between the groups of people who are most fearful and the groups who are most at risk of victimisation, fear of crime research considered why this paradox might be. Various explanations emerged at individual, social and environmental levels.

At an individual level the risk-fear paradox has been theorized as a reflection of real or imagined vulnerabilities. Early work based on the British Crime Survey for example represented women and older adult's fear of crime as an irrational individual response to a statistical unlikelihood [9] structured by, for example, "sensitivity to risk" [19]. Conversely, an absence of fear about criminal victimisation in the face of a statistical likelihood of victimisation was explained by the influence of masculinity, which could both serve to mask perceptions of risk or reduce the likelihood of admitting to feeling fearful to researchers [20]. Over time, critical scholarship has worked to problematize the notion of irrationality in fear of crime. Instead, critical commentators have highlighted the structuring conditions of gender that give rise to real risks of gender-based violence and consequently heightened levels of fear [21].

The "risk" of criminal victimisation has been disaggregated into physical and social vulnerabilities. In this context, physical vulnerability refers to defensive capacity. Older adults, women, and in more recent literature people with poor health status, are presented as fearful about crime because of their relative disadvantage in defending themselves against an attacker. Social vulnerability refers to social characteristics that may increase vulnerability to crime victimisation such as race/ethnicity and

socio-economic status at the individual level [22]. This body of research generally supports the idea of a gender gap in the fear of crime but it also highlights the complexity of variables influencing levels of fear complicating the conclusions of early work that found that women's fear was "irrational". Moreover, the literature forwarding vulnerability-based explanations has generally excluded consideration of relationship status as a potential factor in reported fear of crime. There are at least two ways in which relationship status might connect with vulnerability: first, partnered women may feel more secure as their partnership protects them from feelings of insecurity or vulnerability. However, in the case of same-sex attracted partnerships, being in a relationship may increase the risk of some types of victimization and therefore fear of crime. Second, relationship patterns change over the life course, with single women more likely to be younger than divorced or separated women, and widowed women more likely to be in the older age groups [23]. This means that the consistently identified age-fear effect—whereby age and fear of crime are positively related—may mask a relationship status effect, or an interaction between relationship status, age and fear of crime.

As noted above, a key focus of the extant risk-fear literature has been gender. Stanko's important work in the mid-1990s critically engaged with questions of gender, risk and fear by exploring the ways in which social control governs how women can and do use public space, with a range of hidden consequences [24]. Reflecting on the now large body of gender gap knowledge, Rader describes this literature as presenting two hypotheses which bring together individual and social level explanations [25]. First the sexual assault hypothesis suggests that women particularly fear sexual victimisation, and heightened concern about this raises women's levels of fear more generally. Second the socialization hypothesis suggests that two core beliefs are part of women's socialization—that men are necessary for protection and that women are at risk from strangers in public space. Both explanations highlight that fear of crime is structured differently for men and women, and that fear is not directly related to experiences of crime, calling into question the usefulness of gender based comparisons and highlighting the need to look at, as well as beyond, experiences of crime. Instead, it has been suggested that further exploring variation within gender groupings is a more fruitful direction for fear of crime research [26]. Both explanations also have potential to explain why women in varying family structures may be differentially impacted by experiences of crime. While the first hypothesis—that women particularly fear sexual victimization—might be universally experienced, it is possible to speculate that partnered women may perceive themselves to be at lower risk from sexual victimisation as they spend less time alone, or feel generally more secure. The socialization hypothesis also suggests that by meeting normative expectations about proximity to men as protectors some partnered women feel less vulnerable to crime risks. However, this work does not further our understanding of women's feelings of vulnerability in same sex attracted partnerships.

2.1. Fear of Crime and Well-Being

A large body of research across many disciplines has examined the relationship between wellbeing, happiness and relationship status. Across that work, it is clear that significant life events such as marriage, divorce and widowhood have an effect on happiness and by association, wellbeing. However, it is also clear that the relationship between wellbeing and relationship status is gendered with married women performing comparatively poorly on wellbeing measures compared with married men [27]. What

is more, these women tend to rebound more quickly after divorce, indicating marital status has differential effects by gender [28]. This compels the need for further research which examines women's experiences in greater depth than comparative research may afford.

Fear of crime has been negatively connected to good mental health and general wellbeing [13,14,16], with impacts on participation in everyday activities, use of public space and interaction with others [15,17].

This growing research literature indicates that as fear of crime is unevenly experienced, so the effects of fear of crime on health and wellbeing are unevenly felt. Unsurprisingly, this literature identifies that the impacts of fear of crime are disproportionately felt by women and the elderly [13] and are related to poor mental health, including increased anxiety and depressive symptoms [16] although the direction of causality is not well established [13]. Cossman and Rader considered self-reported health status and its impact on fear of crime. They concluded that, for women, perceived health—as opposed to objective indicators of health—was a significant predictor of higher reported fear of crime. They conclude that "the personal vulnerability hypothesis may be a much more appropriate framework for understanding women's fear of crime (with age, race, marital status and health status all playing a role in how safe women feel in their own neighborhoods) than for men" ([29], p. 159). Similarly, Canadian research concluded that for both elderly men and women individuals expressing fear of crime also experienced greater levels of anxiety, depression and cognitive distress [13]. Although the authors did not concentrate their analysis on the particular experiences of women their results do support the general view that fear of crime and wellbeing are connected. This research further highlights the importance of examining closely the links between health and fear to expose women's particular vulnerability to negative consequences flowing from increased fear of crime.

Fear of crime and health has a complicated relationship which includes both direct and indirect effects. For example, higher levels of fear of crime may increase heart rate and therefore cardio-vascular effects; alternatively, higher levels of fear of crime may reduce engagement in physical activity outside of the home which may have an indirect negative impact on overall health and wellbeing [16]. Protective factors for good mental health such as regular physical exercise and socialising were also impacted by fear of crime, indicating an indirect relationship between increased fear of crime and overall wellbeing [30]. The presence of a spouse or partner may also buffer women from the negative consequences of crime, in part by providing a support network within the home.

In this literature too, the paradox between fear of crime and risk of victimisation is highlighted. However this distinction is less important given the effects of fear of crime, as succinctly argued by Pearson and Breetze:

> What makes investigating the fear of crime on wellbeing outcomes of particular interest is that it is not the actual threat of being a victim of crime that elicits negative stress responses in individuals but the perception of risk of being a victim of crime. When the perception of risk is great, fear abounds, and manifests itself in certain physiological changes and unhealthy behaviour patterns. ([16], p. 289).

More recent work by Jackson and Gray complicates the assumption that fear of crime is intrinsically problematic [31]. Instead, they argue, fear of crime has both positive and negative effects. Some fear of crime is useful—it motivates people to take precautions against criminal victimisation which in turn increases feelings of safety and security. It is only at the point that fear of crime impacts upon quality of

life (which is not inevitable) that it has a negative effect [32]. It is here that wellbeing research can usefully explore some of the negative impacts of fear of crime.

2.2. Families and Fear of Crime

There is limited, but emerging evidence that family structure is relevant to understanding the fear of crime. For example, Whitley and Prince reported that mothers in low income households were more likely to be negatively impacted by fear of crime [19]. Pearson and Breetzke ([16], p. 286) demonstrated that "as age, partner status and income increased, so did mental wellbeing" indicating that family structure in conjunction with age and financial security had a positive impact on fear on crime. Similarly, Rader et al found support for the effect of both physical and social vulnerabilities on fear of crime. This research considered family type, albeit to a limited extent, and concluded that as the percentage of a neighbourhood that was married increased, fear of crime decreased indicating that family type has some influence on levels of fear [33].

Earlier work by Warr and Ellison described the ways in which consideration of family structure problematised established findings about fear of crime and gender arguing that women may be more fearful for themselves but men are "highly susceptible to altruistic fear when it comes to their wives and children" ([5], p. 574). Therefore fear is not evenly distributed across the family and the nature of fear reportedly experienced by women has a qualitatively different character to the fear reported by men. Further, Warr and Ellison argued that the social dimensions of fear have been underexplored compared with the individual dimensions of fear. This is important in light of their conclusions that individuals may be fearful for themselves and/or others, and fear of crime potentially impacts the emotional wellbeing of the household. While the European Social Survey data does not enable us to explore the altruistic fear of crime, our research responds to the gap in knowledge about the social or relational dimensions of fear of crime and wellbeing by considering relationship status.

Taking a narrower focus on married men's fear of crime for themselves and others (altruistic or vicarious fear), Rader argued that marriage had an effect on men's personal fear of crime: "Before entering marriage, men claimed they did not worry much about their safety but once they entered marriage, realized they needed/wanted to be around for a long time to take care of their spouse and enjoy their family." ([22], p. 45). Indeed Rader's earlier work highlighted the relevance of relationship status to understanding fear of crime [17]. Here, Rader explained that both married and divorced women may designate "fear work" to their partner. This "fear work" might include, for example, securing property and physical protection. However there is a paucity of empirical research which interrogates specifically the distinct experiences of women identified by Warr and Ellison [5], or the relevance of family and relationship circumstances to fear of crime identified by Rader [33]. Still less considers the experiences of same-sex attracted women. In one of the few exceptions, Otis examined the perceived risk of victimization and fear of crime reported by lesbians and gay men [6]. In this study women were more likely to fear personal victimization than men, but the effect of gender was low. These findings suggest that when you consider the experiences of particular groups of women the existing truisms that operate in fear of crime work become less convincing.

2.3. Measuring Fear of Crime

The complexity of measuring fear of crime is evident [34]. For some authors, a distinction ought to be made between measures of perceived risk of victimisation and emotional responses such as worry or fear [14]. Traditional measures have typically included questions about fear of walking alone at night—a measure that some critics have argued is less relevant or useful for older research participants [13]. Similarly, local patterns of crime and reporting of crime events challenges national and cross-jurisdictional approaches. More specifically, it has been argued that reported levels of fear are related to specific crime type, and therefore generalised inquiries about risk or fear would be unlikely to pick up the nuances in people's lived experiences of fear of crime. Moreover the relationship between gender and fear that has been established repeatedly in the literature is also called into question by a crime-specific analysis. Here, sceptics argue that it is actually fear of interpersonal violence that explains women's higher levels of fear, rather than a generalised anxiety about crime, or a particular type of crime experience, such as assault and burglary as measured by the European Social Survey 2012 [34,35]. The absence of standardized measure of experiences of crime and fear of crime make it difficult to distinguish and compare research findings across the extant literature.

As highlighted above fear of crime research can be characterised by contradictory or equivocal findings [6]. Critical scholarship has called into question some of the criminological truisms presented earlier in this paper. More specifically, there is now a large body of complicating research on the interaction between age and fear which suggests that older people may not have higher levels of fear at all [1]. At least some of the variation in levels of fear has been explained in relation to methodological limitations and inconsistencies [6]. For example, the extent to which questions about levels of anxiety or practices such as walking home alone accurately measure fear of crime has been questioned. Critics have also suggested that men may not experience lower levels of fear of crime at all, but that this effect may be a result of their lower likelihood to report fear of crime [20]. Similarly, there have been calls to consider research conclusions about women's higher reported fear of crime in the context of their victimisation experiences in the home and in more "mundane" everyday settings which nonetheless contributes to a general, and gendered, sense of unease [36].

While making much of the distinction between fear of crime reported by women compared to men, or older adults compared to younger adults there has been relatively little work which has systematically examined the experiences of women in a nuanced way, starting from the perspective that women are not all the same, and their experiences of crime, fear of crime and resultant wellbeing are also likely to vary. Furthermore, almost exclusively, extant work is interested in adult's fear of crime and does not distinguish between individuals or communities with diverse family and sexuality configurations [6]. In summary, this research landscape highlights the importance of addressing fear of crime in addition to crime prevention. While many authors have argued for the importance of understanding fear of crime because of its range of negative impacts on individuals and communities, relatively few have interpreted the task to include centrally the notion of wellbeing [37]. Fewer still have explored the relevance of relationship status to understanding risk and fear of crime or the uneven relationship between the two.

3. Data

This study applies cross-national data from the 2012 European Social Survey (ESS) [18]. The ESS is collected annually by a consortium of top European academic agencies on a rotating list of topics. While the 2012 ESS is on the module on Understanding of Democracy, questions on crime, fear, anxiety and sleep are present in each wave of the survey. Thus, we selected the 2012 module which is the most recently released data from the ESS. The ESS provides strict accountability to maintain the rigor, validity and consistency across countries and is considered the top general social survey of European countries [38]. The 2012 wave provides a representative sample of respondents across 29 countries. These include: Albania, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Kosovo, Lithuania, the Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine and the United Kingdom. We restricted our models to women aged 18 and older which produced an effective sample size of 28,768 respondents across all 29 countries. We estimate our models for the pooled sample in order to test for significant differences among small yet theoretically important populations. All of our models apply design weights and are estimated as binary logistic regressions as our outcome measures are discrete. We present the log-odds units (B) and the odds ratios (exponentiated B) to ease interpretation.

3.1. Dependent Variables

We apply three dependent variables measured dichotomously. The first captures whether the respondent *experienced crime* or not. Respondents were asked to report whether they or a member of their household was a victim of a burglary or assault over the past 5 years. This measure was dichotomously coded for those who reported yes to this measure (experienced crime = 1). This crime measure is not without limitation, specifically in that it asks for a narrow set of experiences over a long period of time for multiple family members. Yet, this measure is validated across a range of studies as a general indicator of experiencing crime [4,11]. In a major limitation, this question asks for crime experiences for the respondent *and/or* their household members. This limits our ability to definitively state whether the respondents, themselves, experienced the crime. Yet, this measure likely underestimates the positive effect of experiencing a crime on perceptions of fear, anxiety and restless sleep. Thus, our significant coefficients are likely much lower than if this question was asked about respondents' experiences exclusively.

Our second dependent variable captures *feeling unsafe* through the following question: "how safe do you—or would you—feel walking alone in this area after dark?" Responses are on a four point scale ranging from very safe (17.9%), safe (48.3%), unsafe (25.1%) and very unsafe (7.1%). For consistency across measures, we collapsed this measure to capture reports of feeling unsafe (32%; value = 1) but we also estimated ordinal regression coefficients which produced equivalent results to the binary models. Our third dependent variable reflects respondents' reports of feeling anxious. Respondents reported how often they felt anxious over the past week with responses ranging from none or almost none of the time (43.0%), some of the time (41.8%), most of the time (10.8%), all or almost all of the time (3.4%). Given the right skew in the data, we dichotomously coded this measure for those who have felt anxious over the past week (56%; value = 1) compared to those who reported none or almost none of the time

(value = 0). Finally, *sleep is restless* captures respondents' reports of experiencing restless sleep over the past week on an equivalent scale to the anxiety measure. We collapsed this measure to capture those who reported experiencing any restless sleep (61%; value = 1) compared to those who did not experience restless sleep (39%; value = 0). We are interested in those experiencing any level of anxiety or sleep disturbance in the last week. While this includes those with less severe anxiety and sleep disturbances with those in more extreme circumstances, the link of anxiety and disturbed sleep with poorer health outcomes is established [39–42]. Thus, even minor disturbances in sleep and anxiety have serious consequences for well-being. For these reasons, we estimate models across this broader group to identify whether experiencing crime increases the odds of anxiety and disturbed sleep rather than focusing on those with the most severe cases.

3.2. Main Independent Predictors

Given our focus on the impact of complicated family-types on experiences of crime, we estimate a series of dummy measures capturing distinct family groups. In one measure, respondents were asked to report their current marital status. From this measure, we coded respondents into five groups: *married or living as married* (comparative group), *single-never married*, *separated*, *divorced*, and *widowed*. To capture *same-sex* and *cohabiting* respondents, we used the family register to identify respondents reporting living with a husband/wife/partner of the same sex (same-sex partnerships) and those who reported none or not applicable in the legal marital status questions yet report living with a husband/wife/partner of the opposite sex (cohabiting partnership). Consistent with other large representative surveys, same-sex couples account for a small percentage of the total sample (0.4% or 122 cases). Without a direct sexuality question, this modelling strategy underestimates the true number of lesbian women in our sample. Further, this small sample limits our ability to investigate countries separately and rather requires the data to be pooled. Yet, it is important to note capturing this sample, in the absence of a direct sexuality measure, is an important advantage upon previous ESS research which includes these respondents among the other marital status measures, thus confounding these relationships [43,44]. We also estimate the *presence of a child* in the home (value = 1). Further, to determine whether family status structures the impact of experiencing a crime on feeling unsafe, anxious and sleeping restlessly, we also estimate a series of interaction terms by relationship and parental status.

3.3. Individual Controls

We estimate a series of socio-demographic controls. Employment status compares those who are employed *full-time* and *part-time* to those who are currently *not in the labour market* (comparative group). *Age* captures the respondents' age at the time of the interview. *Household income* is measured on a ten-point scale asking the respondent to weigh her income relative to others in her country with higher values reflecting greater relative household income. Respondents reported their highest level of completed *education* in their country-specific systems which were harmonized, on a four-point scale, by the ESS team for cross-national comparability. Higher values reflect more completed education. All of the models also include country dummies to account for country-to-country differences in our dependent measures, with Sweden as the omitted group.

4. Results

Table 1 provides a descriptive overview of our sample. As most of our estimates are coded dichotomously, we present the percentage of the population in each category. Continuous measures are presented as means. Across our dependent variables, 61 percent of our sample reported sleeping restlessly in the past week, the most common experience. Feeling anxious is second with 56 percent reporting anxiety in the past week. One-third of our sample, 32 percent feel unsafe walking down the street and only 16 percent have experienced a burglary or assault in the past 5 years. The modal family type are women who report being married (49%) followed by single women (23%), widowed (15%), divorced (11%), separated (1%), same-sex (0.4% or 120 respondents) and cohabiting (not legally recognized (0.3% or 95 respondents). Close to half of the sample report having a child present in the home (43%). Among these groups, 7 percent of married women experienced a crime compared to 4 percent of single women, 2 percent of widowed and divorced women, and 0.1 percent of separated, cohabiting and same sex respondents. Clearly, the percentage of separated, cohabiting and same-sex respondents experiencing crime is small and should be interpreted with extreme caution. Yet, we estimate these effects in order to ease the interpretation of the interaction effects. Women with children account for 7 percent of those who experienced a crime compared to 8 percent who do not have children in the home. Of course, the presence of a child and marital status are not mutually exclusive. For our individual controls, 67 percent report working 30 plus hours in a typical week, while only 15 percent report working less than 30 hours and 18 percent are not in the labour market. The mean age of the sample is 50 years old. Further, respondents report a mean household income of 4.8, roughly half of the ten point scale. Yet, the education level is quite high with the mean reporting the highest level of education at 3.9, or completing a high school diploma.

Table 1. Descriptive statistics of dependent and independent variables (ESS *n* = 28,768) [10].

	Mean or Percentage	Std. Deviation	Range
Dependent Variables			
Experienced burgulary or assault in past 5 years	16%	0.363	0–1
Feel unsafe walking down street	32%	0.467	0–1
Feel anxious in past week	56%	0.496	0–1
Slept restlessly in past week	61%	0.488	0–1
Main Individual Predictors			
Married	49%	0.500	0–1
Single	23%	0.420	0–1
Separated	1%	0.076	0–1
Divorced	11%	0.312	0–1
Widow	15%	0.354	0–1
Cohab	0.3%	0.057	0–1
Same Sex	0.4%	0.064	0–1
Child Present	43%	0.495	0–1

Table 1. *Cont.*

	Mean or Percentage	Std. Deviation	Range
Interaction Terms			
Married × Experienced Crime	7%	0.263	0–1
Single × Experienced Crime	4%	0.202	0–1
Separated × Experienced Crime	0.1%	0.039	0–1
Divorced × Experienced Crime	2%	0.133	0–1
Widowed × Experienced Crime	2%	0.128	0–1
Cohab × Experienced Crime	0.1%	0.025	0–1
Same Sex × Experienced Crime	0.1%	0.029	0–1
Child Present × Experienced Crime	7%	0.260	0–1
No Child Present × Experienced Crime	8%	0.275	0–1
Controls			
Full-time (30 plus hours)	67%	0.470	0–1
Part-time (1 to 29 hours)	15%	0.356	0–1
Not in the labour market	18%	0.125	0–1
Age	50.024	18.052	18–102
Household Income	4.865	2.811	1–10
Education level	3.931	1.885	1–4

Table 2 addresses our initial research question: are women in different marital groups more vulnerable to crime and reports of fear than others? Across all of the models, we control for country dummies. Thus, the results can be interpreted as the effect of marital status, net of country-to-country differences in women's reports of experiencing crime and feeling unsafe. As these models present binary regression coefficients, we also present exponentiated values of the log-odds of reports to indicate the magnitude of the effects. Model 1 presents the coefficients for reports of experiencing crime. Single, separated and divorced women are more likely to have experienced a crime than married women. By contrast, widowed, cohabiting and same-sex respondents are no more likely than married women to experience crime. In ascending order, the odds of experiencing a crime are 68 percent higher for separated women $[(e^{0.524} - 1) \times 100 = 68.9]$, 24 percent higher for divorced women $[(e^{0.220} - 1) \times 100 = 24.6]$ and 14 percent higher for single women $[(e^{0.131} - 1) \times 100 = 14.0]$ compared to married respondents. Counter to expectations, the odds of experiencing a crime are not significantly different for same-sex and cohabiting couples. The small sample sizes for the same-sex respondents may result in this failed significance or these may be truly non-significant relationships. The odds of women with children in the home experiencing a crime are 18 percent higher than women without children in the home $[(e^{0.169} - 1) \times 100 = 18.4]$, indicating that mothers are more vulnerable to crime than non-mothers. Turning to our demographic controls, employed, higher earning and more educated respondents have a higher odds of experiencing a crime. By contrast, reports of experiencing a crime deteriorate with age.

Table 2. Binary logistic regression coefficients for experiencing a burglary or assault in the past 5 years (ESS n = 28,768) [10].

	Experienced Crime		Feeling Unsafe	
	Model 1		Model 2	
	B	**Exp (B)**	**B**	**Exp (B)**
Main Predictors				
Experienced Crime	-	-	0.787	2.196
Compared to Married				
Single	0.131 **	1.140	−0.067	0.936
Separated	0.524 **	1.689	−0.016	0.984
Divorced	0.220 ***	1.246	0.143 **	1.154
Widow	0.115	1.122	0.171 ***	1.187
Cohab	0.294	1.342	−0.207	0.813
Same Sex	0.284	1.328	−0.090	0.914
Compared to no Child in the Home				
Child Present	0.169 ***	1.184	−0.159 ***	0.853
Controls				
Compared to Those not in the Labour Market				
Full-Time	0.156 **	1.169	−0.019	0.981
Part-Time	0.201 **	1.223	−0.048	0.953
Age	−0.008 ***	0.992	0.0005	1.000
Household Income	0.020 **	1.020	−0.041 ***	0.960
Education Level	0.060 ***	1.062	−0.081 ***	0.922
Constant	−1.294 ***	0.274	−0.967 ***	0.380
R-Square	0.062		0.131	

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; all models control for country dummies (Sweden comparative group).

Model 2 estimates these effects for feeling unsafe. In this model, experiencing a crime becomes a central predictor for feeling unsafe. Consistent with expectations, experiencing a crime has a positive and large effect on feeling unsafe. In fact, the odds of women who experience a crime feeling unsafe are 120% higher than for those who did not experience a crime [$(e^{0.787} − 1) × 100 = 119.6$]. Similarly, the odds of divorced and widowed women feeling unsafe are 15% and 18% higher respectively than for married women [$(e^{0.143} − 1) × 100 = 15.4.6$; $(e^{0.171} − 1) × 100 = 18.7$]. Interestingly, although the odds of single and separated women reporting experiencing a crime are higher, the odds of them feeling unsafe are no higher than those for married women. Women with a child in the home, although reporting greater odds of experiencing a crime, have 14% lower odds of feeling unsafe suggesting that the fear-crime paradox does not structure their experiences [$(e^{−0.159} − 1) × 100 = 14.7$]. Turning to the demographic controls, the odds of feeling unsafe are lower for those with higher household incomes and educations. While we identify clear family-type patterns, our models beg the question, is marital and parental status driving these effects or is it the interaction between marital status and experiencing a crime that structures these reports? Table 3 addresses this question.

Table 3. Binary logistic regression coefficients for feeling unsafe, anxious and reporting restless sleep (ESS *n* = 28,768) [10].

	Feeling Unsafe		Feeling Anxious		Sleep is Restless	
	Model 1		Model 2		Model 3	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Main Predictors						
Experienced Crime	0.834 ***	2.302	0.262 ***	1.300	0.241 ***	1.272
Compared to Married						
Single	−0.019	0.981	−0.104 *	0.901	−0.173 ***	0.841
Separated	−0.174	0.840	−0.152	0.859	−0.081	0.923
Divorced	0.156 **	1.168	0.077	1.080	−0.048	0.953
Widow	0.169 ***	1.184	0.239 ***	1.270	0.159 **	1.173
Cohab	−0.118	0.889	0.187	1.205	−0.194	0.823
Same Sex	0.045	1.046	0.056	1.058	−0.024	0.976
Compared to no Child in the Home						
Child present	−0.165 ***	0.848	0.118 ***	1.125	0.027	1.028
Crime Interactions						
Single × Experienced Crime	−0.224 *	0.799	0.352 ***	1.422	0.321 ***	1.378
Separated × Experienced Crime	0.433	1.541	0.337	1.401	0.238	1.269
Divorced × Experienced Crime	−0.072	0.930	−0.221	0.802	0.084	1.087
Widowed × Experienced Crime	0.040	1.041	−0.254	0.776	−0.265 *	0.767
Cohab × Experienced Crime	−0.378	0.685	−0.420	0.657	0.284	1.329
Same Sex × Experienced Crime	−0.512	0.599	−0.045	0.956	−0.012	0.988
Child Present × Experienced Crime	0.029	1.029	−0.119	0.888	−0.002	0.998
Controls						
Compared to Those not in the Labor Market						
Full-time	−0.017	0.983	−0.026	0.974	0.034	1.035
Part-time	−0.045	0.956	−0.006	0.994	0.063	1.065
Age	0.000	1.000	0.001	1.001	0.010 ***	1.010
Household Income	−0.041 ***	0.960	−0.076 ***	0.927	−0.057 ***	0.944
Education level	−0.081 ***	0.922	−0.017	0.983	−0.044 ***	0.957
Constant	−0.969 ***	0.380	0.182	1.199	0.000	1.000
R-Square	0.131		0.221		0.074	

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; all models control for country dummies (Sweden comparative group).

Table 3 estimates whether the interaction between family-type and experiencing a crime significantly effects reports of feeling unsafe, anxious and sleeping restlessly. Model 1 estimates these effects for feeling unsafe. Consistent with the previous table, respondents who are divorced or widowed or have experienced a crime have a higher odds and women with a child in the home have a lower odds of feeling unsafe. With the exception of the weakening effect for single women who experienced crime (single women's reports log-odd units = 0.83 − 0.22 = 0.61), none of the crime interactions are significant. In other words, all women who experience a crime are more likely to report feeling unsafe regardless of marital or parental status. Model 2 estimates the spillover effects of experiencing a crime and relationship status on reports of feeling anxious and produces some striking results. Consistent with expectations, respondents who experience a crime are more likely to feel anxious during the past week (log-odd units = 0.26) but this positive effect is significantly larger for single women who have experienced a crime (single women's log-odd units = 0.26 + 0.35 − 0.10 = 0.51). This positive effect is startling in light of the negative effect of being single on feeling anxious. The odds of single women reporting feeling anxious are 10 percent lower than married women [$(e^{-0.104} − 1) \times 100 = 9.9$]. But, the odds of single women who have experienced a crime reporting anxiousness are 66 percent higher than married women who experienced a crime ([$(e^{0.26 + 0.35 − 0.10} − 1) \times 100 = 66.5$]. In other words, experiencing a crime deteriorates all of the benefits of singlehood on reports of anxiety. While widows and women with a child in the home are more likely to report feeling anxious, there are no differential effects for these groups when they experience a crime *versus* not.

Model 3 further explores these relationships for reports of restless sleep over the past week. Consistent with the previous model, experiencing a crime is positively associated with reports of restless sleep (log odd-units = 0.24) but this positive relationship is magnified for single women who experienced a crime (single women's log odd-units = 0.24 + 0.32 − 0.17 = 0.39). In other words, the odds of a single women who experience a crime reporting restless sleep in the past week are 47 percent higher compared to their married counterparts [$(e^{0.24 + 0.32 − 0.17} − 1) \times 100 = 47.6$]. These results parallel those for anxiety as the odds of single women who have not experienced a crime on feeling restless are 16 percent lower than married women (log odd-units = −0.173; [$(e^{-0.173} − 1) \times 100 = 15.9$]); yet, this negative effect is expunged for single women who have experienced a crime. For widowed women, the positive effect of experiencing a crime on sleeping restlessly is slightly smaller (widowed women's log odd-units = 0.24 + 0.15 − 0.26 = 0.13) than for married women who experienced a crime. Yet, the odds of widows who have not experienced a crime to report sleeping restlessly are higher suggesting that this may be an aging rather than marital status effect. Yet, our demographic controls demonstrate that widowhood has a larger positive effect above and beyond aging (log odd-unit = 0.01 or 1% for every year). In terms of controls, household income and education have some buffering effects on anxiety and sleeping restlessly. Ultimately, our results demonstrate significant patterns by marital status and experiencing a crime.

5. Conclusions

The results from the 2012 European Social Survey (ESS) [18] demonstrate that there are significant nuances in women's experiences of crime relative to fear of crime and wellbeing. Notwithstanding the aforementioned methodological limitations, these nuances appear to be structured by experiences of crime and family type. First, single, separated and divorced women are more likely to have experienced

a crime than married women. The experience of crime measure sought reports about assault and burglary and is therefore likely to have underestimated experiences of alternative types of crime such as intimate partner violence. As expected, for *all* women experiencing a crime in the last five years has a positive and large effect on feeling unsafe. However the effect of experiencing a crime on feeling unsafe is moderated by family type with divorced and widowed women more likely to report feeling unsafe than married women. This finding suggests that partnerships may buffer some women who experience crime from the effects on fear of crime. In contrast, single and separated women are more likely to report experiencing a crime yet they are no more likely than married women to report feeling unsafe. Similarly women with a child in the home, although more likely to experience a crime, are less likely to report feeling unsafe. These results suggest that divorced and widowed women are more likely to transfer experiences of crime into generally feeling unsafe than women residing in alternative family structures. Also of note, we found no significant relationship effects for same-sex women. One explanation may be that discrimination based on sexual orientation may not translate into fear. Or, our sample size may not lend enough statistical power to document significant associations. In light of these results, additional investigation for this group is warranted.

In terms of wellbeing effects, measured by restless sleep and anxiety, women who had experienced a crime were more likely to feel anxious. Here too the positive effect was moderated by family type. Specifically, single women who had experienced a crime reported greater anxiety in the past week. The increase in anxiety for single women who had experienced a crime was startling, given that without the crime experience single women reported comparatively low levels of anxiety compared to married women. This finding suggests that experiencing a crime deteriorates all of the benefits of singlehood on self-reported anxiety. These results are replicated in the effect of experiencing a crime on restless sleep. Here too the positive relationship between restless sleep and experience of crime is magnified significantly for single women suggesting that the impact of crime on wellbeing may be somewhat cushioned by marriage. These results further compel a close examination of the methods used to establish women's fear of crime, indicating that broader wellbeing measures such as anxiety and sleeplessness may pick up the effects of crime that are not captured by questions about worry walking alone after dark.

These results suggest that when the particular experiences of women are explored there is less evidence of a discrepancy between risk and fear. The women experiencing the most crime—single and divorced women—also felt the least safe. Widowed women were outliers because they reported a greater level of fear of crime relative to their experience of crime when compared to women in alternative family types. This was not explained by age and therefore warrants further investigation. It should be noted that the complex issue of untangling whether there is a direct or indirect relationship between experiences of crime, fear of crime and wellbeing is not resolved by these results [7]. This is further complicated by the ESS measure which does not focus only on personal experiences of crime.

These results lend support to calls to further interrogate women's fear of crime. We have found that women have a variety of experiences of crime and fear of crime and that these experiences are moderated by family structure. What is more, these experiences have differential wellbeing effects suggesting that partnerships, such as marriage, act as a protective buffer against the negative impact of fear of crime. Further research might build on these results by considering the duration of this protective effect.

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