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RESEARCH ARTICLE



Gendered feelings of unsafety and avoidance of local central areas in Finland 2001–2016

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ABSTRACT

There is a lack of knowledge about fear-of-crime-related place avoidance in Finland. International studies have examined different aspects of fear of crime and avoidance. However, examinations of the association between feelings of unsafety and place avoidance are rarer. This study takes on a less-researched perspective and examines the association between feelings of unsafety and avoidance of local central areas in Finland in 2001–2016. It conducts a gendered assessment of the association and distinguishes between different degrees of urbanization. As a methodological contribution, this study conducts cross-sectional time-series analysis. The research data consist of Finnish survey data from 2001 to 2016. The results show that levels of feelings of unsafety and avoidance in local central areas remain relatively stable during the examined period. Furthermore, the considered association is stronger among women than among men, regardless of the degree of municipality or neighbourhood urbanization. Interestingly, the strength of the considered association is more stable among women than among men. Furthermore, of all the considered independent and contextual factors, gender is the most consistently relevant factor in all areas of different degrees of urbanization. Implications of the results are discussed.

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Place avoidance; feelings of unsafety; fear of crime; gender; degree of urbanization; cross-sectional time-series analysis

Introduction

Fear of crime has received significant political and public attention in Finland during the 21st century. This attention has reached such a level that government programmes of recent years have included an ambitious goal of making Finland the safest nation in the world (e.g. Government Programme, 2015, 2019). Despite public attention, there appear to be relatively few national-level studies of the negative effects of fear of crime in Finland. Results provided by cross-national comparisons frequently indicate a low level of fear of crime in Finland compared to most European countries (e.g. Kujala et al., 2019). In addition, national surveys in Finland indicate a fairly static level of fearfulness, with a slight drop in the overall level since the 1990s (e.g. Sirén et al., 2010). However, despite seemingly low levels of fear on the national level, areas and individuals can still be affected by negative effects of fear of crime (e.g. Kemppainen et al., 2014). Cross-

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national comparisons and national surveys often examine perceived neighbourhood safety or worries about victimization. In turn, there appears to be a lack of knowledge about fear of crime-related precautionary behaviour, such as place avoidance, in Finland.

To fill this gap in research, this paper examines the association between feelings of unsafety and place avoidance in 2001–2016 in Finland. Avoidance of places is often undertaken to reduce the risk or the perceived danger of crime victimization (e.g. May et al., 2010). As such, feeling unsafe in a certain place is closely associated with place avoidance (e.g. Hibdon et al., 2016; De Jubainville & Vanier, 2017). Overall, research regarding feelings of unsafety and avoidance behaviour is important as they have been associated with, for example, distrust and decreasing health and well-being (e.g. May et al., 2010; Visser et al., 2013). The negative effects are also reflected on a regional level, affecting neighbourhoods, counties, regions and whole societies (e.g. Pearson & Breetzke, 2014; Visser et al., 2013).

International studies have explored other forms of fear of crime with avoidance behaviour extensively (e.g. May et al., 2010; Rader et al., 2009). However, studies examining simultaneously feeling unsafe in a place and place avoidance are rarer. The results of previous studies indicate that stronger feelings of unsafety are associated with increased place avoidance. Most existing studies focus on avoidance of more closed and confined public spaces, such as college campuses, schools and public transport (e.g. Giblin, 2008; Hibdon et al., 2016; De Jubainville & Vanier, 2017; Ratnayake, 2017; Tomsich et al., 2011; Wilcox et al., 2007). Some research explores avoidance of general public places (e.g. Yates & Ceccato, 2020). However, overall, examination of avoidance of general public spaces such as local central areas, i.e. centres of cities, suburbs, towns, and rural areas, is rare. Local central areas are focal points of neighbourhoods and communities. In addition, urban centres, in particular, are focal points for crime and its negative effects (e.g. Ceccato, 2012). By focusing on avoidance of local central areas, the current study contributes a less-researched perspective of fear-of-crime-induced place avoidance.

As most previous international studies of the association between feelings of unsafety and place avoidance appear to be from the United States, the current study contributes a European perspective. From an international perspective, Finland is a particularly interesting case as it is a country with comparatively strong generalized and institutional trust and a country with a lower population density (Boda & Medve-Balint, 2014; Eurostat, 2021). Both trust and population density have been associated with levels of unsafety and insecurity (e.g. Visser et al., 2013). As most research has been conducted in countries and areas of lower trust and higher population density, research regarding Finland provides evidence from a somewhat different overall context.

Gender is a significant predictor of both feelings of unsafety and avoidance behaviour (e.g. Rader et al., 2009; Visser et al., 2013). However, even though studies of fear of crime have examined gender differences extensively, there is a lack of knowledge about gendered assessments of the association between feelings of unsafety and place avoidance. In addition, previous international studies do not consider avoidance of local central areas. Therefore, the current study explores gender differences in the association between feelings of unsafety and avoidance of local central areas, and so contributes a less-researched approach.

To give depth to the analysis of gender differences and get a clearer view of the settings of local central areas, the study also distinguishes between degrees of

urbanization. This is important because feelings of unsafety and avoidance behaviour appear stronger and more common in urban than in rural areas (e.g. May et al., 2010; Visser et al., 2013). A greater level of disorder, higher risk of victimization, more rapid demographic changes and fewer places of refuge in urban areas could explain this difference (e.g. Cates et al., 2003). Thus, grouping areas of different degrees of urbanization together might distort the results and provide less informative results about the setting of local central areas. There is a significant body of work in the international literature about different aspects of fear of crime in rural areas (e.g. Ceccato, 2018; Mawby, 2007; Pleggenhuhle & Schafer, 2018). However, most previous studies of the association between feeling unsafe in a place and place avoidance focus on urban environments (e.g. Giblin, 2008; De Jubainville & Vanier, 2017; Tomsich et al., 2011; Wilcox et al., 2007; Yates & Ceccato, 2020).

Lastly, the current study contributes to the existing research by utilizing survey data with nationally representative samples to give a more generalized view of the considered association. Furthermore, it expands on previous research by utilizing data for 2001–2016 and conducting cross-sectional time-series analysis. Most previous studies rely on cross-sectional designs (e.g. Hibdon et al., 2016; De Jubainville & Vanier, 2017; Ratnayake, 2017; Tomsich et al., 2011; Wilcox et al., 2007). The research questions in this paper are as follows:

- (1) To what extent do people feel unsafe in local central areas and avoid local central areas in 2001–2016 in Finland?
- (2) To what extent do gender differences in the association between feelings of unsafety and avoidance of local central areas vary in 2001–2016 in areas of different degrees of urbanization in Finland?
- (3) To what extent do other individual characteristics and contextual factors affect the considered association in 2001–2016?

Approaches to feelings of unsafety and place avoidance in fear of crime literature

Feelings of unsafety can be seen as being related to the perceived risk of crime victimization and belonging to the cognitive sphere of fear of crime (e.g. Amerio & Roccato, 2005). As such, feelings of unsafety have been used as a measure of fear of crime by many previous studies (e.g. Vieno et al., 2013; Visser et al., 2013). It is worth noting, however, that this approach has gained some criticism over the years. Some have argued that feelings of unsafety, rather than being a form of fear of crime, precede it (e.g. Chiricos et al., 2001). However, others point out that this order can also be reversed (e.g. Rader, 2004). Critics also see feelings of unsafety as a too-abstract measurement of fear of crime, as it could encompass a broader sense of unsafety rather than just unsafety related to crime victimization (Lee, 2011). Indeed, some studies distinguish between fear of crime and feelings of unsafety (e.g. Visser et al., 2013). Seen as a whole, the theorization and operationalization of feelings of unsafety in the existing literature are multifaceted and not always clear.

Understood through the risk interpretation model, place avoidance can be defined as a reaction to or a derivative of feelings of unsafety (e.g. Giblin et al., 2012; Krulichová &

Podaná, 2019). This means that people assess the risk of victimization related to a certain place, develop feelings of unsafety towards that place and decide to avoid it. This approach is common in the fear of crime literature (e.g. Hibdon et al., 2016; De Jubainville & Vanier, 2017). However, as with feelings of unsafety, discussion surrounding the theory of place avoidance is multifaceted. Some have utilized measures of place avoidance as direct measures of fear of crime (e.g. Hardyns et al., 2019). Others suggest that place avoidance could act as a precautionary measure and reduce fear (e.g. Norris & Kaniasty, 1992; Rader & Haynes, 2014).

Furthermore, some researchers group place avoidance behaviour alongside other types of avoidance behaviour and suggest that fear of crime and avoidance behaviour are associated in a positive escalating loop, where fear causes avoidance behaviour, which in turn increases fear (e.g. Liska et al., 1988). Similarly, Rader (2004) suggests that the emotional and cognitive spheres of fear of crime and avoidance behaviour should be considered as being in a reciprocal relationship, and rather than being examined as separate measures, they should be combined, together with defensive behaviour, as a single measurement of the threat of victimization. However, grouping different types of avoidance behaviour can be considered problematic, as different mechanisms influence different types of avoidance behaviour.

Gendered feelings of unsafety and avoidance of local central areas

Previous studies do not discuss possible overall trends of feelings of unsafety or place avoidance (e.g. Giblin, 2008; Hibdon et al., 2016; De Jubainville & Vanier, 2017; Ratnayake, 2017; Tomsich et al., 2011; Wilcox et al., 2007; Yates & Ceccato, 2020). However, evidence provided by cross-sectional studies indicates an association between stronger feelings of unsafety and a tendency to engage in place avoidance (e.g. Giblin, 2008; De Jubainville & Vanier, 2017; Ratnayake, 2017; Tomsich et al., 2011; Wilcox et al., 2007; Yates & Ceccato, 2020). Thus, it is reasonable to assume that people who experience feelings of unsafety in certain places also actively avoid those places.

It is evident from the results of previous studies that gender is an important predictor of the strength of the association between feelings of unsafety and place avoidance. Exploration of possible temporal changes concerning gender differences is rare, even though the results of existing longitudinal studies indicate that feelings of unsafety are stronger among women than men (e.g. Robinson et al., 2003). The results provided by cross-sectional studies indicate that, more often than not, the association between feelings of unsafety and place avoidance appears stronger among women than men (e.g. Giblin, 2008; Ratnayake, 2017; Tomsich et al., 2011).

Ratnayake (2017) explores survey data from 2012 of university students' safety experiences in Bendigo, a regional city in Australia. The results indicate that feeling unsafe is positively associated with avoiding certain parts of the city. The proportion of those who felt unsafe and engaged in place avoidance was significantly higher among women than men. Hibdon et al. (2016) utilize survey data from 2013 and examine place avoidance among campus student residents of an anonymous Midwestern university in the United States. The campus is located in a largely rural area although close to a large city. The students themselves also have backgrounds in different community types. The results do not associate campus or student housing-related feelings of unsafety with avoidance

behaviour on campus. However, fear of crime at night is positively associated with avoidance behaviour. Female students are also more likely to engage in avoidance behaviour than male students.

Tomsich et al. (2011) conducted an online survey in 2009 of campus safety among university students in Colorado, United States. Their survey shows that feeling unsafe on campus is positively associated with avoiding certain parts of the campus. This association is significantly stronger among female than male students. Giblin (2008) explores data from 1998 on 12 cities in the United States collected through a telephone survey by the Bureau of Justice Statistics and the Office of Community Oriented Policing Services. Giblin examines several predictors associated with self-protective behaviour. The results indicate that feeling unsafe in a neighbourhood is positively associated with avoiding certain routes, avoiding going out at night and avoiding going out alone. However, stronger feelings of unsafety in the city are only associated with a stronger tendency to avoid going out alone. All of these associations are stronger among women than men.

In addition to studies of gender differences, some studies have focused specifically on women and their feelings of unsafety and avoidance of places (e.g. De Jubainville & Vanier, 2017; Wilcox et al., 2007; Yates & Ceccato, 2020). Yates and Ceccato (2020) pool three cross-sections (2008, 2011, and 2014) of the Stockholm Safety Survey to examine the characteristics of women who are most fearful in Stockholm, Sweden. Binary analyses indicate that women who feel more unsafe also avoid certain places in public areas and their neighbourhoods. However, this association appears to disappear in the neighbourhood context when other factors, such as contact with neighbours, are controlled.

In turn, De Jubainville and Vanier (2017) examine women's avoidance behaviour on the public transport of the Ile-de-France region with pooled data from the Living Environment and Security survey 2010–2013. They found that women who felt more unsafe in public transport also avoided using it significantly more than those who felt safer. Lastly, Wilcox et al. (2007) utilize a telephone survey conducted in 2004 among female students of an anonymous state university located in the south-eastern United States. They conclude that female students who report stronger feelings of unsafety also have a stronger tendency to avoid certain places on their university's campus. However, feelings of unsafety appear less important as a predictor of avoidance behaviour than, for instance, worry about crime or previous victimization.

Although previous studies do not examine avoidance of local central areas, based on their results it is reasonable to assume that first, feelings of unsafety are also associated with avoidance of local central areas and second, that this association is stronger among women. Thus, it is reasonable to assume that the association between feelings of unsafety and avoidance of local central areas and associated gender differences will also persist regardless of the examined cross-section. Most of the abovementioned studies focus on urban environments. However, the results related to rural environments indicate similar gender differences in the association between feelings of unsafety and avoidance behaviour (e.g. Hibdon et al., 2016; Ratnayake, 2017). Furthermore, some studies have also found that fear of crime in rural areas is stronger among women than among men (e.g. Pleggenkuhle & Schafer, 2018).

The risk interpretation model could explain these gender differences regarding local central areas. The model states that people assess the risk of victimization based on their experiences and characteristics, such as gender (e.g. Giblin et al., 2012; Krulichová &

Podaná, 2019). There is evidence that suggests that women perceive their victimization risk to be higher than men's, and that women are more prone to self-protective behaviour, such as place avoidance (e.g. Krulichová & Podaná, 2019). The gender differences in the considered association could also be explained through the vulnerability theory, commonly used in the fear of crime literature (e.g. Visser et al., 2013). This suggests that people who are more vulnerable to victimization or perceive themselves to be vulnerable also have stronger feelings of unsafety. Thus, these people will also engage in place avoidance and avoid local central areas more often than those who are less vulnerable or who feel less vulnerable. Furthermore, there is evidence of women perceiving themselves as more vulnerable as potential victims than men (e.g. Alvi et al., 2001; Badiora et al., 2014), and evolutionary psychology could explain this (e.g. Sidebottom & Tilley, 2008). In brief, this means that the stronger feelings of unsafety and the higher tendency for avoidance among women are rooted in complex processes moulded through the evolution of the human species and because women are naturally more fearful and, on average, less prone to take risks than men.

On the other hand, a more socioecological approach could explain women's stronger perceived vulnerability. For example, according to Koskela (1997), women do not necessarily have to be afraid, and a lot of their fear is associated with power-related emotions and characteristics of spatial surroundings. Thus, fear is largely socially constructed, and women's fear is thought to be normal, as opposed to their boldness, which is seen as risky (Koskela, 1997). This could account for the stronger perceived vulnerability among women than men. It could also be that the crimes that more often target women, such as sexual crimes, cause stronger feelings of unsafety and a sense of vulnerability than crimes targeting men (e.g. Grabosky, 1995). The shadow of crime theory posits that women's fear is particularly related to sexual crimes and that fear of crime for most women is fear of rape (e.g. May et al., 2010; Riggs & Cook, 2015).

The results indicating stronger feelings of unsafety among women than among men have also been criticized with reference to an alleged gender bias. It could be that men do not necessarily recognize their fears and feelings of unsafety, or they are not as open about them as women are (e.g. Sutton & Farrall, 2005; Walklate, 2007). Cultural reasons might explain this, as in many societies, traditional masculinity has viewed fear and feelings of unsafety as signs of weakness and shame (e.g. Brownlow, 2005; Gilchrist et al., 1998). It could be that men's actual feelings of unsafety do not always come up in surveys. Hence, gender differences in feelings of unsafety and avoidance in local central areas might not be as straightforward as one would expect.

Vulnerability also features other forms, which may affect feelings of unsafety and avoidance of local central areas in both urban and rural settings. Older people have also been traditionally seen as having stronger feelings of unsafety than the young (e.g. Grabosky, 1995; Vieno et al., 2013). This is because older people are perceived as being more vulnerable to victimization (e.g. Grabosky, 1995). However, some critics point out that comparisons between age groups can be somewhat problematic, as some results suggest that people fear different types of crime at different life stages (e.g. Tulloch, 2000; Vieno et al., 2013). Education, income and employment status are often seen as indicators of the number of resources people have available to them. Thus, they are also indicators of the resources, which help people to protect themselves or recover, through knowledge

or material means, from victimization (e.g. Vieno et al., 2013). Hence, people with fewer resources are more vulnerable than people with more resources.

In addition to vulnerability, contextual factors must also be considered. For example, some results indicate that people who have previous experiences of crime victimization and perceive crime to be prevalent in their area also have stronger feelings of unsafety and a stronger tendency to engage in avoidance behaviour (e.g. De Jubainville & Vanier, 2017; May et al., 2010). Thus, it could be that either feeling unsafe acts as a moderating factor between previous experiences of crime, perceptions of the prevalence of crime and avoidance of local central areas, or that avoidance, in this case, is undertaken for more practical and sensible reasons related to perceived risk.

Materials and methods

The data ($N = 8059$) for this study come from the Police Barometer, a nationwide survey on safety and public opinion on the Finnish police. The survey was commissioned by the Finnish Ministry of the Interior and conducted by the Police University College of Finland. The Police Barometer was conducted nine times during 1999–2016. Methodological differences do not allow the 1999 cross-section to be included in the analysis. Thus, the data for the current study include eight cross-sections from 2001, 2003, 2005, 2007, 2010, 2012, 2014, and 2016 (Ministry of the Interior, 2012, 2018a, 2018b, 2018c, 2018d, 2018e, 2018f, 2018g). The data is freely available from the Finnish Social Science Data Archive, but has only been used in a handful of international studies (see, e.g. Fagerlund & Kääriäinen, 2018; Kääriäinen, 2008). The surveys were conducted in Finnish, and there is some variation in the coding and/or wording of variables between cross-sections. The current study uses the English codebook of 2016 (Finnish Social Science Data Archive, 2018) as a basis for the translation and coding of variables. The data were originally gathered through face-to-face interviews and structured forms. The cross-sections include samples of 15–79-year-olds in mainland Finland (for descriptive statistics, see Table 1), not including the Åland Islands. The respondents in the 2003 cross-section were chosen by multi-phase sampling and form a representative sample of the target population. The respondents in the other cross-sections were chosen by quota sampling based on gender, age and municipality size. The data from 2001, 2005, and 2007 are not weighted. For this study, weights enabling the samples in these cross-sections to represent the population of 15–79-year-olds in mainland Finland more accurately are created.¹

The dependent variable *Avoidance of local central areas* is examined by asking the respondents if they avoid walking alone at night in the centre of the area where they live to reduce the risk or danger of crime. The response choices are *no* (=0) and *yes* (=1). Concerning the explanatory variable, *Feelings of unsafety* are examined by asking respondents whether they feel unsafe after dark in the local centre. The response choices are *no* (=0) and *yes* (=1).

The independent variables include *gender*, *age*, *annual household income*, *employment status*, and *level of education*. *Gender* is a binary variable (0 = male, 1 = female). *Age* and *annual household income* are grouped according to the existing groupings in the data and to accommodate all the cross-sections (see Table 1). *Employment status* is a binary variable distinguishing between the employed (=0) and those unemployed or not in the workforce (=1). People not in the workforce include full-time students, stay-at-home parents and

Table 1. Descriptive statistics of the data 2001–2016.

		N	%
Cross-sections	2001	986	
	2003	1005	
	2005	1012	
	2007	989	
	2010	1027	
	2012	1018	
	2014	1015	
	2016	1007	
Avoiding the local centre to reduce the risk or danger of crime	Yes	2479	30.76
	No	5580	69.24
Feeling unsafe after dark in the local centre	Yes	2197	27.26
	No	5862	72.74
Gender	Male	3872	48.05
	Female	4187	51.95
Age	15–24yo	1498	18.59
	25–34yo	1309	16.25
	35–49yo	1798	22.32
	50–59yo	1262	15.67
	60–79yo	2189	27.17
	Higher	1488	18.58
Education	Lower	6521	81.42
	Missing	50	0.62
Annual household income	Over 50,000	1302	18.95
	35,001–50,000	1263	18.39
	20,001–35,000	1925	28.02
	Under 20,000	2379	34.63
	Missing	1190	14.77
	Employed	3644	45.33
Employment	Unemployed or not in the workforce	4395	54.67
	Missing	20	0.25
	Never	6034	84.53
Assault victim	Over 4 years ago	693	9.71
	2–4 years ago	207	2.90
	Last year	101	1.41
	This year	103	1.44
	Missing	60	0.74
	Never	6457	91.39
Sexual harassment or sexual violence victim	Over 4 years ago	368	5.21
	2–4 years ago	117	1.66
	Last year	53	0.75
	This year	70	0.99
	Missing	57	0.71
	Not at all serious	1872	23.51
Perceptions of crime	Not that serious	4131	51.88
	To some extent serious	1621	20.36
	Very serious	339	4.26
	Missing	96	1.19
	City or town	4588	56.93
	Rural municipality	1438	17.84
Municipality urbanization	Centre of a city/town/rural municipality	960	11.91
	Noncentral densely populated district, suburb or other population centre	1614	20.03
	Sparsely populated area	466	5.78
Neighbourhood urbanization			

pensioners, who generally have fewer resources and thus, are more vulnerable than people with steady employment. *Level of education* is divided into higher (=0) and lower education (=1) following the specifications of the UNESCO International Standard Classification of Education (ISCED). Primary and secondary education is classified as lower education. Tertiary education is classified as higher education.

Contextual factors are also considered. *Previous experiences of crime* are examined through personal experience of victimization of assault and sexual harassment or violence. The respondents are asked about the time frame of these experiences. The response choices are *never* (=1), *over 4 years ago* (=2), *2–4 years ago* (=3), *last year* (=4), and *this year* (=5). *Perceptions of crime* are explored by asking the respondents how serious a problem they think crime is in their neighbourhood. The response choices are *not at all serious* (=1), *not that serious* (=2), *to some extent serious* (=3) and *very serious* (=4). *The degree of urbanization* is examined with two variables. *Type of municipality* divides the respondents into those who live in cities or towns (=1) and *rural municipalities* (=2). However, because of areal mergers in recent years, Finnish municipalities officially classed as towns or cities might also include rural areas. Thus, the degree of urbanization inside a municipality should also be examined. To this end, *neighbourhood urbanization* is explored. The respondents are asked to choose the type of their neighbourhood. The response choices are *centre of a city/town/rural municipality* (=1), *noncentral densely populated district, suburb or other population centres* (=2), and *sparsely populated areas* (=3). Lastly, a time variance variable *Year*, which consists of the survey years as an ordered set of numbers, is utilized.

The multicollinearity number for the data (21.9) is below 30, which indicates an acceptable amount of multicollinearity, i.e. a high correlation between explanatory variables. The measures of the degree of urbanization used in this study are the only measures present in more than one cross-section. However, the cross-sections from 2012 to 2014 do not include measurements of municipality urbanization. In turn, only the cross-sections from 2012 to 2016 include measures of neighbourhood urbanization. Thus, the cross-sections from 2001 to 2010 and 2016 are used to examine the considered association by municipality urbanization. The 2012–2016 cross-sections are then used to examine the considered association by neighbourhood urbanization.

Descriptive analysis is utilized to examine the trends regarding the examined phenomenon and their bivariate association. First, overall percentages of respondents who report feeling unsafe and avoiding local central areas are examined. Second, the association between feelings of unsafety and avoidance is examined with cross-tabulations. In other words, the percentages of reported place avoidance among men and women who report feeling unsafe are compared by the degree of urbanization of municipalities and neighbourhoods. Third, probit regression models are utilized to examine the effects of the independent and contextual factors. Separate models are provided for areas with different degrees of urbanization to uncover area-specific differences in the effects of the independent and contextual factors.

Probit regression is chosen because it can accommodate both categorical and continuous independent variables in addition to a dichotomous dependent variable. In addition, previous studies of the association between feelings of unsafety and place avoidance use descriptive analysis and logistic regression but not probit regression (see, e.g. Giblin, 2008; Hibdon et al., 2016; De Jubainville & Vanier, 2017; Ratnayake, 2017; Tomsich et al., 2011; Wilcox et al., 2007; Yates & Ceccato, 2020). As the estimates provided by both logistic and probit models can be sensitive to unobserved heterogeneity (see, e.g. Mood, 2010), the models' estimates are presented as average marginal effects (AME). AMEs represent the probability of the average effect of the independent variables and contextual variables on the dependent variable. Previous studies of the considered

association do not utilize AMEs. Thus, these results take unobserved heterogeneity more thoroughly into account than previous studies. The missing values are excluded from the analysis. The goodness-of-fit of the probit models is evaluated using the Pearson Chi-Squared test and the Hosmer–Lemeshow test.

Results

Trends in feelings of unsafety and avoidance of local central areas

We start by examining the overall percentages of feelings of unsafety and avoidance of local central areas in Finland in 2001–2016. The mean value for reported feelings of unsafety is 27.26%, and there is approximately 0.04%–7.9% variance between cross-sections. Concerning place avoidance, on average, 30.77% of respondents report avoiding local central areas. The variance in avoidance is 0.32%–7.29% between cross-sections. Thus, the levels of both phenomena remain relatively stable during the examined period. However, [Table 2](#) shows a clear divide between men and women. Both feelings of unsafety and the tendency to avoid local central areas are stronger among women than among men. The mean value for reported feelings of unsafety is 37.41% among women and 16.31% among men. The variance between cross-sections is approximately 0.02%–8.85% among women and 0.08%–9.76% among men. In turn, on average, 45.17% of women report avoiding local central areas, while the average among men is 15.25%. The variance between cross-sections is approximately 0.12%–6.97% among women and 0.07%–7.41% among men.

Concerning the overlap of the considered phenomena, approximately 17.38% of respondents report feeling unsafe and avoiding local central areas with a variance of 0.06%–6.06% between cross-sections. When gender is considered, on average, 26.55% of women who report feeling unsafe also report avoiding the local centre. In turn, the mean is only 7.48% among men. The variance between cross-sections is approximately 0.03%–6.89% among women and 0.09%–6.55% among men. As levels of fear and unsafety have generally been relatively low in Finland, compared to many other European nations, it is

Table 2. Percentages of reported feelings of unsafety and place avoidance in Finland 2001–2016.

		2001	2003	2005	2007	2010	2012	2014	2016
Feeling unsafe in the local centre at night	Overall	26.88	25.77	30.24	28.21	28.04	26.92	29.66	22.34
	Women	36.58	36.80	39.62	37.50	37.32	37.07	41.62	32.77
	Men	16.77	14.85	20.33	16.85	17.60	16.40	17.14	10.57
Avoiding the local centre	Overall	31.14	30.65	33.30	34.38	32.72	29.47	27.09	27.41
	Women	46.32	46.20	47.12	47.79	47.24	43.63	42.20	40.82
	Men	15.32	15.25	18.70	17.98	16.36	14.80	11.29	12.26
Feeling unsafe and avoiding centre	Overall	18.66	16.02	19.96	18.71	17.62	17.68	16.45	13.90
	Women	28.43	25.60	27.88	27.39	27.21	27.03	27.36	21.54
	Men	8.49	6.53	11.59	8.09	6.83	8.00	5.04	5.29
Feeling unsafe but not avoiding centre	Overall	8.22	9.75	10.28	9.50	10.42	9.23	13.20	8.44
	Women	8.15	11.20	11.73	10.11	10.11	10.04	14.26	11.24
	Men	8.28	8.32	8.74	8.76	10.77	8.40	12.10	5.29
Avoiding centre but not feeling unsafe	Overall	12.47	14.63	13.34	15.67	15.09	11.79	10.60	13.51
	Women	17.89	20.60	19.23	20.40	20.04	16.60	14.84	19.29
	Men	6.83	8.71	7.11	9.89	9.52	6.80	6.25	6.98
Neither feeling unsafe nor avoiding centre	Overall	60.65	59.60	56.42	56.12	56.86	61.30	59.70	64.15
	Women	45.53	42.60	41.15	42.10	42.65	46.33	43.55	47.94
	Men	76.40	76.44	72.56	73.26	72.88	76.80	76.61	82.45

not surprising that most men (mean 75.93%) and a large proportion of women (mean 43.98%) do not feel unsafe or avoid local central areas. However, the relatively high proportion of those who do feel unsafe but do not avoid local central areas (on average, 8.83% of men and 10.86% women) and those who do feel safe but engage in place avoidance (on average, 7.76% of men and 18.61% women), is somewhat surprising. This indicates that for some, feeling unsafe in the centre is not enough to avoid the centre. In turn, some appear to avoid local central areas for other reasons than feelings of unsafety.

Municipality context

We next examine gender differences in the considered association by the degree of municipality urbanization. Figure 1 shows the percentages of reported place avoidance among men and women who feel unsafe by degrees of municipality urbanization in 2001–2016. The results indicate no clear overall strengthening or weakening trend in the association between feelings of unsafety and avoidance among men or women in cities or towns. The considered association is stronger among women than men in the examined period. Overall, the difference between men and women is quite substantial. The proportion of reported avoidance is approximately 10%–35% higher among fearful women than among fearful men. Interestingly, the considered association appears more stable in strength among women, as the variance is, for the most part, approximately 10% or less between cross-sections. Among men, the strength of the considered association varies approximately 5%–20% between cross-sections.

The results in Figure 1 also indicate no clear strengthening or weakening trend in the association between feelings of unsafety and place avoidance among women in rural

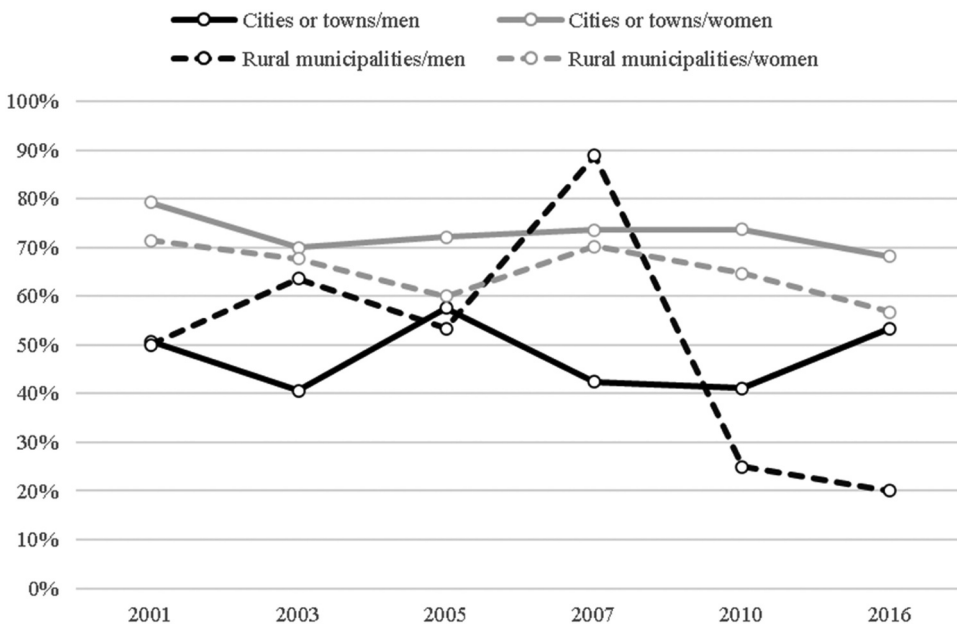


Figure 1. Percentages of reported avoidance of local central areas after dark among men and women who feel unsafe in the local centre by the degree of municipality urbanization 2001–2016.

municipalities in 2001–2016. However, among men, there appears to be a weakening trend overall. The association is, for the most part, stronger among women than among men. However, gender differences in the considered association are not as consistently strong and appear to vary much more than in towns or cities. Depending on the cross-section, the proportion of reported avoidance behaviour is approximately 5%–35% higher among fearful women than fearful men.

The 2007 cross-section is a notable exception, as the proportion of reported avoidance behaviour is approximately 20% higher among fearful men than fearful women. There is a significant peak in the association between feeling unsafe and avoidance among rural men. It appears that approximately 90% of rural men who report feeling unsafe also avoid local central areas. The considered association strengthens among rural women as well; however, less dramatically than among men. It could be that such a sharp peak among rural men is the result of selection bias. As was the case in cities and towns, the considered association appears more stable in strength among women than among men. The variance among women is approximately 5%–10% between cross-sections, with approximately 5%–65% variance among men.

Let us turn to the probit regression models to examine the effects of the independent and contextual factors. Table 3 shows the probit models with average marginal effects for both people in cities or towns and rural municipalities. First, the results show quite a strong association between feeling unsafe and avoiding the local centre in both categories of municipality urbanization. Second, the results indicate that women are more likely to avoid local central areas than men. This difference also appears to be quite strong. The role of the independent and contextual factors is surprisingly weak, and only a few appear to have a statistically significant effect. Those in cities or towns with under 20,000 annual household income are more likely to avoid local central areas than those with higher income. In addition, recent experiences of assault victimization appear to be positively associated with avoiding local centres. In the rural municipalities, perceptions of the severity of crime in the area are strongly and positively associated with a stronger tendency towards avoidance.

Neighbourhood context

To examine gender differences in the association between feelings of unsafety and avoidance of local central areas more thoroughly in a Finnish context, the degree of neighbourhood urbanization should also be considered. Figure 2 shows the percentages of reported place avoidance among men and women who feel unsafe by degrees of neighbourhood urbanization in 2012–2016. For the most part, the results here indicate no clear strengthening or weakening trend in the association between feelings of unsafety and avoidance of local central areas among men or women. However, there is a weakening trend among women in sparsely populated areas. The considered association is consistently stronger among women than among men in all the types of neighbourhoods in 2012–2016. Again, the difference between men and women is substantial. The proportion of reported avoidance behaviour is approximately 25%–40% higher among fearful women than fearful men in the centres of cities, towns or rural municipalities. In noncentral densely populated districts, suburbs or other population centres, the proportion of reported avoidance is approximately 10%–30% higher

Table 3. Probit models by the degree of municipality urbanization with marginal effects 2001–2016.

	Cities or towns	Rural municipalities
Feel unsafe after dark in the local centre	0.268*** (0.0168)	0.182*** (0.0380)
Female	0.234*** (0.0178)	0.178*** (0.0326)
Age (ref. 15–24yo)		
25–34yo	–0.057 (0.0335)	0.044 (0.060)
35–49yo	–0.017 (0.0343)	0.044 (0.0562)
50–59yo	–0.007 (0.0350)	0.039 (0.0532)
60–79yo	0.0416 (0.0321)	0.0529 (0.0510)
Lower education	0.0080 (0.0236)	0.0856 (0.0552)
Income (ref. Over 50,000)		
35,001–50,000	–0.0013 (0.0296)	–0.0011 (0.0507)
20,001–35,000	0.0196 (0.0288)	–0.0027 (0.0526)
Under 20,000	0.0604* (0.0304)	0.0126 (0.0535)
Unemployed or not in the workforce	0.0253 (0.0239)	–0.0703* (0.0356)
Assault victim (ref. Never)		
Over 4 years ago	0.0631 (0.0341)	–0.0334 (0.0626)
2–4 years ago	0.0533 (0.0589)	–0.163*** (0.0324)
Last year	–0.0135 (0.0756)	0.113 (0.1792)
This year	0.133* (0.0668)	0.0670 (0.1584)
Sexual harassment or sexual violence victim (ref. Never)		
Over 4 years ago	–0.0449 (0.0368)	–0.0076 (0.0764)
2–4 years ago	0.0359 (0.0735)	0.147 (0.1555)
Last year	–0.0898 (0.082)	–0.0277 (0.1232)
This year	–0.158*** (0.0471)	0 (0)
Perceptions of crime (ref. Not at all serious)		
Not that serious	0.0906*** (0.0228)	0.0893** (0.0335)
To some extent serious	0.0895** (0.0296)	0.198*** (0.0528)
Very serious	0.0816 (0.0485)	0.262* (0.1277)
Year	–0.0088* (0.0039)	–0.0101 (0.0065)
<i>N</i>	3324	988
Pearson Chi2	0.1928	0.3605
Hosmer-Lemeshow	0.9015	0.4585

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

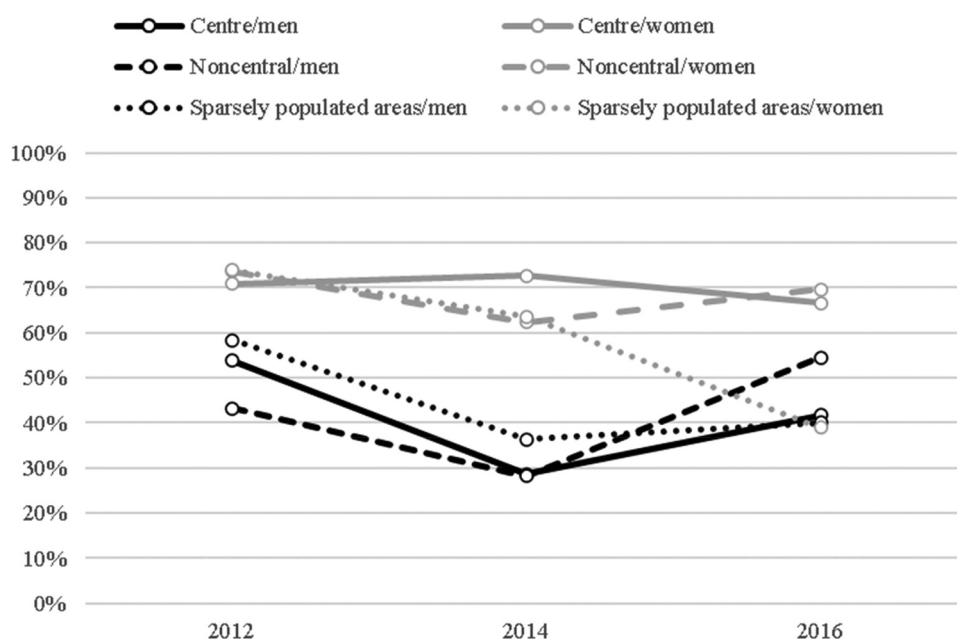


Figure 2. Percentages of reported avoidance of local central areas after dark among men and women who feel unsafe in the local centre by the degree of neighbourhood urbanization 2012–2016.

among fearful women than fearful men. In sparsely populated areas, the proportion is 15%–30% higher among women in 2012–2014 but appears to be at the same level as men in 2016.

The considered association in centres of cities, towns or rural municipalities, and noncentral densely populated districts, suburbs or other population centres appears more stable in strength among women as the variance is, for the most part, approximately 5%–15% between cross-sections, while among men, the variance is approximately 15%–25%. In sparsely populated areas, however, the strength of the considered association varies more among women than among men: for women, the variance is 15%–25% and for men 5%–20% between cross-sections.

To include the independent and contextual factors in the analysis, we once again utilize probit regression. Table 4 shows the probit models of the association between feelings of unsafety and avoidance of local central areas by the degree of neighbourhood urbanization. In all three categories of neighbourhood urbanization, the results indicate that feeling unsafe is strongly associated with avoiding the local centre. The results also indicate that women are more likely to avoid local central areas than men. As was the case in the municipality context, the role of the independent and contextual factors appears weak, and only a few have a significant effect. Among respondents from noncentral densely populated districts, suburbs or other population centres and sparsely populated areas, the independent and contextual factors appear not to have a significant effect. However, among respondents who reside in the centre of a city, town, or a rural municipality, older age and perceiving crime in the area to be very serious are positively associated with place avoidance.

Table 4. Probit models by the degree of neighbourhood urbanization with marginal effects 2012–2016.

	Centre of a city/town/ rural municipality	Noncentral densely populated district, suburb or other population centre	Sparsely populated area
Feel unsafe after dark in the local centre	0.254*** (0.0262)	0.256*** (0.0216)	0.251*** (0.0278)
Female	0.176*** (0.0302)	0.229*** (0.0222)	0.137*** (0.0358)
Age (ref. 15–24yo)			
25–34yo	0.0155 (0.0479)	–0.0663 (0.0441)	0.0366 (0.0689)
35–49yo	0.0458 (0.0495)	–0.0380 (0.0457)	0.0080 (0.0525)
50–59yo	0.0072 (0.0492)	–0.0157 (0.0470)	0.0433 (0.0583)
60–79yo	0.0934* (0.0436)	–0.0105 (0.0424)	0.0417 (0.0546)
Lower education	0.0221 (0.0347)	–0.0056 (0.0273)	0.0177 (0.0423)
Income (ref. Over 50,000)			
35,001–50,000	0.0317 (0.0437)	0.0238 (0.0314)	–0.0324 (0.0402)
20,001–35,000	0.0236 (0.0422)	0.0378 (0.0337)	0.0313 (0.0482)
Under 20,000	0.0340 (0.0435)	0.0171 (0.0357)	0.0454 (0.0526)
Unemployed or not in the workforce	0.0334 (0.0357)	0.0472 (0.0294)	–0.0236 (0.0406)
Assault victim (ref. Never)			
Over 4 years ago	–0.0969* (0.0460)	0.0369 (0.0447)	0.137 (0.0846)
2–4 years ago	–0.0950 (0.0738)	0.0672 (0.0747)	0.0878 (0.0967)
Last year	0.168 (0.1752)	–0.0965 (0.0742)	0.0951 (0.1195)
This year	0.0105 (0.1177)	–0.0966 (0.0935)	0 (0)
Sexual harassment or sexual violence victim (ref. Never)			
Over 4 years ago	0.0400 (0.0736)	0.0075 (0.0566)	–0.0238 (0.0538)
2–4 years ago	0.0509 (0.1029)	0.0912 (0.1058)	0.0924 (0.1642)
Last year	–0.120 (0.1252)	0.339* (0.1459)	–0.0808 (0.0681)
This year	0.0294 (0.1099)	–0.138 (0.0786)	0 (0)
Perceptions of crime (ref. Not at all serious)			
Not that serious	0.0604 (0.0340)	0.0659* (0.0281)	0.0238 (0.0367)
To some extent serious	0.0965 (0.0495)	0.0813* (0.0369)	0.0549 (0.0506)
Very serious	0.193* (0.0774)	0.110 (0.0883)	–0.0772 (0.0537)
Year	0.0027 (0.0180)	–0.0154 (0.0144)	–0.0448* (0.0215)
<i>N</i>	759	1255	342
Pearson Chi2	0.0848	0.3866	0.8980
Hosmer-Lemeshow	0.8494	0.9849	0.2221

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusions

This paper examined the association between feelings of unsafety and place avoidance in Finland in 2001–2016. As the literature lacked knowledge about place avoidance in Finland, the current study endeavoured to form a national overview of the subject. As most previous international studies of the considered association explore more closed public spaces, the paper focused on general public spaces and examined avoidance of local central areas. As previous research identifies gender as an important predictor of fear of crime, the current study conducted a gendered assessment of the considered association. Furthermore, it considered the degree of municipality and neighbourhood urbanization to account for differences between urban and rural areas. The literature on fear of crime includes a significant amount of area-level research regarding fear of crime and feelings of unsafety in urban and rural areas. However, there was a lack of national-level research concerning the association between feelings of unsafety and place avoidance in urban and rural areas. The current study responded to this need.

The results showed a strong association between feelings of unsafety and avoidance of local central areas. Overall weakening or strengthening trends were, for the most part, hard to detect, and the cross-sectional nature of the data does not allow for further longitudinal conclusions of the considered associations. As such, the results support previous findings of a somewhat stagnated but persistent level of fear of crime in Finland. As a contribution to the research, the results of this study highlight that place avoidance should be taken into account more thoroughly in Finnish fear of crime research. It is clear that examining perceived unsafety and worries about crime victimization do not give a full picture of the prevalence and nature of fear of crime. This was further highlighted by the fact that some of those who reported avoiding local central areas to reduce the risk or danger of crime victimization did not report feeling unsafe in the centre. The results support the idea of considering avoidance behaviour as part of the umbrella term fear of crime.

From an international perspective, the results highlight that fear of crime is a social problem even in countries with a comparatively low level of fear of crime. This should be taken into account when conducting cross-national comparisons. The same principle applies to urban and rural areas. Ceccato (2015) points out that, far too often, fear of crime in rural areas is deemed less important and less interesting than fear in urban areas. Finnish fear of crime research has largely concentrated on examining urban areas. Conversely, there was a lack of knowledge about fear of crime in rural Finland in the 21st century.

The results of the current study support previous findings on the importance of gender as a predictor of feelings of unsafety and place avoidance, in both urban and rural areas. The considered association was significantly stronger among women than among men. This was observed in every cross-section in 2001–2016. If feelings of unsafety are understood as related to perceived risk, the results give strong support for the theory concerning the risk interpretation model regardless of the degree of urbanization.

Interestingly, the results revealed different significant independent and contextual factors on both the municipality and neighbourhood levels. Vulnerability theory received some support from the results regarding urban areas. In municipalities consisting of towns or cities, lower income appeared to predict more frequent avoidance of local

central areas. At the neighbourhood level, the independent and contextual factors had no significant effect in noncentral densely populated districts, suburbs and other population centres or sparsely populated areas. However, in centres of cities, towns, and rural municipalities, older age appeared to predict more frequent place avoidance, which partially supports vulnerability theory. The results regarding vulnerability further highlight the need to examine urban and rural areas separately.

The relationship between crime and fear of crime is multifaceted. Often the results do not find an association between prevalence of crime and fear of crime. Thus, they reflect the so-called crime-fear paradox. Therefore, it is somewhat unexpected and interesting that the perceptions of a very serious crime situation in the area predicted avoidance of local central areas in rural municipalities. Conversely, on the neighbourhood level, perceptions of serious crime had a significant effect in centres of cities, towns and rural municipalities, and also noncentral densely populated districts, suburbs or other population centres. Concerning previous crime victimization, recent experiences of assault predicted avoidance of local central areas in municipalities consisting of towns or cities. Previous experiences of crime and perceptions of the prevalence of crime had a weaker role than is indicated by the results of some previous studies (e.g. De Jubainville & Vanier, 2017; May et al., 2010). In any case, they may indicate risk assessment concerning the safety of local central areas. As such, they offer additional support for the risk interpretation model.

The current study has limitations. Its measurement of avoidance of local central areas included by default both avoidance intended to reduce the risk of crime and avoidance to reduce the danger of crime. Separate measurements would perhaps be more informative about the role of perceived risk and emotions. The data offered only limited measures of the degree of urbanization. Future research should utilize more comprehensive measurements. The study also did not control or include more in-depth analysis of municipality or neighbourhood characteristics. This was because of data restrictions that did not permit the identification of municipalities or neighbourhoods. Thus, linking different factors into the data was impossible. In addition to measuring the degree of urbanization, the data did include some additional measurements of municipality sizes. However, these measurements were not consistently included in all cross-sections, and there were differences in the way they were constructed. This would have made combining the cross-sections difficult and would have resulted in removing several cross-sections from the analysis, defeating the purpose of a cross-sectional time-series analysis. However, further analysis of regional characteristics is an important topic for future studies to understand better the surroundings that might affect feelings of unsafety and place avoidance.

Despite the limitations, the study achieved its goal of presenting a generalized view of the association between feelings of unsafety and place avoidance in Finland. The results highlight the importance of obtaining information about different aspects of fear of crime, even in seemingly safe areas. Even though the overall level of fear is low, fear still has real and significant consequences for people. Although women's fear of crime is consistently stronger in both urban and rural areas than men's fear, Finnish fear-reduction strategies should recognize that different mechanisms affect people's risk assessment depending on the degree of urbanization of the area where they live. For instance, perceptions of risk in urban areas are associated with experiences of crime victimization, whereas in more rural areas, perceptions of crime, rather than actual experiences, affect risk assessment. Further research on the assessment of victimization risk among men and women in rural areas is needed.

Notes

1. A weight w_i is calculated for each respondent based on gender and age. The weight is formed as follows: $w_i = \frac{N K_i}{n_i}$. N is the amount of all the respondents in a particular cross-section. K_i is the target distribution of a group in a population, and n_i is the number of respondents belonging to the target group.

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