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Multifamily Housing and Resident Life Satisfaction: Evidence from the European Social Survey

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ABSTRACT: Much of the literature on sustainable communities and compact cities calls for higher density housing including multifamily dwellings. Some case studies suggest problems with such dwellings. However, rigorous comparative research on this topic has not been conducted to date. This paper draws on a high quality, comparative dataset, the European Social Survey, to analyse a) the quality of multifamily dwellings in European urban areas, b) the characteristics of residents of these dwellings, c) their life satisfaction compared with those living in detached housing and d) the relative importance of built form in explaining life satisfaction. One of the main findings from the multivariate analyses is that built form, including residing in multifamily housing, is not a statistically significant predictor of life satisfaction when you control for standard predictors of life satisfaction (e.g. health, employment and income) and housing and neighbourhood quality.

KEY Words: Quality of life, built form, housing density, life satisfaction, compact cities

1. Introduction

Higher density urban housing has been linked to a range of beneficial social, economic and environmental outcomes. Increasing the provision of this housing is enshrined as a goal in policies in many countries. It is likely that policy-makers will continue to support higher density housing as climate change and other environmental pressures add to the pressures on the demand for land. For example, increased flood-risk will put some land and housing beyond use for residential purposes. Furthermore, it is likely that additional land will be required for energy and food. The literature provides some mixed evidence on the benefits of higher density housing, particularly the built form most associated with it, namely apartments and multiunit or multifamily dwellings. Problems include inadequate space, noise pollution, suitability for families and children, and a lack of personal green/outdoor space. These studies raise questions about the quality of life, life satisfaction and liveability for its residents. Some suggest that residing in these dwellings is likely to be short-term, that those who can do so relocate to lower density housing over time. In an attempt to enhance knowledge on some of these issues, this paper adopts a comparative European perspective to examine the experiences of those living in multiunit housing. It explores the quality of the dwelling and of the environment in which such dwellings are located, the socio-demographic characteristics of those living there, their overall life satisfaction, and the main predictors of that life satisfaction.

2. Literature review

Much of the literature on sustainable housing and urban planning calls for higher density housing, in particular multifamily dwellings. Along with support for mixed use developments, its importance is linked to the concept of the compact city (Jenks *et al.,* 1996; Williams, Burton, and Jenks, 2000), to smart growth, and to sustainable cities (Power and Houghton, 2007). While there is some debate about the actual density required, the suggested advantages are varied. These include: its capacity to support mixed use developments and access to a range of local services (Bramley and Power, 2009); reduced need to travel by car and fuel emissions (Breheny and Rockwood, 1993; Owens, 1991; 1992; Sherlock, 1991); increased active travel (walking, cycling, etc.) and public transport use (Barrett, 1996; Newman and Kenworthy, 1989; Calthorpe, 1993;

Duany and Plater-Zyberk, 1991); conservation of rural land, which may be essential for other purposes such as food and recreation (Burton and Matson, 1996); regeneration of urban areas, both inner city and suburbs (e.g. Gwilliam *et al*., 1999; Southworth, 1997); increased efficiency in the provision of utilities and infrastructure (Newman, 1992; Troy, 1996); and lower energy consumption (DETR, 1994; Newton *et al*., 2000). Some also contend that it may enhance social cohesion and community development, though there are arguments on both sides here (Barton, 2000). It is argued that pedestrian- and child-friendly compact cities and urban villages are important for social interaction in higher density areas (Elkin *et al*., 1991).

Compact or higher density cities are not without their critics (see Vallance *et al*., 2009 for a review of studies on this topic). Higgins and Campanera's (2011) find higher quality of life in Southern English cities compared with more compact Northern ones. Neuman (2005) argues that people will choose to live in the metropolitan periphery if given a choice. Some suggest that many people do not wish to live at higher densities (Neal, 2003; Howley, 2010; CABE, 2005a; 2005b), and that people prefer detached or semi-detached homes compared with flats or terraces (HATC, 2006; Howley, 2010; Burgess and Skeltys, 1992; Reid,, 1994; MacLaren and Murphy, 1997). Mace, Hall, and Gallent (2007) argue that families may be opposed to higher densities. In the context of shrinking cities, they call for lower density housing to be constructed in order to attract the family market, which they contend is essential for 'sustainable, stable, mixed communities' as families are less likely to be 'footloose' and have a stake in the quality and quantity of local services. Some studies of high-rise living reveal negative effects on children and mothers (Gillis, 1977; Fanning, 1967; Fowler, 2008; Lowry, 1990; Wilkinson, 1999). However, Gifford (2007) argues that many of these studies focus on social housing and a more nuanced study of these relationships is required, including issues such as housing choice (McCarthy *et al,* 1985), affordability and poverty (Davey Smith and Hart, 1998; Galobardes *et al.,* 2006; Graham, 2000). Carroll, Witten, and Kearns (2011, 354) suggest that there is a 'prevailing discourse of houses, gardens and open space as desirable sites for children'. Furthermore, it is argued that developers and planners do not take households with children into account when planning apartment developments (Costello, 2005; Fincher, 2004).

Clearly, the quality of the housing and neighbourhoods is essential (e.g. Urban Task Force, 1999; Williams, 2009). Problems identified in studies of higher density housing include inadequate size and storage space, noise, affordability, designs for single or two person households, rather than families, and lack of open space (Carroll, Witten and Kearns, 2011; Dixon and Dupuis, 2003; Howley, 2010). Internal space standards can vary significantly across countries as Gallent *et al*. (2010) reveal in their comparison of Italian and English standards. Bramley and Power's (2009) find that higher density urban areas and housing types are associated with higher levels of neighbourhood dissatisfaction and neighbourhood problems. Some of this can be explained by the socio-demographic characteristics of residents, especially by high levels of poverty and social renting. They conclude that 'who lives where within the urban form, and with what resources and choices, may be more critical to making urban communities work' (Bramley and Power, 2009, p. 46). Some studies reveal considerable social and/or racial segregation among residents of multifamily housing (e.g. Pendall, 2000; Resseger, 2013). Andersson and Magnusson Turner (2014, p. 15) find that non-western, first generation immigrants are increasingly concentrated in the rental part of the outer city multifamily housing area in Stockholm.

A link between urban/housing density and crime has been revealed in a number of studies, but the findings of these studies are mixed. Some link detached properties to increased risk of burglary (Winchester and Jackson, 1982; Hillier and Sahbaz, 2009). Others associate multiunit dwellings with higher perceived vulnerability to burglary (Cozens, Hillier, and Prescott, 2001a; 2001b; 2002), to concerns about safety among families living in apartments (Lowry, 1990) and to safety as an issue for residents in high rise apartments (Fowler 2008; Yuen *et al.* 2006). However, it is argued that 'appropriately designed' higher density, mixed use housing developments/areas can enhance safety (Bentley *et al.,* 1985; Petherick, 1991; Poole and Donovan, 1991) and that higher quality housing developments are not necessarily associated with more crime (Armitage, Rogerson, and Pease, 2013). Key features of this 'appropriately designed' housing include: streets and squares in medium and low-rise housing; public fronts and private backs; perimeter blocks with immediate access to the ground floor; and a view of central open space. The mixed use element increases the presence of

people throughout the day and night, which can increase perceptions of safety among residents of the area (Petherick, 1991; Poole and Donovan, 1991).

Much of the literature on housing density and built form fails to examine the life satisfaction of residents and, in her critique of data and measures of urban compaction, Burton (2002, p. 245) specifically calls for research on the link between urban compactness and quality of life. The literature reviewed above may be combined with research on housing and well-being to elucidate possible links between residing in multifamily housing and life satisfaction. Various characteristics of this housing might lower life satisfaction, in particular issues of dwelling quality, as well as inadequate internal and/or external space. There is a substantial literature linking housing quality to well-being (e.g. Mulder, 2007; Sirgy and Cornwell, 2002), and to physical and mental health (Aylin *et al.*, 2001; Collins, 1986; Curwen, 1991; Evans, 2003). Aspects of the neighbourhood in which the multifamily housing is located may detract from life satisfaction. In particular, social problems, such as crime and anti-social behaviour, are likely to detract from the quality of life of residents.

Existing research suggests that certain social, economic, and demographic characteristics are strongly correlated with life satisfaction. Those with higher levels of life satisfaction include: older people; married people; the employed/retired, and those on higher incomes (see for example Fahey, 2007). Some of the literature reviewed here suggests that multifamily housing residents with children may have lower levels of life satisfaction than those without children. Similarly, some studies suggest that home owners enjoy better quality housing and greater housing and neighbourhood satisfaction than renters (Dekker *et al*., 2007; Hipp, 2009; Kurz and Blossfeld, 2004; Schlottman and Boehm, 2008; Iwata and Yamaga, 2008; Elsinga and Hoekstra, 2005). Therefore, owners might be expected to have a higher quality of life than renters. Recent research on ethnic and social segregation among residents of multifamily housing suggests that they are characterised by low incomes, social renting, and membership of new immigrant communities, all of which may reduce life satisfaction.

The research on this topic to date is rather limited as it is based on single case or a small number of case studies, generally from Australia, Britain, Ireland, and New

Zealand, countries which do not have a strong tradition of multifamily housing. In addition, it has been argued that residents are often invisible in research and discourses on sustainable cities (Vallance *et al*, 2011). This paper addresses both of these limitations by exploring the extent to which the concerns raised in case studies are relevant to residents of nineteen European urban areas, including ones with a tradition and culture of multifamily residence. It begins with an analysis of the quality of multifamily dwellings, and the neighbourhoods in which they are located, compared with other built forms. Next, it explores the key social, economic and demographic characteristics of those living in multifamily housing. This is followed by an examination of the life satisfaction of residents compared with those living in detached housing. The final section of the paper investigates the relative importance of multifamily housing (and other built forms) in predicting life satisfaction when one controls for other factors generally used to predict it (e.g. income, employment) and other housing variables (e.g. housing and neighbourhood quality, tenure, space) which the literature suggests are relevant for quality of life.

3. Data and methods

The data on which this paper is based is Round 2 of the European Social Survey (ESS) fielded in 2004/05[1]. This survey has a number of important advantages. First, it is a very high quality, academically driven, dataset containing the relevant variables to analyse the issues of interest. Second, the dataset enables a cross-national analysis of these issues for nineteen EU member states. The broad range of countries and covariates, combined with the high quality of the data, make this strand of the ESS an excellent source of data to examine if the findings from some of the national case studies apply in other contexts.

One of the core aims of the ESS has been to improve the quality of cross-national surveys. It does this by requiring participating countries to adhere to a high standard regarding: sampling; translation; improving question quality by pre-testing and piloting; analysing response and non-response; interviewer training and analysis of interviewing quality and effects. The high quality of the dataset is revealed through the

[1] For more information on this dataset, see Jowell and the Central Co-ordinating Team (2005). The data was made available via the Norwegian Social Science Data Services (NSD) as the data archive and distributor of the ESS data.

use of strict random probability sampling, a minimum target response rate of 70 percent and rigorous translation protocols. As a reflection of its quality, the ESS was awarded European Research Infrastructure Consortium (ERIC) status in November 2013.

This paper is based on an examination of urban residents aged 18 years and over in 19 countries (35,511 individuals), although in two instances the analysis refers to 18 countries due to missing data on a particular variable. The minimum national urban sample size is 1,188 cases (Denmark). Urban includes those living in: a big city; suburbs or outskirts of a big city; and town or small city. It excludes those living in student accommodation, sheltered/retirement housing and house-trailers/boats. Data are weighted according to the ESS protocol (see European Social Survey, 2014). Finally, the data is collected via one hour, face-to-face interviews.

Dwelling type, a key variable of interest, consists of detached houses, semi-detached houses, terraced houses, and multiunit houses/flats. The quality of the buildings and dwellings in the area were assessed by the interviewers using the following scale: very good, good, satisfactory, bad or very bad. Interviewers also recorded the extent to which there was a problem with a) litter and b) vandalism in the area, using a scale ranging from very common, fairly common, not very common, to not at all common. Neighbourhood quality is also assessed using responses to a question asking respondents how safe they feel walking alone in the local area after dark: very safe, safe, unsafe, very unsafe. Housing tenure is examined via responses to a question on whether or not the dwelling is owned by the inhabitants.

Life satisfaction was assessed via a question asking respondents to indicate how satisfied they were with life as a whole on a scale of 0-10, with 0 representing extremely dissatisfied and 10 extremely satisfied. Global life satisfaction scales such as this, have been used by researchers for many decades, and have been subjected to considerable testing regarding their reliability, validity and sensitivity. The most recent review finds that they have high levels of both reliability and validity (Diener, Inglehart, and Ta, 2013).

A range of socio-economic factors commonly associated with quality of life are included in the analysis. Respondent's age is recoded into four categories: 18-34; 35-49; 50-64 and 65 years plus. Household net annual income, originally 12 categories, is recoded into: <€6,000; €6,000-<€24,000; €24,000-<€60,000; €60,000 and over. Marital status is categorised as: married; separated/divorced; widowed; and never married. Finally, employment status consists of four categories: employed; unemployed; retired; and home duties. One of the limitations of this comparative dataset is the lack of information on neighbourhood ethnic and social segregation. As a result, it was not possible to test if the quality of life of residents in multifamily housing is affected by these variables.

The data were analysed using the Statistical Package for the Social Science (SPSS). Most of the tables and charts present data from two- or three-way cross-tabulations. The Chi-square test was performed to test for statistical significance of the results and the reader is alerted to results which are not statistically significant. Ordinary least squares (OLS) regression was employed to examine the relative importance of built form (multifamily versus other forms of housing) for life satisfaction. OLS examines the independent effects of each variable on life satisfaction while controlling for all of the other variables in the equation. This reveals the relative contribution of each variable to life satisfaction. The model presented here includes the standard social, economic and demographic variables used to explain life satisfaction. I include a variable for whether or not the respondent has children living in the household along with some housing variables predicted to be linked to life satisfaction, namely housing and neighbourhood quality, space, and housing tenure. OLS regression requires that variables be either continuous (e.g. life satisfaction scale) or that dummy variables (1,0 format) be created where this is not the case. This was done for a number of variables including: income category, employment and marital status, country, health, whether or not children were living in the household, housing quality, vandalism, litter, perception of safety after dark, reference, home owned or rented, and built form. For each dummy variable, the reference category, shown in brackets in the table, is that which is predicted to be associated with lower levels of life satisfaction. The Beta coefficients reveal the size of the correlation between each variable and life satisfaction. The sign of the coefficient (positive or negative) indicates the direction of that relationship. The discussion of the

regression results focuses on those findings which are statistically significant (i.e. p≤.05).

4. Findings

Using data from this representative cross-national survey, this section presents an overview of multifamily dwellings in nineteen European urban areas. It includes an analysis of the quality of the housing and neighbourhoods. In addition, it explores the key social, economic and demographic characteristics of respondents living in multifamily housing. This is followed by an examination of their life satisfaction compared with those living in detached housing. It includes an investigation of the relative importance of multifamily housing (and other built forms) in predicting life satisfaction while controlling for other factors generally used to predict it such (e.g. income) but also a range of other housing variables which are relevant for quality of life but to date have not been tested in a model of this type on a comparative basis.

4.1. Multifamily residence in the EU

Table 1 presents the survey data on the type of housing occupied by urban respondents in the countries under examination. It reveals that in almost half of the countries (9 of the 19), detached dwellings are the most common type of housing. This is the case in Austria, Belgium, Denmark, Finland, France, Ireland, Luxembourg, Portugal, and Slovakia. However, multifamily housing is the most common built form in the urban areas of 8 of the 19 countries, namely Germany, some Eastern European (Czech Republic, Hungary, Estonia, Poland) and some Southern European countries (Spain, Greece, and Italy). Overall, the data reveal considerable cross-national variations in the extent to which urban residents live in multiunit housing, ranging from a high of 70 percent in Italy and Estonia to a low of one percent in the Republic of Ireland. It is noteworthy that this form of urban housing is the least common type of housing in both the Republic of Ireland and the UK, two locations from which some of the negative commentary and research evidence emerges.

Table 1: House type by country (% within house type)

	Detached house %	*Semi-detached %*	*Terraced %*	*Multiunit %*
Austria	47.5	5.5	4.4	42.7
Belgium	37.8	19.4	26.5	16.2
Czech	35.5	2.7	8.9	52.9
Germany	36.4	9.6	7.4	46.6
Denmark	58.5	2.5	12.2	26.7
Estonia	23.9	2.6	3.4	70.1
Spain	34.7	2.1	5.4	57.8
Finland	46	2.4	15.8	35.8
France	62.8	22.4	0	14.8
UK	26.2	33.1	30	10.9
Greece	32.6	20.9	3	43.4
Hungary	37.9	5	1.2	55.9
Ireland	48.1	29.7	21.2	0.9
Italy	6.8	8.9	14.1	70.2
Luxembourg	38.9	17.5	21.7	21.9
Netherlands	16.4	30.1	34.4	19.1
Poland	29.9	3.1	2	65
Portugal	50.2	6.5	5.4	37.9
Slovakia	54.1	2.9	0.8	42.3

Source: author's calculations using ESS 2004/05

4.2. Dwelling type by quality of the housing and neighbourhood

Housing and neighbourhood quality are important dimensions of urban sustainability. However, Table 2 reveals that multifamily housing is less likely than detached housing to be designated as very good quality in all but three countries examined. The exceptions are Austria and Greece, where multiunit housing is considered higher quality than the detached form, and Portugal where there is no difference between the two. Multifamily housing quality was highest in Belgium, but even there just under a third of this type of housing was categorised as very good. The quality of multifamily dwellings was lowest in the Republic of Ireland - 1 percent of this type of housing categorised as very good quality. This is one of the countries from which some negative research findings have emerged in the literature on higher density housing. Table 3 presents data on neighbourhood quality, specifically perceptions of safety, litter and vandalism. In each country, residents of multiunit housing are less likely to say they feel very safe/safe after dark than those living in detached housing. However, there are

significant differences between countries in perceptions of safety among residents of this type of housing, with relatively high perceived safety in Austria (81 percent), Finland (81 percent) and Denmark (79 percent). By contrast, safety concerns in multiunit housing are particularly problematic in Republic of Ireland (46 percent), Estonia (48 percent) and Slovakia (51 percent). Litter is not a significant problem in the urban areas under examination but it is more problematic for those living in multifamily than in detached housing, with the exception of Portugal where it is a slightly more prominent issue for residents of detached housing. Finally, in each country, vandalism is more common in multiunit than in detached dwellings.

Table 2: Very good housing quality (%) by house type and country

	Detached house %	*Semi-detached* %	*Terraced* %	*Multiunit* %
Austria	7.5	5.7	15.5	22.9
Belgium	50.6	23.3	20.1	32.2
Czech	41.5	57.3	26.9	22.5
Germany	41.5	38.3	42.2	17.6
Denmark	37	20	29.9	20.3
Estonia	19.1	6.8	16.1	3
Spain	21.8	3.1	42.7	17.4
Finland	29	40.5	27.3	15.5
France	55.8	29.5	--	26.2
UK	51	23.3	12.8	16.8
Greece	11.4	6.6	18.2	14.7
Hungary	25	34.8	50	11.6
Ireland	61.7	28.6	8.6	1.1
Italy	25	12.3	20.6	7.9
Luxembourg	47.1	32.1	16.2	24.4
Netherlands	53.6	30.2	14.8	17.4
Poland	26.3	13.5	34.8	13.8
Portugal	12.1	18.9	6.8	10.9
Slovakia	29.9	34.2	50	9.6

Source: author's calculations using ESS 2004/05

Table 3: Neighbourhood quality by house type and country

	Very safe/safe %		*Litter not very/not at all common %*		*Vandalism not very/not at all common %*	
	Detached	Multiunit	Detached	Multiunit	Detached	Multiunit
Austria	84.8	80.8	99.1	93.6	99.6	95.0
Belgium	83.2	67.1	98.0	82.4	100	83.1
Czech	70.2	59.0	92.8	75.4	94.4	77.6
Germany	77.2	71.9	97.3	91.1	99.4	94.5
Denmark	89.8	79.4	98.1	85.5	99.7	87.1
Estonia	72.0	48.3	92.9	74.9	96.0	71.2
Spain	83.5	71.6	97.5	88.6	98.5	88.2
Finland	93.1	80.8	97.8	92.3	99.6	92.8
France	75.7	67.5	99.5	94.8	99.9	93.1
UK	79.0	56.6	97.6	69.8	99.0	83.7
Greece	75.9	65.9	88.3	74.2	93.8	76.9
Hungary	75.5	63.2	93.1	72.7	96.9	76.2
Ireland	70.6	46.2	98.2	84.6	99.4	84.6
Italy	78.3	67.9	92.5	85.0	95.7	87.3
Luxembourg	75.3	67.4	96.6	92.7	99.8	91.0
Netherlands	88.0	70.2	99.6	93.7	100.0	95.9
Poland	73.1	56.5	94.3	93.4	99.1	86.5
Portugal	84.5	69.9	84.2	89.1	95.7	92.2
Slovakia	66.4	51.1	92.2	79.0	96.6	76.9

Source: author's calculations using ESS 2004/05

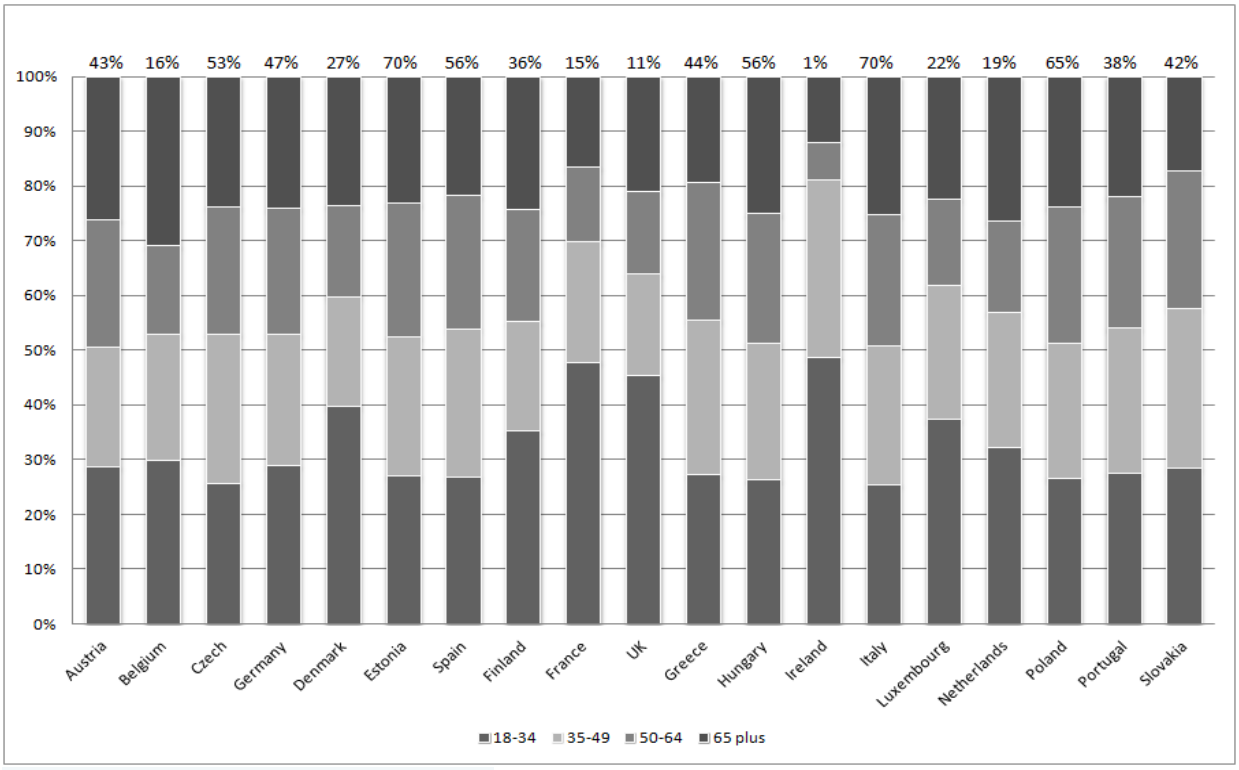
4.3. Characteristics of the residents of multifamily dwellings

Given some of the critique of higher density building forms from case study research, it is interesting to examine the socio-demographic characteristics of those respondents living in this type of urban housing. Figure 1 indicates that, in the majority of countries, there is almost no relationship between age and living in a multifamily dwelling. However, young people are over-represented in this form of housing in Ireland, France, UK, Denmark and Finland, countries where the proportion of multifamily housing is relatively low (i.e. below the average for the countries under examination). Belgium and the Netherlands might be considered exceptions to this pattern as there is no relationship between age and residing in a multifamily residence despite the fact that in both countries there are below average levels of multifamily housing.

The unemployed are over-represented in multifamily dwellings in a number of countries (see Figure 2), including Austria, Belgium, Denmark, France, UK, Luxembourg

and the Netherlands. However, with the exception of Austria, these are countries which have relatively low proportions of multifamily housing.

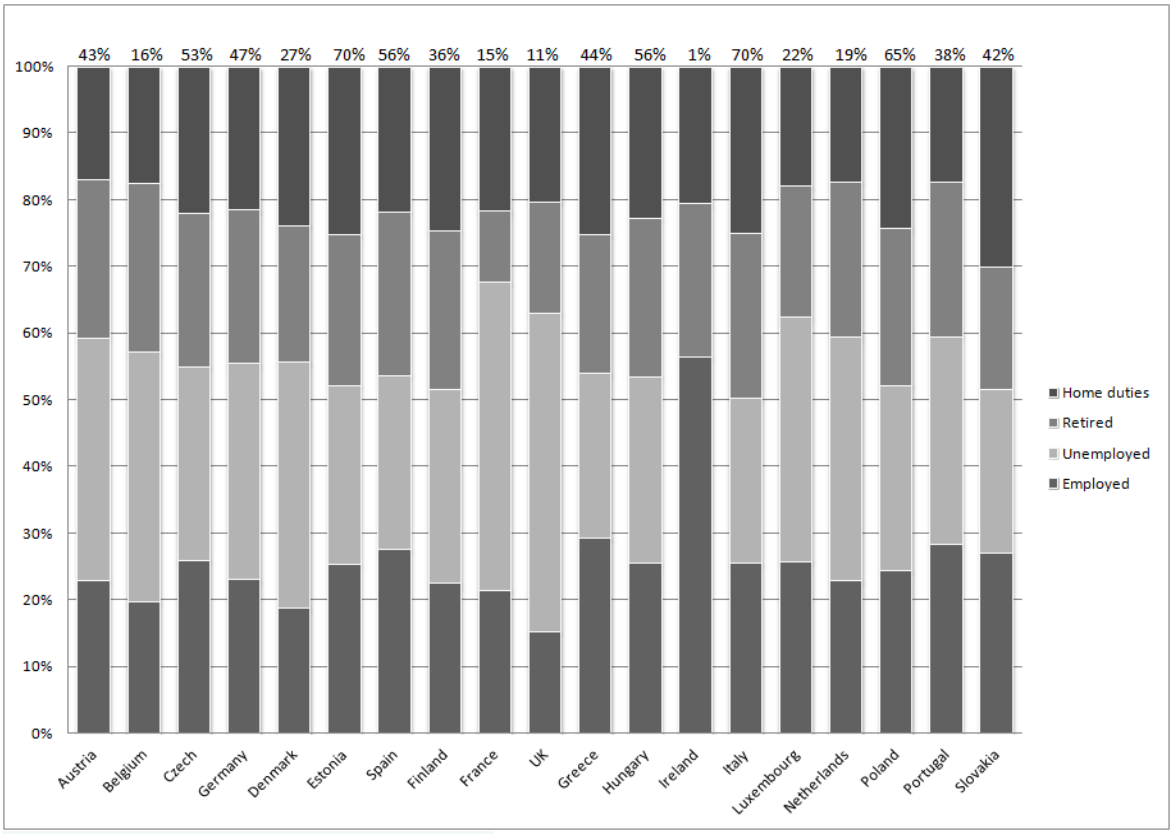
Figure 1: Multiunit residence by age and country (%)



Source: author's calculations using ESS 2004/05

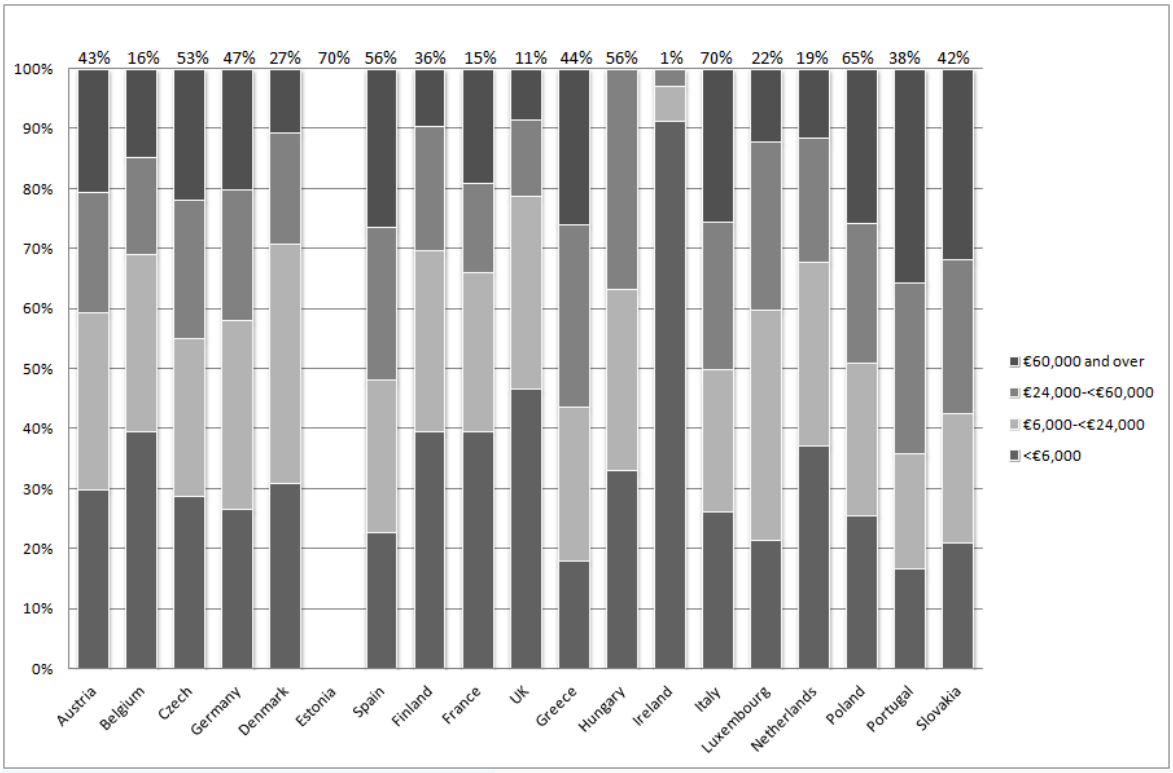
A similar pattern is revealed with regard to income. Those on low incomes are over-represented in multifamily housing in a number of countries where that form of housing is somewhat less common, e.g. Ireland, UK, France, Finland, the Netherlands and Belgium and to a lesser extent Denmark (see Figure 3). Home ownership rates among residents of multiunit dwellings vary significantly by country. They are relatively high in some countries such as Italy (89 percent), Estonia (73 percent), Poland (62 percent), Spain (61 percent), Hungary (58 percent), and Greece (50 percent). These are all countries with relatively high levels of multifamily residence. By contrast, there are relatively low levels of home ownership in the Republic of Ireland (1 percent), France (8 percent), the UK (10 percent), Denmark (10 percent) and Belgium (13 percent) (Figure 4). This latter group of countries has relatively low levels of multiunit housing.

Figure 2: Multiunit residence by employment status and country (%)



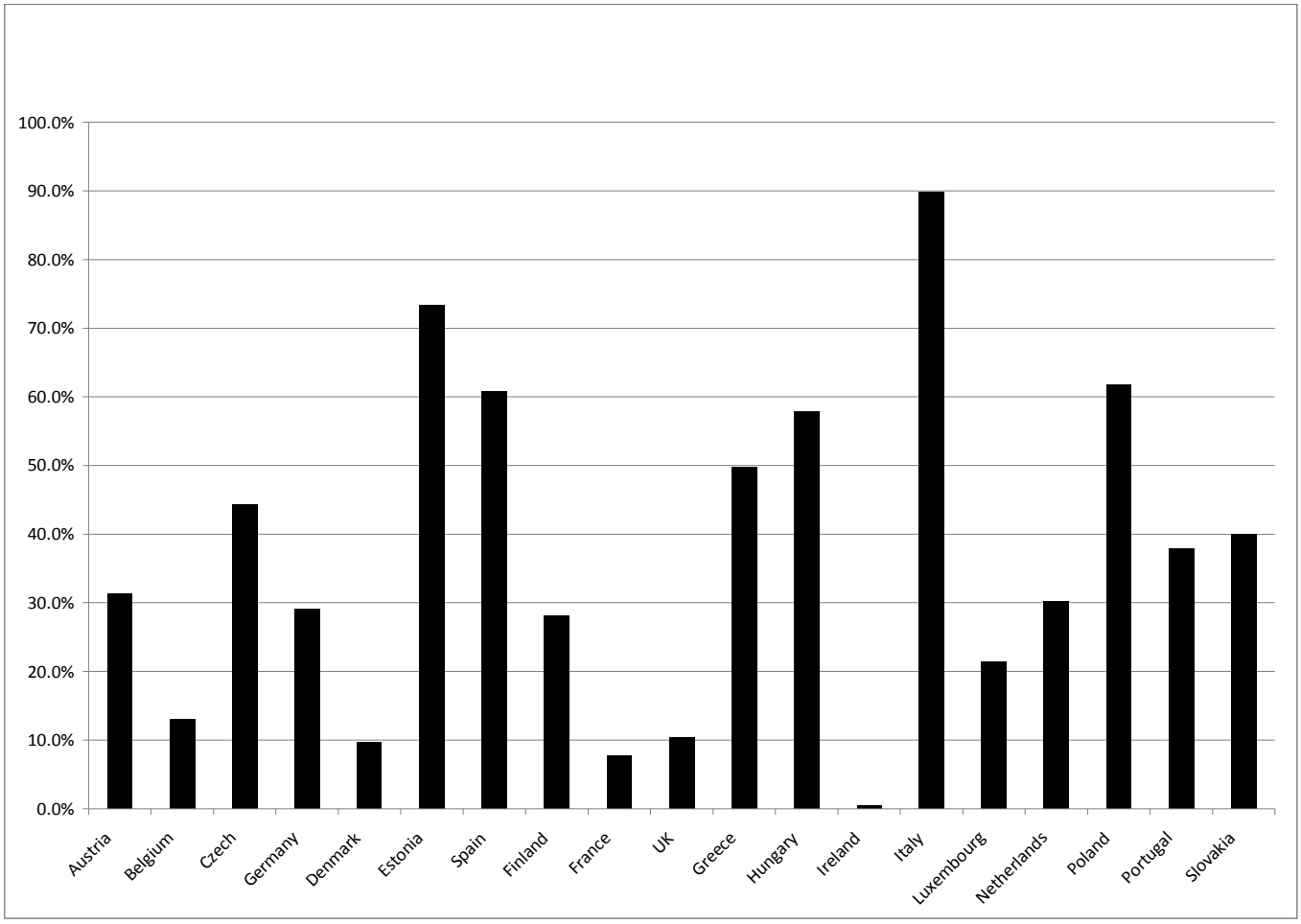
Source: author's calculations using ESS 2004/05

Figure 3: Multiunit residence by income (household net annual) and country (%)



Source: author's calculations using ESS 2004/05

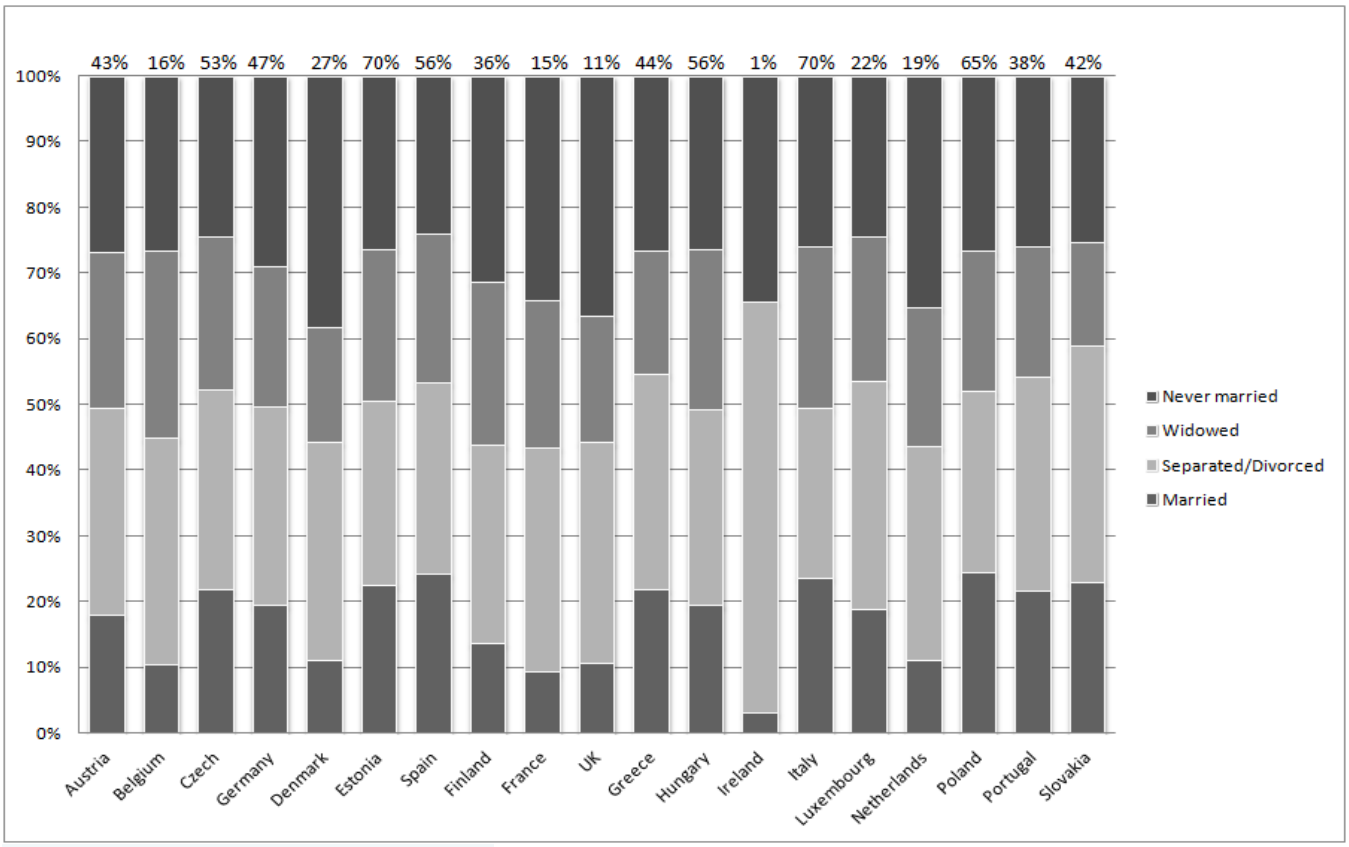
Figure 4: Multiunit residence by home ownership and country (%)



Source: author's calculations using ESS 2004/05

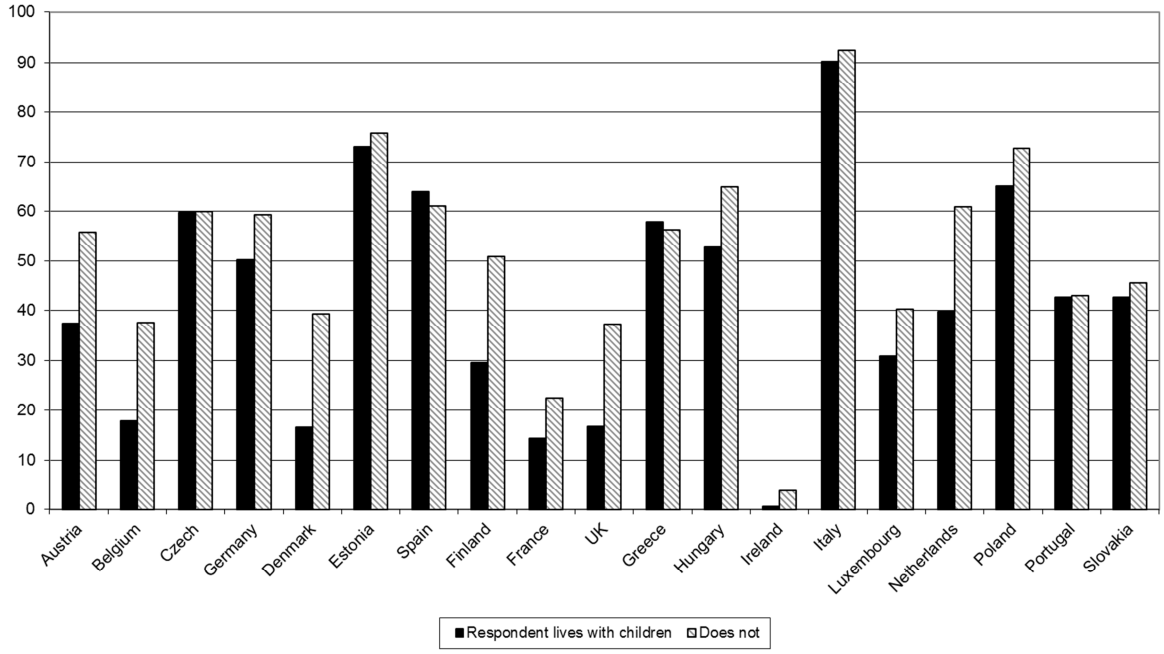
With regard to marital status , those who are separated/divorced and the 'never married' are over-represented in multiunit housing in a significant number of countries examined here (Figure 5). However, there are significant cross-national variations in the extent to which residents of multifamily housing have children living in the dwelling. It is a very common occurrence in Italy (90 percent), Estonia (73 percent), Poland (65 percent), Spain (64 percent), and the Czech Republic (60 percent), but also relatively common in Greece (58 percent), Hungary (53 percent) and Germany (50 percent) (Figure 6). By contrast, children are much less likely to be living in multiunit housing in the Republic of Ireland, France, Denmark, the UK, and Belgium.

Figure 5: Multiunit residence by marital status and country (%)



Source: author's calculations using ESS 2004/05

Figure 6: Multiunit residence by presence of children and country

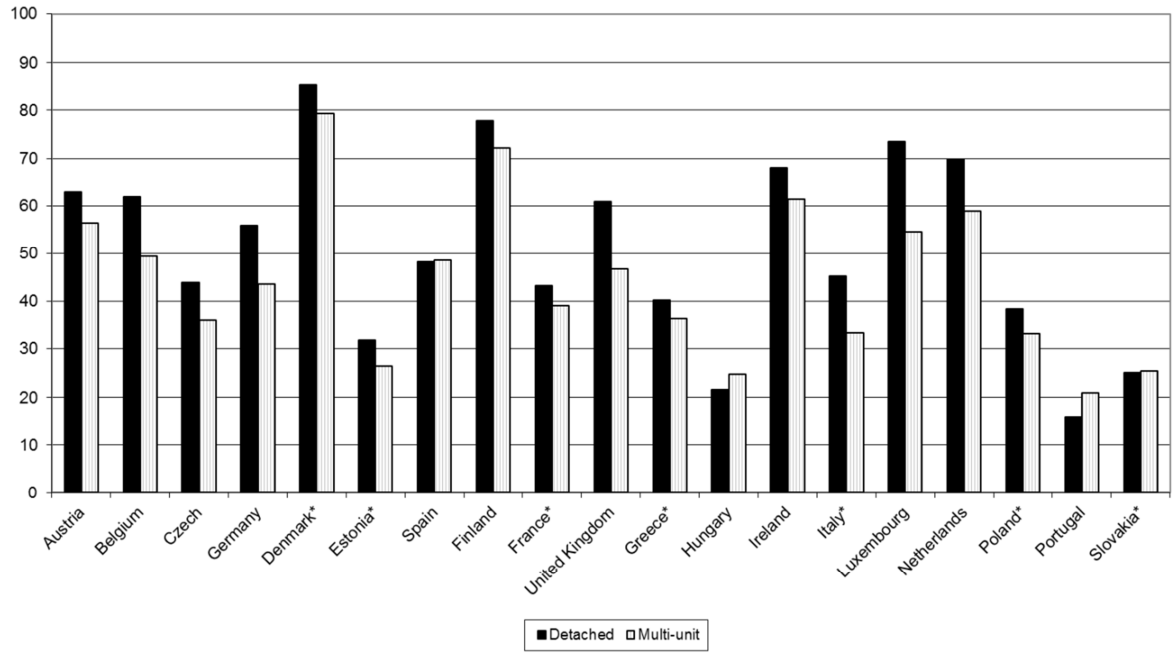


Source: author's calculations using ESS 2004/05

4.4. Dwelling type and life satisfaction

Existing research reveals significant variations in life satisfaction by country. The final research question in the paper examines whether or not there is a relationship between dwelling type and life satisfaction in the urban areas of the countries analysed here. In 15 of the 19 countries examined here, those living in multiunit housing are somewhat less likely to say they are very satisfied with life compared with those living in detached dwellings (see Figure 7).

Figure 7: Percent very satisfied with life by house type and country



Source: author's calculations using ESS 2004/05

The differences are relatively large in Luxembourg, the UK, Belgium, Germany, Italy, and the Netherlands. By contrast, in Portugal and Hungary those residing in multiunit accommodation are somewhat more likely to say they are very satisfied with life than those living in detached dwellings. Finally, in Spain and Slovakia, there is almost no difference in life satisfaction between residents of the two housing types.

One of the keys questions addressed in this paper is whether or not residing in multifamily housing has an effect on life satisfaction when one controls for other factors associated with life satisfaction such as income or employment. Table 4 presents the findings from multiple regression analyses employed to address this question. Model 1 examines the total sample of countries and includes the key socio-demographic characteristics of residents, housing and neighbourhood quality, housing tenure, dwelling space and built form. The standardised co-efficients (Betas) reveal the strength and direction of the relationship between each variable in the equation and life satisfaction. They indicate that the most important predictors are those which research usually links to satisfaction, i.e. being healthy rather than unhealthy, being retired or employed rather than unemployed. The results for the other socio-demographic variables are in the expected direction or they are not significant. That is, life satisfaction tends to be higher for those with higher incomes, higher education, the married rather than widowed, and having children living at home compared with not having children living at home. By contrast with the health and employment variables, the housing variables are relatively weak predictors of life satisfaction. Of those that are statistically significant, and therefore worthy of comment, the most important ones, in order, are: owning rather than renting; perceiving the neighbourhood to be safe; good housing quality; and vandalism not being a problem in the neighbourhood.

Turning to the key variable of interest in this paper, built form, it was expected that those living in detached or semi-detached housing might have higher life satisfaction compared with those living in multifamily dwellings. However, when you control for all of the other factors (e.g. income, size of dwelling etc.), built form is not a statistically significant predictor of life satisfaction, with one exception. Those living in semi-detached dwellings have lower life satisfaction than those in multifamily housing, which is rather unexpected in light of the literature reviewed above. Model 2 repeats the regression analysis for UK respondents only, as much of the European research which highlights problems with multifamily housing stems from that jurisdiction. However, the results indicate that built form is not a statistically significant predictor of life satisfaction there either. For the sake of comparison with a country where multifamily housing is much more prominent in the housing stock, model 3 examines

the equation for the Spanish sample only and, once again, built form is not a statistically significant predictor when you control for the other important variables.

Table 4: Life satisfaction among respondents living in European urban areas

	Model 1 (All countries)	**Model 2 (UK)**	**Model 3 (Spain)**
	Beta	**Beta**	**Beta**
Age	.006	-.001	-.082
€6,000<€24,000 (lowest income)	.082***	.032	.371***
€24,000<€60,000	.132***	.091	.377***
€60,000 and above	.095***	.092	.153***
Employed (unemployed)	.208***	.131	.189*
Retired	.251***	.286	.183**
Home duties	.167***	.110**	.188**
Other employment status	.143	.029	.211***
Married (widowed)	.063***	.085*	.163***
Separate/divorced	-.033***	-.021	-.075*
Never married	.012	.012	.032
Austria (Portugal)	.123***		
Belgium	.137***		
Switzerland	.192***		
Czech Republic	.092***		
Germany	.112***		
DK	.215***		
Spain	.109***		
Finland	.230***		
France	.049***		
UK	.118***		
Greece	.042***		
Hungary	.005		

Ireland	.132***		
Italy	.060***		
Lux	.140***		
Neths	.163***		
Poland	.063.***		
Slovak	.003		
VG health (poor health)	.427***	.329***	.269***
Good health	.390***	.227***	.326***
Fair health	.231***	.057	.256***
Kids not @ home (kids @ home)	-.033***	-.115***	-.033
Education	.021**	-.041	-.004
Good physical quality (poor quality)	.029***	.010	.052
Vandalism not a problem (vandalism a problem)	.021**	.031	-.021
Litter not a problem (litter a problem)	.010	-.055	.040
Feels safe after dark (does not)	.051***	.105***	.009
Space	.010	-.072*	.017
Dwelling owned (rented)	.064***	.046	-.018
Detached (multiunit)	-.010	-.005	.015
Semi-detached	-.018**	-.066	-.047
Terraced	-.011	-.012	.004
R-Square	.261	.133	.120

Notes: 1) OLS regression. 2) Reference category in brackets. 3) *p≤ 0.05; ** p≤ 0.01; *** p≤ 0.001.

Source: author's calculations using ESS 2004/05

5. Conclusions

Despite the not inconsiderable environmental and economic arguments for higher density urban housing forms, some case studies suggest there may be disadvantages for residents. The paper extends the evidence base on this topic to nineteen European

urban areas using nationally representative survey data. It explores key issues including the quality of multifamily dwelling and the neighbourhoods in which they are located, the characteristics of residents and their overall satisfaction with life. The results reveal that multifamily housing is the most common type of urban housing in eight of the nineteen countries examined here. The data suggests that respondents living in multifamily dwellings face a number of important concerns regarding their housing and neighbourhoods. In all but three countries examined, multiunit housing is less likely than detached housing to be designated as 'very good quality'. Compared with those living in detached dwellings, residents are less likely to feel safe in their neighbourhoods after dark. These findings provide support for some of the case studies discussed earlier in the paper (e.g. Bramley and Power, 2009; Cozens *et al*., 2001a; Howley, 2010).

In a majority of the countries examined, there is almost no relationship between age and living in multifamily dwellings. Where young people are over-represented in this form of housing, such dwellings tend to be less common in the urban housing stock, and residing there may represent a step in the housing career (e.g. Ireland, France, UK, Denmark and Finland). Those who can afford to do so may move to other forms of housing if they can afford to do. However, the paper reveals that certain categories of multifamily residents may be restricted in this regard. In particular, the unemployed, those on low incomes, and renters are overrepresented in multiunit dwellings some countries with relatively low proportions of this type of urban housing. Those who are separated/divorced and the 'never married' are over-represented in multiunit housing in almost all of the countries examined. However, there are significant cross-national variations in the extent to which residents of multifamily housing have children living in the dwelling. It is very/relatively common in a number of countries (i.e. Italy, Estonia, Poland, Spain, the Czech Republic, Greece, Hungary and Germany). By contrast, children are much less likely to be living in multiunit housing in the Republic of Ireland, France, Denmark, the UK, and Belgium. The findings for the UK and Ireland support the findings of some case study research which suggests this form of higher density housing may not be appropriate, or considered appropriate, in its current format for families with children in those locations (e.g. Howley, 2010; Mace, Hall and Gallent, 2007).

Studies of life satisfaction or quality of life frequently fail to incorporate important housing variables, including built form/house type. This research has shown that, in the vast majority of countries examined here, life satisfaction is somewhat lower for those living in multifamily dwellings than it is for those in detached dwellings. Furthermore, in some countries this difference is relatively large. However, the regression results reveal that residing in multifamily housing is not a statistically significant predictor of life satisfaction when one controls for other relevant socio-demographic variables, in particular health and income. Not surprisingly, dwelling quality and perceptions of neighbourhood safety are important predictors of life satisfaction. If multifamily housing is to be a desirable, sustainable option for individuals and families, there is scope to increase its quality so that it is similar to that of detached housing. Improvements in this direction will enhance the creation of more sustainable urban communities and may help to stem unsustainable housing and consumption patterns such as counter-urbanisation.

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