



SPORT AND RECREATIONAL EXERCISE AMONG ADULTS (AGED 16+) IN LOUTH AND MEATH, 2007-2009

Dr. Elish Kelly & Dr. Pete Lunn
Economic and Social Research Institute (ESRI)

February, 2011

SUMMARY

- Between 2007 and 2009, 35% of adults surveyed in Louth-Meath actively participated in sport or recreational exercise during the previous week
- This is significantly higher than the national figure of 33%, which appears to be due to the relatively high proportion of both men and women in the region who participate in individual activities, especially personal exercise activities and golf
- The pattern of playing sport with age shows that participation in the area, unlike elsewhere, does not display a decline in middle-age, although those over 65 are less likely to be active
- Women are most likely to participate in personal exercise (8.4%) and swimming (7.1%)
- Men are most likely to participate in golf (11.5%), personal exercise (9.3%) and soccer (9.3%)
- The participation rate in Gaelic football in the region is also higher than nationally, among both men and women
- Income has a particularly strong relationship with the likelihood of playing sport in Louth-Meath, such that those with high income are many times more to play sport than those with low income
- People with educational attainment below Leaving Certificate are also less likely to play sport
- Active participation increases following retirement, which is most likely due to additional free time to engage in physical activity
- Rates of recreational walking (60%) and walking for transport (48%) are in line with national figures, but cycling for transport (6%) is somewhat lower
- Combining all forms of activity measured, 15% of adults in Louth-Meath are effectively sedentary
- The estimated participation rate in sport is somewhat lower in Meath than in Louth, which also feeds through to a higher rate of sedentarism in Meath

Policy Implications:

- Policy needs to target those who remain excluded, despite higher levels of activity in the area: people with low incomes and older people
- Activities promoted need to be affordable and designed to appeal to lower income adults as they move beyond their mid-thirties

- For older people, activities need to be tailored for those who may have been inactive for many years and require social support

1. INTRODUCTION

A body of international evidence demonstrates that our level of physical activity is linked to our chances of developing chronic life-threatening conditions, including heart disease, various cancers, stroke, diabetes and osteoporosis. Because sport and recreational exercise form a substantial part of overall physical activity, their successful promotion has become a worldwide policy aim. Yet much of the policy initiative must be local.

This report provides evidence relating to the sport and recreational exercise activity of adults (aged 16 and over) in Louth and Meath, which will hereafter be referred to as “Louth-Meath”. The analysis aims to be of interest and assistance to those involved in the promotion of sport and exercise within this area, from councils and local sports partnerships, to individual participants and volunteers.

The results are based on telephone interviews with 1,505 adults conducted over three years (2007-2009), as part of the national *Irish Sports Monitor* (ISM), which is a survey conducted by the Economic and Social Research Institute (ESRI) on behalf of the Irish Sports Council (ISC). The ISM asks interviewees about sporting activity undertaken in the previous 7 days. Like all social surveys, the ISM has limitations. In particular, some groups are easier to reach on home telephones than others (e.g. non-working individuals compared to employees). Thus, to counteract any potential bias arising, the data are re-weighted to match the population characteristics of the area, as recorded by the Central Statistics Office (CSO). Further details of the aims and methodology of the ISM can be found in ISM Annual Reports (available at www.irishsportscouncil.ie and www.esri.ie).

The primary justification for public investment in sport is to increase physical activity and hence to improve health. Consistent with this aim (and the *Irish Sports Council Act, 1999*), the report defines “sport” broadly, to include recreational exercise (e.g. swimming, gym, dance classes), as well as field games (e.g. soccer, Gaelic football). The ISM also records recreational walking, walking as a mode of transport and cycling for transport, allowing sport to be set in the context of more general physical activity.

In this report, most charts and tables show percentage participation rates in a given activity by a particular group (e.g. the percentage of women who play team sport). However, reporting simple participation rates like this can be misleading. For example, young adults are more likely to play sport than older ones. This may mean that age reduces the tendency to play. But, on average, younger adults have higher educational attainment – a factor that is also strongly linked to participation. So, is age or education the crucial influence? To answer such questions, the analysis uses multivariate statistical techniques that can identify the individual impact of a given characteristic (e.g. gender, age, educational attainment, income, residential location, etc.) while simultaneously controlling for other background characteristics that can affect participation in sport. Thus, where displaying simple participation rates might mislead, the output of a multivariate statistical model is also provided.

2. RESULTS

2.1 OVERALL PHYSICAL ACTIVITY

In order to place active participation in sport in context, Table 1 provides a summary of overall physical activity in Louth-Meath, together with equivalent national figures. Thirty-five per cent of the population in the area participated in sport in the previous 7 days which, based on Census 2006, translates into approximately 72,648 adults playing sport on a regular basis in Louth-Meath.¹ This participation rate is significantly higher than the national rate of 33%. It is important to note that variations in levels of sport participation across the country can arise because of demographic differences. For example, areas with a relatively high (low) proportion of younger (older) people, who tend to play more (less) sport, can be expected to have a higher (lower) active participation rate. Based on the 2006 Census, Louth-Meath has a slightly higher proportion of adults aged under 35 and a smaller proportion aged over 65. Given this demographic profile, one might expect a somewhat higher rate of active participation in Louth-Meath.

Table 1: Summary of physical activity (%)

Activity	Louth-Meath	National
Played sport in previous 7 days	35	33
Walked for recreation in previous 7 days	60	59
Regularly walks for transport	48	46
Regularly cycles for transport	6	11
Sedentary	15	17

The amount of recreational walking and walking for transport undertaken in Louth-Meath is similar to the national rate (Table 1). However, the percentage that regularly bike for transport is lower, at 6% compared to 11%. Overall the rate of complete inactivity in the region, or “sedentarism”, is significantly below the rate in the rest of the country.

Comparing the two counties, there are no statistically significant differences between Louth and Meath with respect to the proportions who walk for recreation, walk for transport or cycle for transport. However, we record more people participating in sport in the previous 7 days in Louth (38%) compared to Meath (32%), with the effect that the rate of sedentarism is also lower in Louth. These two differences between the counties are borderline statistically significant. That is, given the sample size, a difference in the participation rates of this magnitude could have occurred by chance with a probability of roughly 0.04-0.07. It is therefore fairly unlikely that the difference represents mere statistical variation and much more likely that participation in sport is, in fact, somewhat higher in Louth than in Meath.

¹ This figure is approximate. Given the impact of the recession, the population may have varied significantly during the 2007-2009 period.

2.2 MOST POPULAR SPORTING ACTIVITIES

Table 3 lists the most popular sporting activities undertaken in Louth-Meath, for all adults and separately by gender. Only activities with a recorded participation rate of at least 1% are listed. Given the sample of 1,505, the percentage figures should be regarded as indicative rather than precise – they could vary by 1-2 percentage points either way.

Overall, the top four sports are personal exercise², swimming, golf and soccer. Although these four sports also dominate the national picture, the rankings and participation rates are somewhat different. A significantly greater proportion of individuals in Louth-Meath engage in personal exercise, 9% compared to 6% nationally, raising its participation rate above that of swimming, which is the most popular activity nationally. Another interesting feature in Louth-Meath is that the number of individuals that play Gaelic football in the region is almost double the national figure of 2.4%.

Table 2: Most popular sporting activities in Louth-Meath³

	All	Male		Female	
	%		%		%
Exercise	8.9	Golf	11.5	Exercise	8.4
Swimming	6.9	Exercise	9.3	Swimming	7.1
Golf	6.4	Soccer	9.3	Dancing	3.0
Soccer	4.8	Swimming	6.6	Gaelic Football	2.1
Gaelic Football	4.2	Gaelic Football	6.5	Cycling	2.0
Cycling	3.0	Jogging	4.2	Yoga	1.7
Jogging	2.9	Cycling	4.0	Jogging	1.5
Dancing	1.7	Rugby	1.4	Golf	1.2
				Horse Riding	1.2

Turning to gender differences, the strong preference for golf and soccer observed in Table 2 is driven by males, while engagement in personal exercise and swimming is similar among both genders. Apart from Gaelic football, female activities are comprised of individual sports, whereas males engage in a mixture of both team and individual activities. We can see from Table 2 that the high participation rate in Gaelic football in this region is being driven primarily by males, who have a participation rate of 6.5% compared to a national figure of 3.8%. Nevertheless, the number of females that engage in Gaelic football in Meath-Louth is also almost twice the national figure of 1.1%. These gender differences in sporting activities produce overall participation

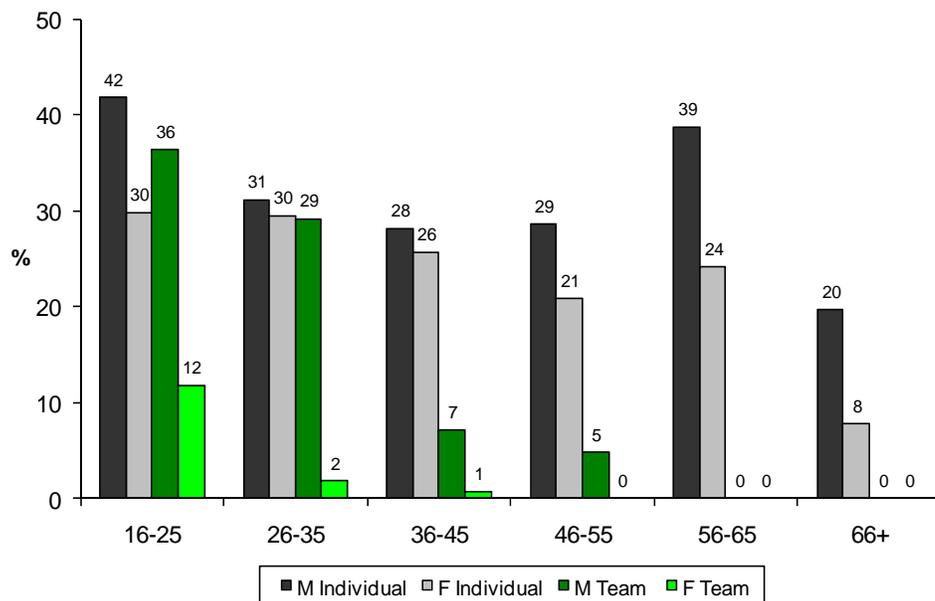
² This category includes various forms of personal exercise, including going to the gym, “working out”, doing exercise routines at home, as well as attending exercise, aerobics or keep-fit classes.

³ From this point onwards, all results presented are for Louth-Meath only. Readers interested in comparative national figures should consult the ISM Annual Reports, available at www.irishsportsCouncil.ie and www.esri.ie.

rates of 43% and 27% for males and females respectively, which compare to national figures of 40% and 26%.

In terms of individual and team activities, the proportion of both males and females in Louth-Meath that engage in individual sports (33% and 25% for males and females respectively) are much higher than the figures for team activities (17% and 3%). Thus, the gender gap for individual sporting activities is much smaller than the gap for team sports. These participation rates are similar to the national figures with the exception of male participation in individual activities, which is considerably greater than the equivalent national figure (27%). Greater insight into this pattern can be had from Figure 1, which breaks down participation in different types of activity by age.

Figure 1: Active participation in individual and team sports by gender and age



The main feature of Figure 1 is that the high participation rate in individual activities in Louth-Meath is primarily driven by males in the 16-25 and 56-65 age brackets. For males aged 16-25, this figure is 10 percentage points higher than the national equivalent of 32%, while for males aged 56-65 the Louth-Meath figure of 39% is much greater than the 23% national figure. Involvement in team activities among males aged 16-25, on the other hand, is somewhat lower than the national figure (36% compared to 43%), but the age profile pattern after this, particularly the huge reduction in the proportion of men playing team sports after the age of 35, resembles the national picture. In relation to females, apart from those aged 16-25, who have a slightly lower individual participation rate compared to the national figure (30% compared to 35%), female participation in both individual and team activities across the age spectrum resembles the national pattern.

2.3 DEMOGRAPHY AND ACTIVE PARTICIPATION

Using a multivariate statistical model to identify the individual impact of various characteristics on a person's likelihood of playing sport in Louth-Meath, we found that gender, age, educational attainment, income, principal economic status and health status had a statistically significant impact. The first four of these factors are also the most important characteristics countrywide. Family background characteristics, such as presence of children and marital status, along with occupation, residential location (living in a town, village or isolated location) and car ownership were not significant. Interestingly, income has a particularly strong impact on a person's likelihood of participating in sporting activities in the area, once other background characteristics are controlled for. This is discussed further in Section 2.4, while this section here continues to focus on differences by age and gender.

Figure 2 provides participation rates for different categories of age and gender. As indicated earlier, the overall participation rates for men and women in Louth-Meath are 43% and 27% respectively, but this gender gap is not stable across the age distribution. In particular, we can see from Figure 2 that the divergence in active participation among males and females is greater among those aged 16-35. The gap then narrows considerably among 36-45 year-olds, before increasing moderately again for the older age groups.

Figure 2: Active participation by age and gender

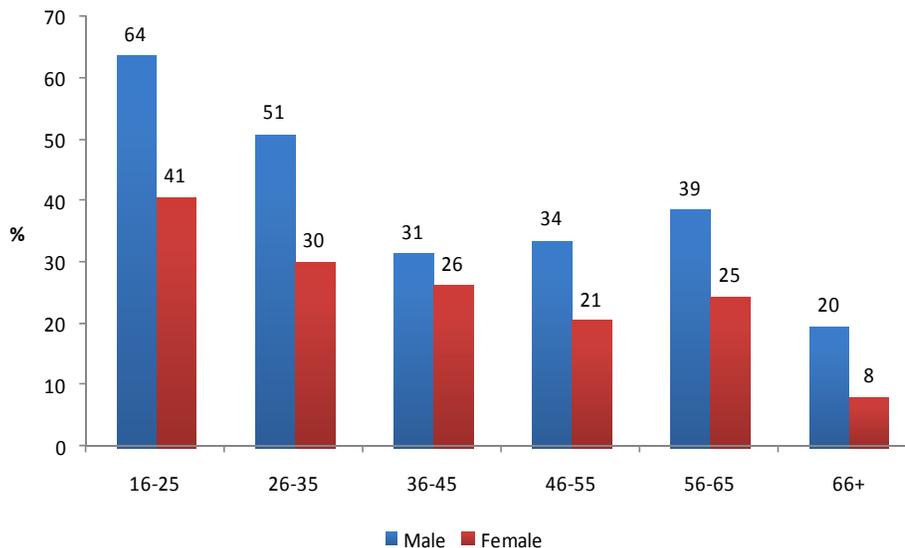


Figure 2 is not straightforward to interpret, however. In addition to age, other characteristics of older and younger adults influence whether or not someone plays sport. For example, younger people have, on average, higher

educational attainment, which tends to be positively associated with participation. Similarly, income and economic status vary systematically with age. Given all of these interlinked factors, a multivariate statistical model is required to isolate and assess the impact of different competing influences on participation in sport. Such a model can compare the likelihood of participation across males and females of different ages but the same educational attainment, occupation and other background characteristics. In other words, the use of multivariate techniques allows us to isolate the impact of gender and age independently of other associated background factors that also influence whether or not someone plays sport.

For illustrative purposes, we use the multivariate model to estimate the predicted participation rates for two “typical” adults in Louth-Meath, one male and one female. Based on 2006 Census data for the region,⁴ this “typical” person is 39 years of age, has a Leaving Certificate qualification, works for a living, has household income of €500-749 per week and does not suffer from ill-health. Figure 3 provides predicted participation rates for males and females from Louth-Meath who have this “typical” profile, yet differ in age (in steps of ten years from the median age of 39).

Figure 3: Predicted participation rates by age and gender for individuals with typical socio-economic characteristics

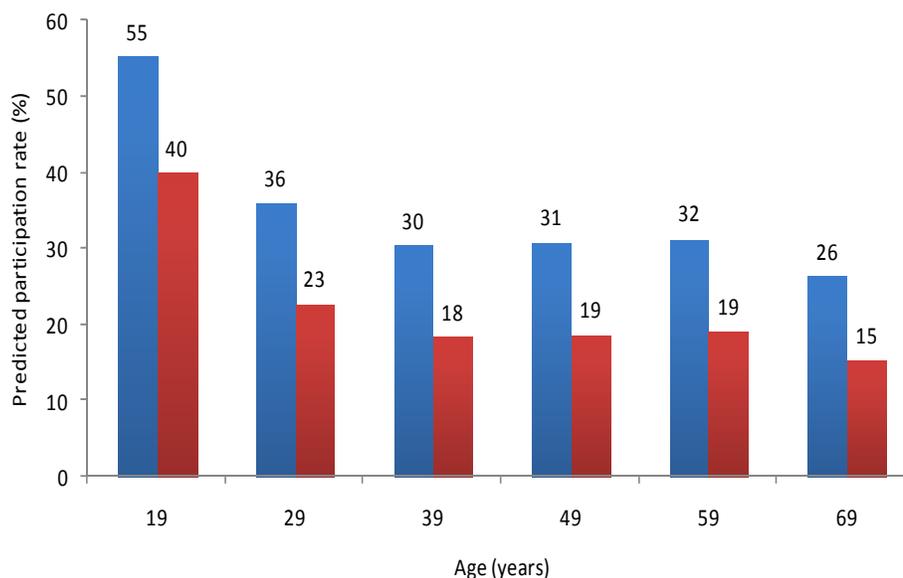


Figure 3 reveals that once other characteristics are controlled for, participation in sport in Louth-Meath declines very significantly in young adulthood, but then maintains a high level through middle age, before declining again among older people. This pattern, which is common to both men and women, is slightly different to that typically found in the rest of the country, where the fall

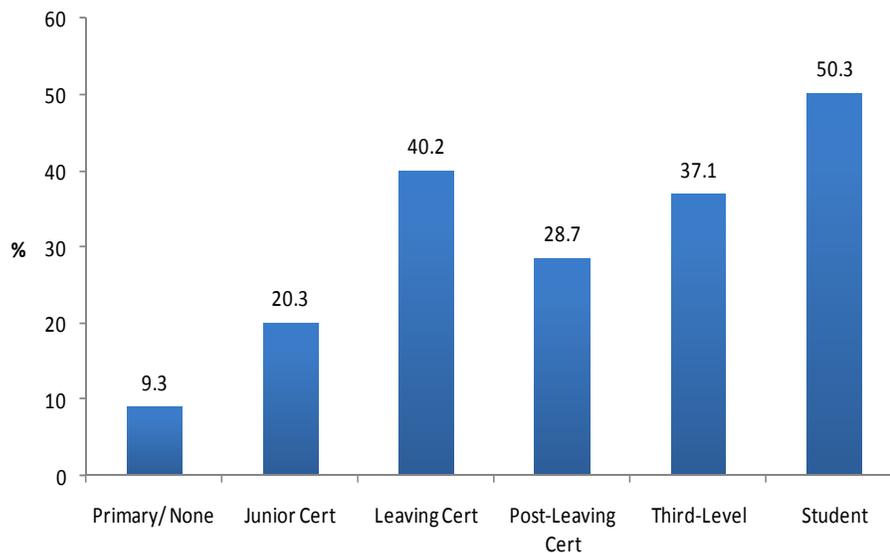
⁴ The “typical” adults characteristics are selected to get them as close as a possible to a median individual from the Louth-Meath.

off in active participation with age is more consistent. Figure 1 sheds some light on the reason for the age profile observed in Louth-Meath: the decrease in participation in young adulthood is due to individuals dropping out from team activities, while the relatively high level of sports participation in middle age seems to be the result of a relatively large proportion of people engaging in individual sporting activities, in comparison to the rest of the country. This pattern applies to both males and females in the region.

2.4 SOCIO-ECONOMIC STATUS AND ACTIVE PARTICIPATION

This section focuses on the impact of socio-economic characteristics on active participation; specifically, the impact of an individual's educational attainment and income. Figure 4 illustrates that individuals with higher levels of education are more likely to play sport, as are those currently in education (students), while Figure 5 shows that those with higher incomes are also more likely to participate in sport. At first sight, both of these effects appear to be very strong.

Figure 4: Active participation by educational attainment



However, these education and income results are again not straightforward to interpret, because educational attainment and income are themselves related, i.e. those with higher levels of education also tend to have higher earnings. Given this, it is not clear what exactly drives the relationship between active participation and socio-economic status. However, the multivariate statistical model allows us to identify the separate effects of educational attainment and income on active participation. Specifically, the model allows us to compare the likelihood of participation across people with the *same* educational attainment, and other background characteristics, but *different* income levels and vice-versa.

Figure 5: Active participation by income

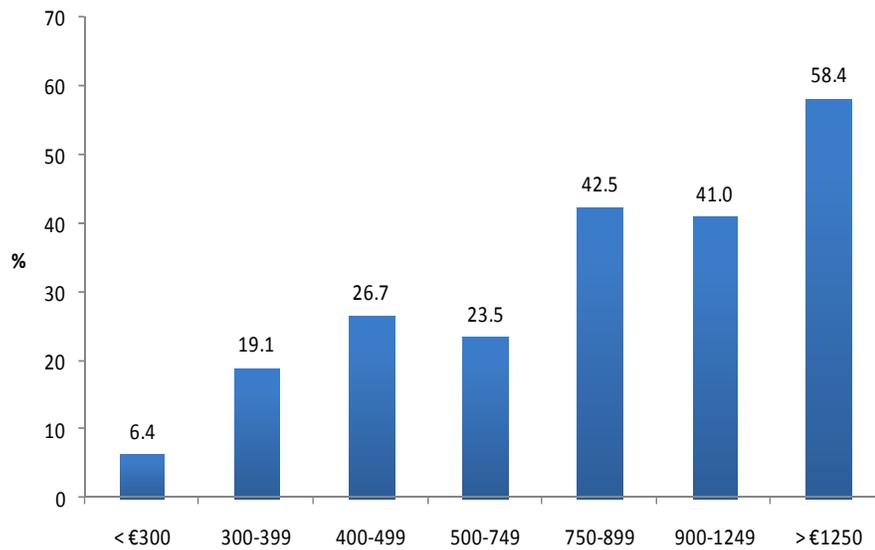


Figure 6 shows the outcome when this method is used to isolate the impact of educational attainment. The chart gives predicted probabilities for a “typical” male and female who have the same background characteristics (39 years old, healthy, working, average income of €500-749 per week) but different levels of education. In other words, Figure 6 reveals what happens when people with otherwise similar characteristics differ only in terms of educational attainment.

Figure 6: Predicted participation rates for typical individual with differing levels of educational attainment

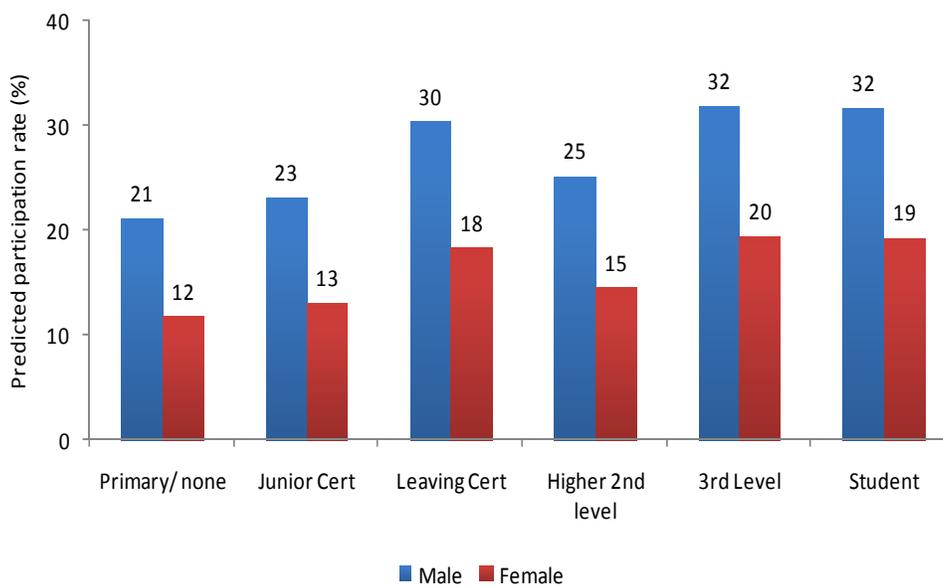
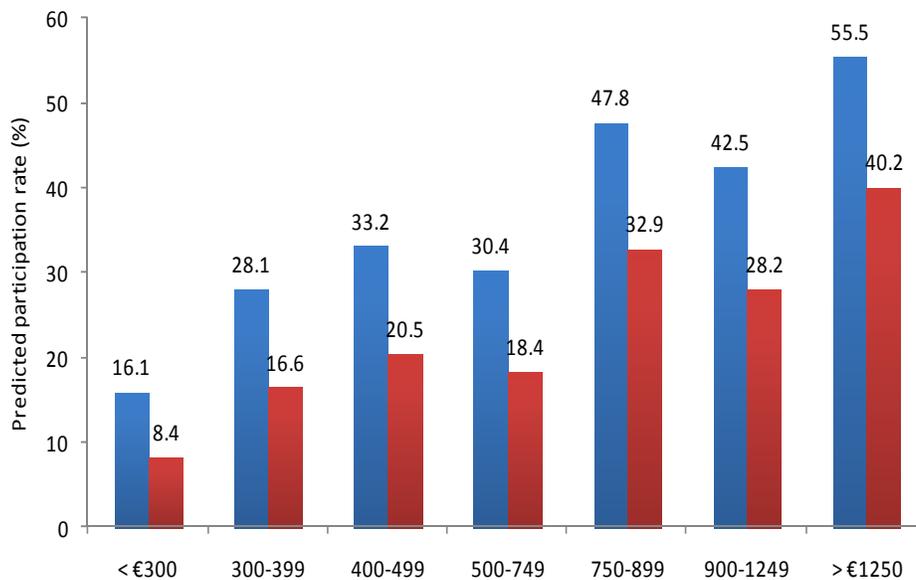


Figure 6 confirms that a person's education attainment has an impact on whether or not he/she plays sport: as educational attainment increases, so does the likelihood of playing sport. However, once income has been controlled for, the impact of education on active participation in Louth-Meath does not appear to be as strong. Indeed, it emerges as somewhat weaker than is the case in other parts of the country – we typically observe an even steeper gradient as educational attainment increases.

Figure 7 replicates the multivariate analysis for income, separately for males and females. The typical individual has the same characteristics as before, except that this time educational attainment is fixed at Leaving Certificate level and income is allowed to vary. The results show that income has a very strong impact on active participation, even after educational attainment (and other background characteristics) have been controlled for.

Figure 7: Predicted participation rates for typical individual differing only by income



Comparing Figures 6 and 7, we can see that the relationship between socio-economic status and playing sport is mainly driven by income rather than educational attainment. In particular, the likelihood that someone in Louth-Meath participates in sport increases very considerably with higher levels of income. The lowest income group has a particularly low probability of active participation. The implication is that, as regards the likelihood of continuing to be active, what a person can afford, as measured by their income, is more important than their experiences as a young adult, as indicated by educational attainment. This finding tallies with the list of most popular sports described above, since personal exercise activities and golf, both of which have high

participation rates in Louth-Meath, tend to require relatively expensive membership fees for gyms and clubs, compared with some other sporting activities.

In addition to opportunities, connections and resources, there may be other factors associated with higher socio-economic status that affect its relationship with playing sport. For instance, individuals in higher socio-economic groups are more likely to have parents in higher socio-economic groups and, therefore, to have parents who themselves play or played sport. The ISM asks interviewees whether, when they were at school, their parents played sport. Once this information is controlled for in the statistical model, it reduces the strength of the associations between participation and socio-economic factors in Louth-Meath, particularly the impact of educational attainment on sports participation, which is no longer statistically significant. This result seems to suggest that a large part of the relationship between sports participation and education is due to the 'intergenerational transfer' of sporting habits – children's behaviour following that of their parents, and that this factor matters more than a person's actual education level when it comes to whether he/she plays sport.

Two other socio-economic factors are significantly related to the likelihood that individuals in Louth-Meath play sport: a person's health status and principal economic status. In relation to health, the multivariate model estimates, after controlling for other background characteristics (e.g. age, education level, income, etc.), that those with a health problem are 15% less likely to participate in sporting activities. Regarding a person's principal economic status, those that are retired are 14% more likely to play sport compared to those that are working. This indicates that the increase in free time arising from retirement enhances activity, although the same positive influence is not present for those who are unemployed or engaged in home duties.

2.5 SEDENTARISM

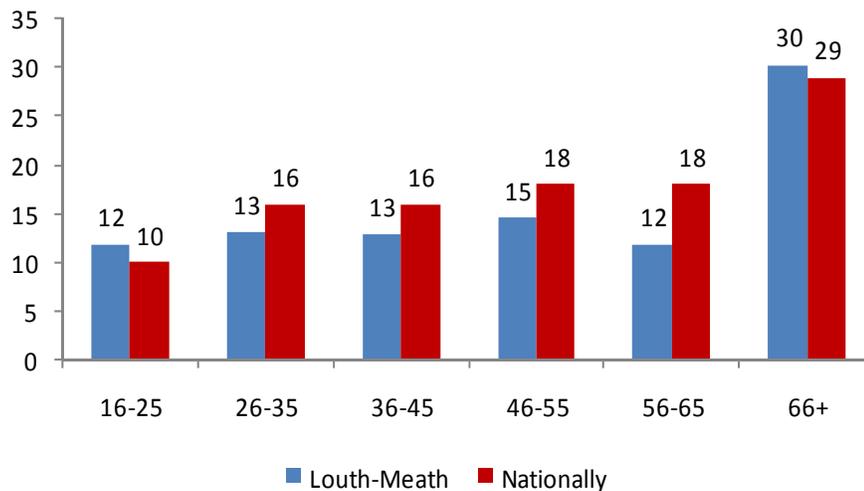
Complete physical inactivity carries particular risks to health. An analysis of the types of people that are most likely to be sedentary in Louth-Meath is consequently of interest from a policy perspective. Here, someone is defined as sedentary if they meet four criteria: (1) did not play sport in the previous 7 days, (2) did not take a recreational walk in the previous 7 days, (3) does not walk regularly for transport and (4) does not cycle regularly for transport. This definition is imperfect, because it is limited to recreation and transport activity. Most notably, some individuals undertake significant physical activity associated with work, either through a manual occupation or via domestic duties, which is not recorded by the ISM. Nevertheless, the results offer a reasonable guide to inactivity, especially as it can be affected by policy relating to sport and physical activity.

As with identifying the factors that impact on active participation in sport in Louth-Meath, we again use a multivariate statistical model to isolate the

individual impact of various characteristics on a person’s likelihood of being sedentary. The model shows that health status, occupation, income, the presence of children, whether someone’s parents played sport, the type of residential location all have a statistically significant impact. Note that there is no gender difference in rates of sedentarism, because the lower level of participation in sport among women is counterbalanced by their greater propensity for walking.

Age is also an important attribute associated with sedentarism. Figure 8 gives rates of sedentarism by age in Louth-Meath and for the country as a whole. The rate of sedentarism among young people (aged 16-25) in Louth-Meath is slightly higher than what it is for the rest of the country. Interestingly, however, rates of sedentarism among those people in the region aged 26 to 65 are lower than the national figures. The rate of sedentarism then increases considerably among those aged 66 and over, but this trend is in line with the national picture. Overall, within the Louth-Meath region we can see that the lower rate of sedentarism is mostly driven by the behaviour of the middle-aged. This age pattern is confirmed by multivariate analysis.

Figure 8: Sedentarism by age



Turning to the other significant factors mentioned above, the multivariate analysis also reveals that sedentarism is more likely among people that have a disability (or long-term health problem) that prevents them from taking part in sport or exercise. With respect to occupational status, the self-employed are also more inclined to be sedentary, which may reflect additional time constraints, although we have no way to test this hypothesis. Individuals are also less likely to be sedentary once their children have reached the age of 18. Unsurprisingly, given the impact of income on the likelihood of playing sport, those in higher income groups are less likely to be completely inactive. With respect to residential location, the ISM records whether people live in an isolated location, a village or a town/city. This was also found to have a

significant impact. Specifically, those living in isolated locations are more likely to be sedentary compared to those that live in towns/cities. This last finding may well be related to the extent of car dependency in more isolated locations, although we cannot test this directly with the available data. The results also indicate that people whose parents (both) played sport when they themselves were in school are less likely to be sedentary, again suggesting a degree of intergenerational transfer of habits in relation to physical activity.

Lastly, once we control for background characteristics (health status, occupation, income, etc.) using the multivariate statistical model, we find residents of Meath are more likely to be sedentary than residents of Louth. The difference between the rates is 16% versus 13%. As discussed above, the statistical significance of this difference, which is mostly driven by active participation in sport rather than walking behaviour, is marginal.

2.6 SOCIAL PARTICIPATION

The ISM also records social participation in sport. The survey asks whether individuals undertook volunteering associated with sport (e.g. officiated, organised, provided transport), whether they are a member of any sports club and whether they attended any sporting events. The results reveal that 6% of adults in Louth-Meath volunteered for sport during the previous week, 36% are members of some type of sports club and 16% had attended a sporting fixture. These rates of volunteering and attendance do not differ significantly from the equivalent national figures, but the level of club membership is significantly higher, as might be expected given the higher level of active participation, especially in personal exercise, golf and Gaelic football, activities that are likely to involve club membership.

3. POLICY IMPLICATIONS

With respect to participation in sport, Louth-Meath has many things in common with the rest of the country, in terms of who plays sport and who does not. There are many potential policy responses to the findings – too many to summarise here. Policymakers and others are encouraged to consult recent publications that have dealt specifically with these influences on active participation (*Fair Play? Sport and Social Disadvantage in Ireland; Sporting Lives; ISM Annual Reports*; all available at www.irishsportsCouncil.ie and www.esri.ie). This final section, therefore, offers an indicative rather than exhaustive examination of policy implications. We focus on two groups that are not sharing the benefits of the relatively high level of physical activity in the region: those with lower income and older people.

The analysis shows that the relationship between income and the likelihood of playing sport in Louth-Meath is very strong. Those with lower incomes are many times less likely to participate in sport than those with higher incomes, even after a number of other factors related to income are controlled for. This disparity feeds through to a greater likelihood of being sedentary among those with lower incomes, with serious potential health consequences. The findings straightforwardly suggest, therefore, both that affordability is a barrier to active participation. Yet sports policy makers are limited in their ability to reduce membership fees for clubs, many of which are private concerns, especially those that offer some of the more popular activities in the region, e.g. going to the gym or playing golf. These activities are also those that tend to be undertaken by people once they move beyond young adulthood and cease involvement with team sports. The danger, therefore, is that people in the lower half of the income distribution, even if they are active as young adults, will tend to drop out from sport altogether once they give up team games. Given this, there is a strong argument for policy makers targeting participation programmes at those in lower income groups. Furthermore, the activities to be promoted need to be affordable and appropriate for adults moving towards middle age, which implies either individual activities or team games (or formats) that continue to appeal beyond people's mid-thirties.

The other social group that is somewhat excluded from the otherwise relatively high activity levels in the area is older people. Indeed, those over 65 have a sedentarism rate of 30%. The health consequences of compete inactivity mean that getting this proportion down by engaging this group needs to be a key priority for policy makers. Both international evidence and research in Ireland offer some indications of how participation programmes may engage more older people. In particular, activities need to cater for people who may have been inactive for a long period and may be daunted by the prospect of strenuous activity. Successful programmes elsewhere have made use of pre-existing social groups, which can offer support to people who may be understandably nervous about engaging in physical activity, but find it easier to do so among friends. Lastly, as is clear from the above discussion, activities need to be affordable.