



**SPORT AND RECREATIONAL EXERCISE
AMONG ADULTS (AGED 16+) IN
MAYO AND SLIGO, 2007-2009**

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

November, 2010

SUMMARY

- Between 2007 and 2009, 26% of adults surveyed in Mayo-Sligo actively participated in sport or recreational exercise during the previous week
- 57% of adults undertook a recreational walk during the previous week
- 19% of adults were effectively sedentary
- Allowing for the demographic profile of Mayo-Sligo, activity levels are in line with national figures
- Swimming (5.6%), personal exercise (5.3%), soccer (3.9%) and Gaelic football (3.7%) are the most popular activities
- More than two-thirds of all sporting activity (excluding recreational walking) consists of individual sport and recreation activities, as opposed to team games
- The likelihood of playing sport is strongly linked to socio-economic status, such that individuals with higher income and, especially, higher educational attainment, are very much more likely to participate
- Students have a particularly high active participation rate (48%)
- Women are less likely to play sport than men, but this gender gap reduces with age and is smaller among single people
- Increased age reduces the likelihood of playing sport, although less so among women
- Age is a less powerful influence than socio-economic status on whether an individual plays sport
- Single men are less likely to play sport than married or cohabiting men – there is no similar effect of partnership for women
- Although less likely than men to play sport, women are more likely to undertake recreational walks, such that they are marginally less likely to be sedentary overall
- 8% of adults volunteered for sport in the previous week, 26% are members of sports clubs and 16% attended a sporting event
- The findings have policy implications regarding the targeting of participation programmes at specific social groups and the types of sport and exercise activities promoted

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 counties Mayo and Sligo (hereafter 'Mayo-Sligo'). The analysis aims to be of interest and assistance to those involved in the promotion of sport and exercise in the area, from councils and local sports partnerships, to individual participants and volunteers.

The results are based on telephone interviews with 1,435 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 Mayo-Sligo, 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, marital status, 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 Mayo-Sligo, together with the equivalent national figures. Levels of activity are generally on the low side, especially with respect to the proportion who actively engaged in sport in the previous 7 days. The result is that a higher proportion of the population is effectively sedentary. However, the average age of adults in Mayo-Sligo is significantly higher than it is for Ireland as a whole. Once this and other demographic characteristics are controlled for, there is no significant difference in activity levels between Mayo-Sligo and Ireland generally. Based on Census 2006, the 26% participation rate translates into approximately 37,500 adults playing regular sport in Mayo-Sligo.¹

Table 1: Summary of physical activity

Activity	%	National %
Played sport in previous 7 days	26	33
Walked for recreation in previous 7 days	57	59
Regularly walks for transport	43	46
Regularly cycles for transport	9	11
Sedentary	19	17

Comparing the two counties, there are no clear, statistically significant differences between Mayo and Sligo with respect to the proportions who play sport, walk for recreation, or are sedentary. However, significantly more people in Mayo cycle for transport, whereas significantly more people in Sligo walk for transport.

2.2 MOST POPULAR SPORTING ACTIVITIES

Table 2 lists the most popular sporting activities undertaken in Mayo-Sligo, for all adults and separately by gender. Only activities with a recorded participation rate of at least 1% are listed. Given the sample of 1,435, the percentage figures should be regarded as indicative rather than precise – they could vary by 1-2 percentage points either way.

Overall, the top three sports are swimming, personal exercise² and soccer. This pattern matches the national picture. However, Gaelic football appears

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

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.

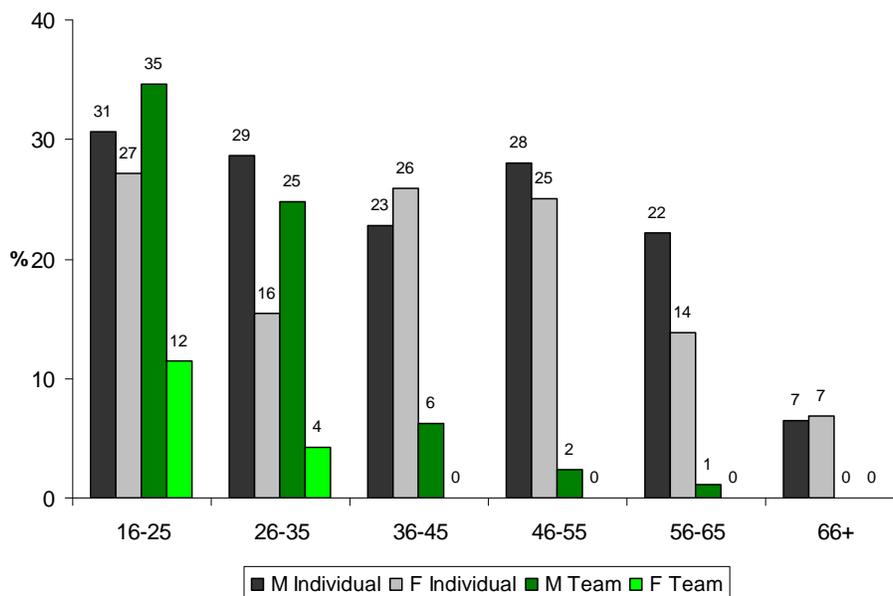
higher up the ranking of activities than it does countrywide, with a higher participation rate in Mayo-Sligo than nationally for both men and women. (The same cannot be said for hurling/camogie, which does not reach the 1% threshold for inclusion).

Table 2. Most popular sporting activities³

All		Male		Female	
	%		%		%
Swimming	5.6	Soccer	7.1	Swimming	7.4
Exercise	5.3	Gaelic football	4.6	Exercise	6.1
Soccer	3.9	Exercise	4.4	Dancing	3.4
Gaelic football	3.7	Jogging	4.1	Gaelic football	2.7
Golf	2.6	Golf	4.0	Golf	1.2
Jogging	2.6	Swimming	3.9	Jogging	1.0
Cycling	2.3	Cycling	3.8		
Dancing	2.0	Rugby	2.2		
Rugby	1.1				

There are strong gender differences. Male sporting activity consists of a mixture of team and individual activities, while female activity is dominated by individual activities (especially swimming and exercise), the majority of which are non-competitive. Greater insight into this pattern can be had from Figure 1, which shows participation in individual and team sports by gender and age.

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



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

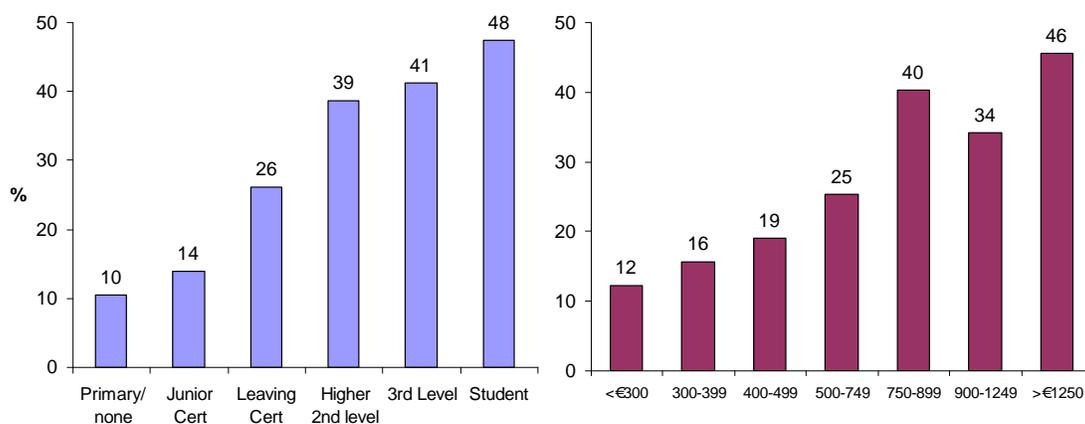
Figure 1 has several striking features. First, although some of the most popular sports are team sports, individual sporting activities account for more than two-thirds of total activity in Mayo-Sligo. Second, team sport is heavily concentrated among young men. Lastly, many young adults, especially women, drop out of team sport fairly rapidly, such that very few of those aged over 35 participate in team sports.

2.3 SOCIO-ECONOMIC STATUS AND ACTIVE PARTICIPATION

Using a multivariate statistical model to identify the individual impact of various characteristics on a person’s likelihood of playing sport, five factors emerge as having a strong association with active participation in sport in Mayo-Sligo. These are educational attainment, gender, age, income and marital status. The first four are known to be significant countrywide, but the association between playing sport and marital status found in Mayo-Sligo is atypical. This section concentrates on the impact of educational attainment and income.

Figure 2 shows the very strong relationship between the likelihood of playing sport and socio-economic status. Those with higher educational attainment are very much more likely to play sport, as are those with higher income.

Figure 2: Participation in sport by educational attainment (left) and weekly household income (right)



These results are not easy to interpret, however, because income and educational attainment are themselves strongly related, i.e. more educated people tend to have higher earnings; thus, it is unclear which factor is really driving the result. Using a multivariate statistical model makes it possible to disentangle the two effects. The model can compare the likelihood of participation across people with the *same* income (and other background characteristics), but *different* educational attainment, and vice-versa.

Figure 3 shows the results when this method is used to isolate the impact of educational attainment. For illustrative purposes, we use the model to estimate predicted participation rates for two “typical” adults, one male and one female, as defined by the 2006 Census data for Mayo-Sligo: 44 years old, married and of middle income. Hence, Figure 3 reveals what happens when people who are otherwise similar differ only in terms of educational attainment – comparing like with like. The analysis therefore shows that the impact of educational attainment on playing sport remains very strong even after other characteristics that might affect the outcome are accounted for. It is interesting to note that current students are particularly likely to play sport, even after controlling for age, which might suggest that having a direct link to a school or college is very beneficial for participation in sport.

Figure 3: Predicted participation rates for typical male and female differing only by educational attainment

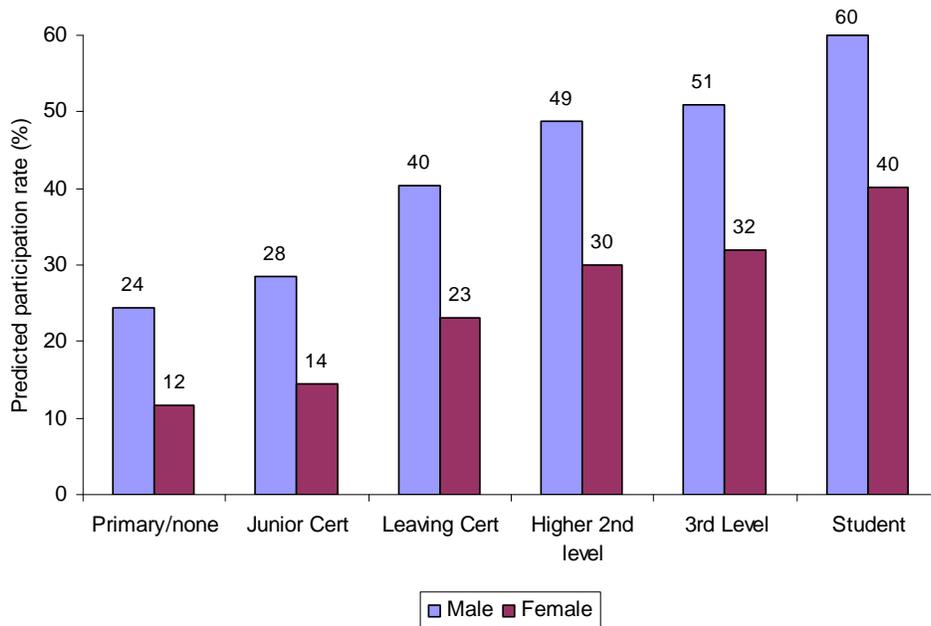
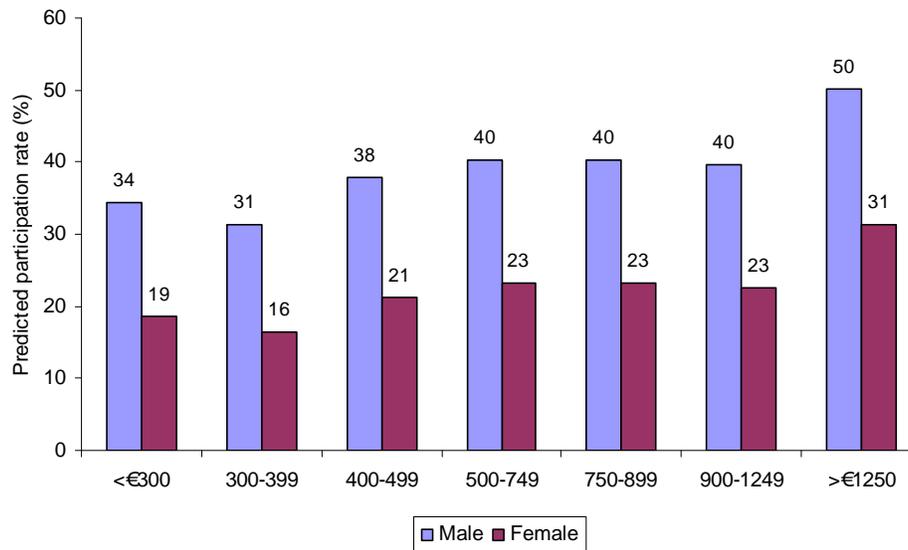


Figure 4 replicates the multivariate analysis for income. This time, the typical male and female are as before, except that educational attainment is set at Leaving Cert level and income is allowed to vary. The results show that while income does have a significant impact on participation, it is somewhat weaker than the influence of educational attainment revealed by Figure 3. More specifically, while income has a substantial impact on the likelihoods of participation of the two lowest and the very highest income categories, there is little difference across middle income categories.

Taken together, the analyses of Figures 2-4 provide a clear message. There is a very strong association between socio-economic status and participation in sport in Mayo-Sligo. Those with higher educational attainment and income

are much more likely to take part. Such a strong relationship suggests that the opportunities and social connections associated with spending longer in full-time education and, perhaps to a lesser extent, with possessing more resources, have very strong influences on the likelihood of playing sport.

Figure 4: Predicted participation rates for typical male and female differing only by income



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 somewhat reduces the strength of the associations between participation and socio-economic factors. This implies that a small part of the relationship might be due to the ‘intergenerational transfer’ of sporting habits – children’s behaviour following that of their parents.

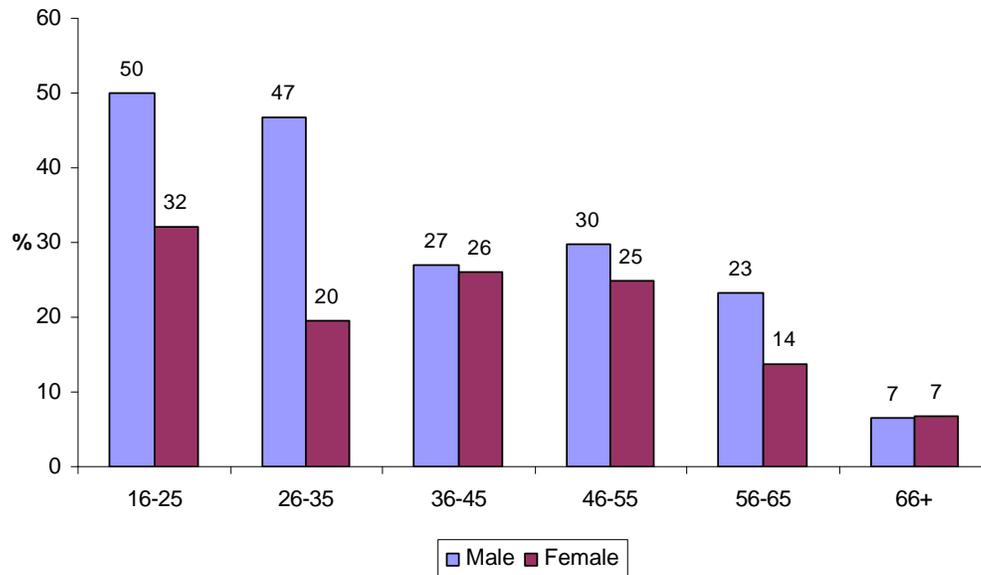
2.4 DEMOGRAPHY AND ACTIVE PARTICIPATION

Figure 5 provides participation rates for different categories of age and gender. The overall participation rates for men and women are 32% and 21% respectively, but this gender gap varies substantially across different categories of individual and is not therefore easily summarised.

Indeed, Figure 5 is not straightforward to interpret, because characteristics of older adults and younger adults other than age affect whether someone plays sport, as does more than one factor associated with gender. For example,

younger adults are, on average, better educated, which we have already seen is positively associated with participation. In Mayo-Sligo they also tend to have higher income. Furthermore, women (especially younger women) have higher average educational attainment than men. Given all of these various interlinked factors, a multivariate statistical model is again necessary to isolate and assess the different competing influences.

Figure 5: Participation by age and gender



The statistical model reveals that, as Figure 5 suggests, there is a significant interaction between age and gender, such that the drop in participation with age is steeper for males. One cause of this difference was suggested earlier by Figure 1: a higher proportion of men play team sports as young adults, from which they are very likely to have dropped out by their mid-thirties. The individual activities that are more typically engaged in by women (e.g. swimming and personal exercise) are more likely to be continued as people progress through middle age.

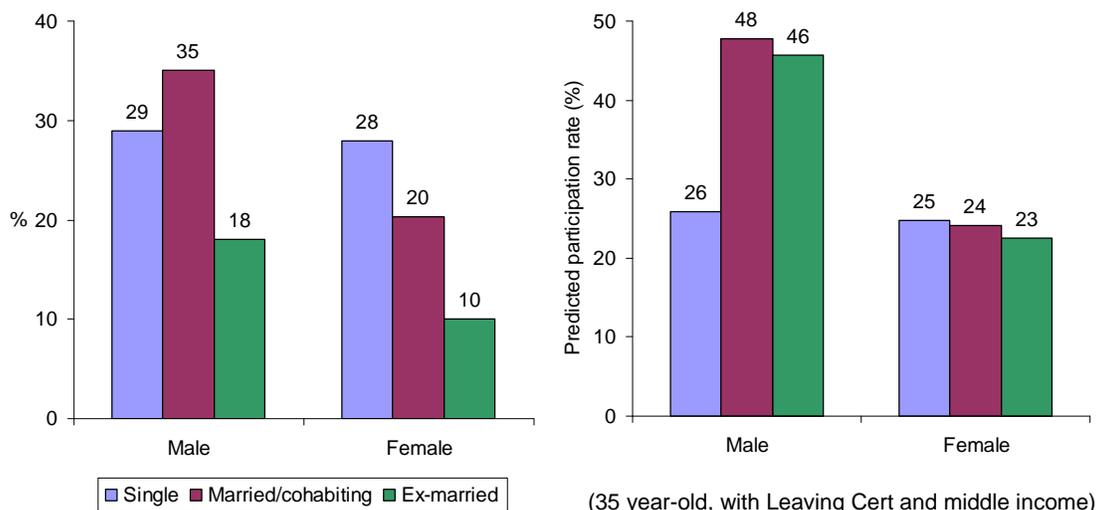
The model estimates the magnitude of the age effect to be the equivalent of one in every 20 men who play sport dropping out for each additional 10 years of age. In other words, once other beneficial factors associated with being younger are taken into consideration, the impact of age on the likelihood of playing sport is considerably less than the decline initially implied by Figure 5.

It is useful to compare the size of this effect with that due to educational attainment. One way to do this is to use the statistical model to match the effect of a different level of educational attainment with that due to a given number of years of age. For men, this technique reveals that the impact on the likelihood of playing sport of having a third-level qualification rather than Junior Certificate, is greater than the impact being 30 years younger. For women, meanwhile, the decline in the likelihood of participation with age,

once associated factors are controlled for, is so small as to be statistically insignificant.

A last significant influence on active participation to consider is marital status, which also interacts significantly with gender. Figure 6 provides participation rates for single people, people with partners (cohabiting or married) and those who are separated or divorced. The panel on the left shows that the raw participation rates display a different pattern for men and women. These figures are again difficult to interpret, because single people are on average younger than people with partners, who are on average younger than people who are separated or divorced. As explained above, a range of factors may mean that younger adults are more likely to play sport, including higher educational attainment and income.

Figure 6: Participation by marital status and gender – raw figures (left) and predicted participation rates (right) for a 35 year-old of average socio-economic status



The multivariate statistical model isolates the impact of marital status, while controlling for other characteristics, including age and socio-economic status. The panel on the right in Figure 6 presents predicted participation rates by marital status for a man and a woman who are both 35 years old and of average educational attainment and income. Age 35 is chosen to illustrate the effect because people with partners begin to outnumber single people by the late twenties and early thirties. The analysis shows that, once related background characteristics are controlled for, partnership (and ex-partnership) is associated with higher chances of participation in sport, but only for men.

Caution is required when considering this result, since it can be interpreted in a number of ways. It is possible that, rather than reflecting the impact of being in a partnership on the likelihood playing sport, the finding reflects the influence of playing sport on the likelihood of being in a partnership. Alternatively, Figure 6 (right) can be read as implying that the gender gap in

participation effectively vanishes among single people. The result may therefore be better interpreted as evidence that remaining single reduces the likelihood of participation among men. One possibility, then, is that the finding implies a degree of social isolation among single men in Mayo-Sligo. Note that this relationship between marital status and playing sport does not apply countrywide.

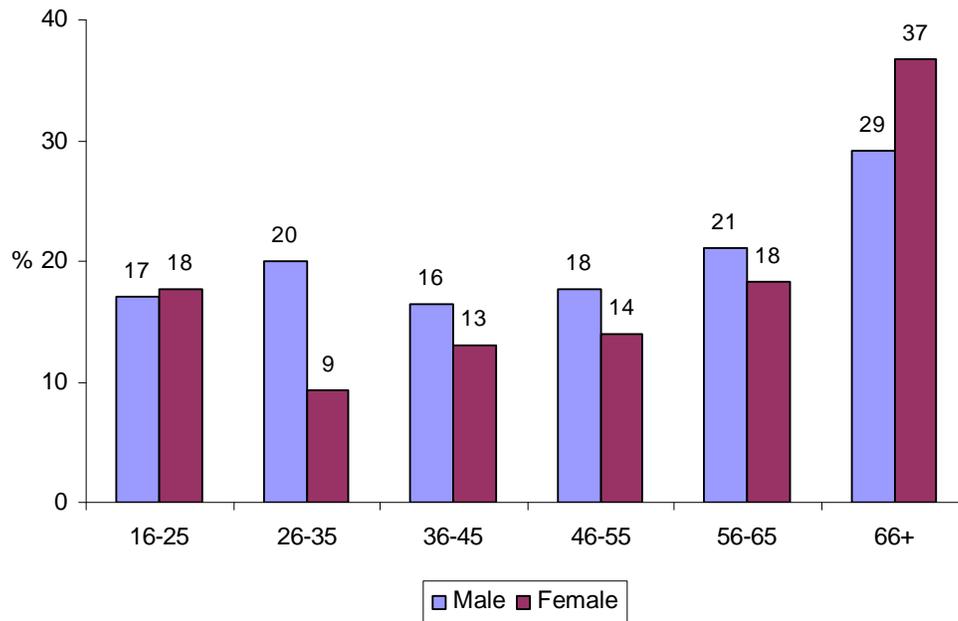
Before moving on, it is worth reiterating what the analysis in this section suggests about the gender gap. There is no straightforward yet representative way to quantify the greater overall likelihood that men play sport, because the extent of the gender gap in participation varies greatly for different sections of society, not only with age but also with other aspects of the life-cycle. The statistical model confirms that gender interacts with both age and marital status, such that the gender gap in sport is very small, perhaps even non-existent, among older single people, but much larger among young married people.

2.5 SEDENTARISM

Complete physical inactivity carries particular risks to health. An analysis of which social groups are most likely to be sedentary in Mayo-Sligo 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 (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 sport and physical activity policy.

Figure 7 gives rates of sedentarism by age and gender. The pattern indicates a U-shaped relationship with age, which is confirmed as statistically significant using a multivariate statistical model. Overall, women are marginally less likely to be sedentary than men, but the gender difference is not statistically significant. The implication is that while men are more likely than women to engage in sport, those men who do not participate are more likely to do no physical activity at all. In terms of the likelihood of being totally inactive, women make up for their lower participation in sport by being more likely to walk regularly, for both exercise and transport.

Figure 7: Sedentarism by age and gender



The multivariate analysis also reveals that sedentarism is more likely among individuals with lower educational attainment, people with a disability (or long-term health problem) that prevents them from taking part in sport or exercise, and those living in more isolated areas (villages or isolated locations rather than towns). This last finding may well be related to the extent of car dependency in more rural locations, although there is no way to test this directly with the available data.

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 8% of adults volunteered for sport during the previous week, 26% are members of a club and 16% had attended a sporting fixture. Given the demographic profile of the area, these proportions are in line with the equivalent national figures.

3. POLICY IMPLICATIONS

With respect to participation in sport, Mayo-Sligo has much in common with the rest of the country. Socio-economic status, gender and (to a lesser extent) age are the biggest influences on participation. There are many potential policy responses to these 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.irishsports council.ie and www.esri.ie). This final section, therefore, offers an indicative rather than exhaustive examination of policy implications. We focus on three findings that may be of relevance in Mayo-Sligo: drop-out from team sports, the strength of socio-economic factors, and the importance of social connectedness.

The large majority of sport played by adults in Mayo-Sligo consists of individual rather than team activities, with the latter very highly concentrated among young males, most of whom drop out by their mid-thirties. This age and gender pattern has implications for the effectiveness of policies primarily based on promoting team games to young people. The impact of such policies on active participation in sport across all adults is likely to be limited, unless simultaneous efforts are made to encourage participation in other activities that people are likely to continue into middle age and beyond (e.g. swimming, personal exercise, etc.). Policy might do more to reduce drop-out from team sports (e.g. improving links between school, college and club teams), but the data imply that policy effort also needs to focus on promoting individual activities. That said, the social capital that surrounds team sports offers an opportunity to engage with many non-playing club members and former players. For instance, soccer or GAA clubs might also host alternative sport and exercise activities for older members (e.g. walking clubs, golf societies, fitness classes) that could both increase physical activity and potentially strengthen the club.

The relationship between socio-economic status and playing sport in Mayo-Sligo is especially strong. It is worth emphasising, therefore, that the results imply both a greater need and a greater potential for increasing participation among lower socio-economic groups. There is a strong case for ensuring that members of these groups are the primary target for sports policy in the area, and that the design and marketing of participation programmes reflects this.

Finally, the link between marital status and male participation is consistent with other evidence that points to the importance of social connectedness in the context of sports policy. While the primary justification for public funding of sport is to improve health, the social capital that sport offers is also a relevant consideration. It is a natural (and probably effective) strategy to try to use existing social networks to promote sport, but there is a need also to reach out beyond them. The popularity of sport means that it has the potential to reduce social isolation. This may be particularly true in areas of low residential density, where people live, and perhaps work, in isolated locations.