PHYSICAL ACTIVITY, AGEING AND HEALTH

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Centre for Ageing Research and Development in Ireland

RESEARCH BRIEF

Research Briefing paper
This research briefing paper represents the findings from a project funded under CARDI's 2013 data-mining funding programme. The paper includes key findings by the funded research team and additional information collated by CARDI. The full report can be downloaded from www.CARDI.ie

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Physical activity, ageing and health

Promoting physical activity has been identified as a key public health strategy to improve good health in advanced age. As the population in the Republic of Ireland (ROI) and Northern Ireland (NI) is ageing, it is important to understand the relationship between physical activity and the physical and mental well-being of older people.

As part of its data mining programme, CARDI funded the Stay Active study, a research project led by Dr. Elaine Murtagh of Mary Immaculate College, University of Limerick (Murtagh et al., 2014). It examined the relationship between physical activity participation and health status in older adults in Ireland, North and South using five sources:

- The Irish Longitudinal Study on Ageing (TILDA) 2011
- The Survey of Lifestyles, Attitudes and Nutrition in Ireland (SLAN) 2007
- The Irish Sports Monitor 2011
- Health Survey Northern Ireland (HSNI) 2010/11
- The Northern Ireland Sport and Physical Activity Survey 2009/10

This research brief presents a summary of the main findings from the research and other information collated by CARDI.

Key Findings

- Physical activity declines with age: adults aged 75+ years are on average 2.5 times more likely than 60-64 year olds to be insufficiently active (Murtagh et al., 2014).
- Levels of physical activity are lower among older adults in NI than in ROI – 37% of 60-64 year olds were sufficiently active in ROI compared to 22% in NI. 18% of those aged 75+ engage in recommended levels in ROI compared to 7% in NI (Murtagh et al., 2014).
- 32% of older adults in ROI reported participation in sport in the previous seven days compared to a 24% participation rate in NI. Participation was 50% lower in the 75+ age group compared to the 60-64 age group in the NI Sport and Physical Activity Survey (Sport NI / Department of Culture, Arts & Leisure, 2010) but remained relatively consistent across all age groups in ROI (Murtagh et al., 2014).
- Women are on average 75% less likely to be sufficiently active than men (Murtagh et al., 2014).
- Older people who walk outdoors at least four times weekly for at least 15 minutes per walk have an approximately 50% lower risk of mortality in comparison to older people who walk less frequently (Fortes, et al., 2013).
- Older adults who do stay active cite participation in sports such as cycling, swimming, golf, aerobics, dance and jogging as their preferred exercise, so it is important that a transition from team to individual sports is available for middle-aged to older adults (Murtagh et al., 2014).

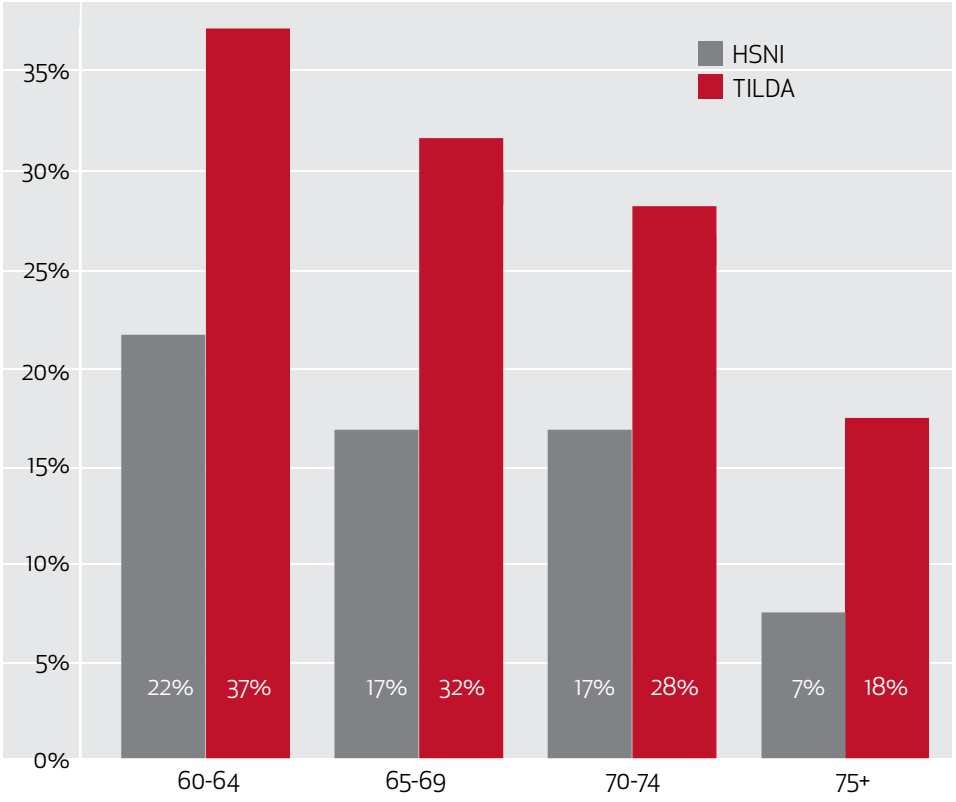
Levels of physical activity

The National Guidelines on Physical Activity for ROI recommend that older adults should engage in 150 minutes of moderately intense activity each week to achieve both physical and cognitive health benefits (Department of Health and Children / Health Service Executive, 2009). The analysis conducted by Murtagh et al. shows that only a minority of older adults in ROI and NI achieve current guidelines. This finding is similar in other countries, where levels of physical activity have been found to decline with age, particularly among women (Hamrik et al., 2013). Adults aged 75+ were 1.5 to 3.4 times more likely than 60-64 year olds to be insufficiently active and thus not meet physical activity guidelines, indicating that physical activity levels decline with age. There was a similar finding for walking, with self-reported walking decreasing with age, particularly among those aged 75 years or more (Murtagh et al., 2014).

Levels of physical activity are lower among older adults in NI than in ROI. While 37% of those aged 60-64 in ROI engage in sufficient physical activity, only 22% do so among the same age group in NI. Among 65-69 year olds, 32% in ROI engage in sufficient physical activity compared to 17% in NI. For the over 75s, just 7% engage in high levels of physical activity in NI, compared to 18% in ROI. Figure 1 below shows levels of physical activity by age group in ROI and NI.

Figure 1: Age comparison of proportion meeting physical activity guidelines

TILDA (2011) / Health Survey Northern Ireland (2010/11)



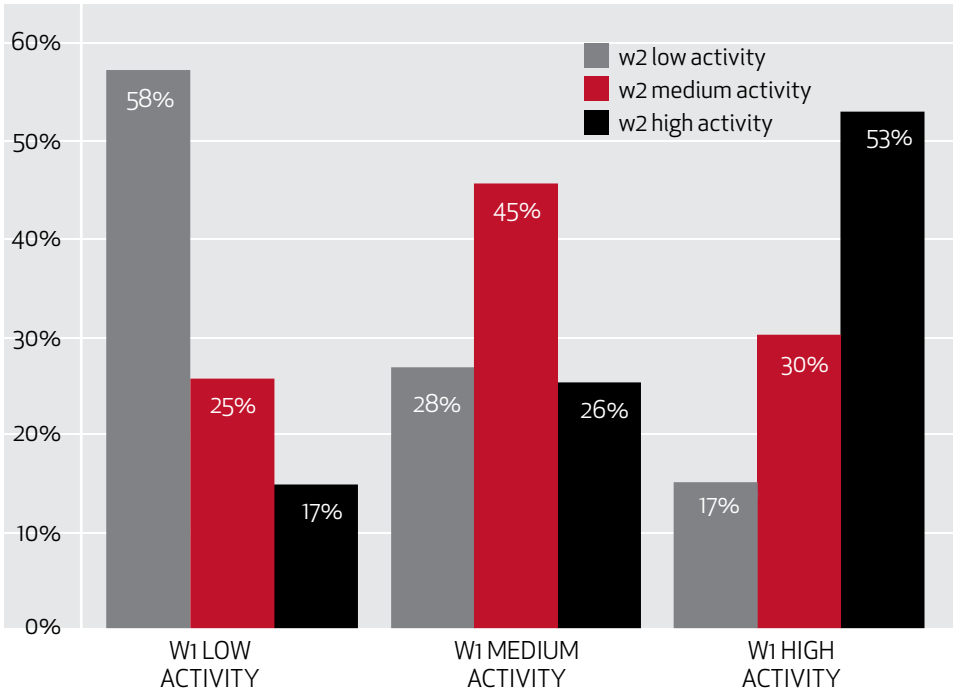
1. Findings must be interpreted with caution because many indicators are not directly comparable between NI and ROI. Questions may have been worded differently; or figures may be aggregated from a number of indicators; or survey methods or times may have been different.

Sports participation is one domain where older adults can be physically active. Some interesting differences were discovered between older adults in ROI and NI when it comes to participation in sporting activities. Just under one third (32%) of older adults in ROI reported participation in sport in the previous seven days compared to 24% in NI. Participation was 50% lower in the 75+ age group compared to the 60-64 age group in NI but remained relatively consistent across all age groups in ROI. Participation rates were notably higher among older adults aged 65+ in ROI compared to their counterparts in NI, while the mean time spent playing sport per week was also higher in ROI. Older adults are more likely to take part in individual sports rather than team sports common among younger age groups.

Murtagh et al. looked at the correlates of physical activity participation to determine what factors influence low levels of physical activity. Women reported lower levels of physical activity across all ages. Data from SLAN, TILDA and HSNI indicated that women were between 1.5 and 2 times as likely to be insufficiently active than men. The findings also show that participation in physical activity declines with age.

TILDA wave 2 results enabled the analysis of physical activity levels among older adults compared with wave 1 approximately two years earlier. 53% of older adults maintained high levels of physical activity across waves, with 17% of adults who reported high activity levels at wave 1 transitioning to low activity levels by wave 2. Of those who reported low activity levels at wave 1, 25% transitioned to medium activity levels by wave 2 and a further 17% transitioned to high activity levels. Figure 2 shows the levels of activity in wave 2 for each category of response from wave 1.

Figure 2: Levels of physical activity in TILDA Wave 2 **TILDA, 2014**



Older age groups were much more likely to reduce their levels of physical activity between waves. 29% of those in the 75+ age group transitioned to low activity between waves, compared to only 14% of those aged 50-64. Over time, more women reduced their level of physical activity than men. 31% of women previously reporting medium activity levels and 23% reporting high activity at wave 1 report low activity levels at wave 2, compared to 25% and 14% of men respectively (TILDA, 2014).

Physical activity and health

Murtagh et al. (2014) found that survey respondents who had poor perceptions of their health and ability to be active were much less likely to meet physical activity guidelines than those who had more favourable perceptions about their health. Older adults who reported meeting the physical activity guidelines had significantly lower BMI and waist circumference and were less likely to be obese.

Levels of walking decrease with age in both ROI and NI. In ROI, adults aged 60-64 reported walking 341 minutes per week, compared to 223 minutes for adults aged 75+ (TILDA, 2011). In NI, adults aged 60-64 reported walking 109 minutes per week, compared to 45 minutes for those aged 75+ (DHSSPS, 2011). Individuals who reported walking at higher intensity are less likely to be overweight or obese. For example in NI, 25% of older adults who reported walking only at a light intensity were obese, compared to just 11% who reported moderate-vigorous intensity walking (Murtagh et al., 2014).

A ten-year cohort study has shown that increased volume of walking is highly beneficial for functionality and older people walking outdoors four times weekly or more for at least 15 minutes each walk benefit from almost half the risk of mortality in comparison to old people walking less than that amount (Fortes, et al., 2013).

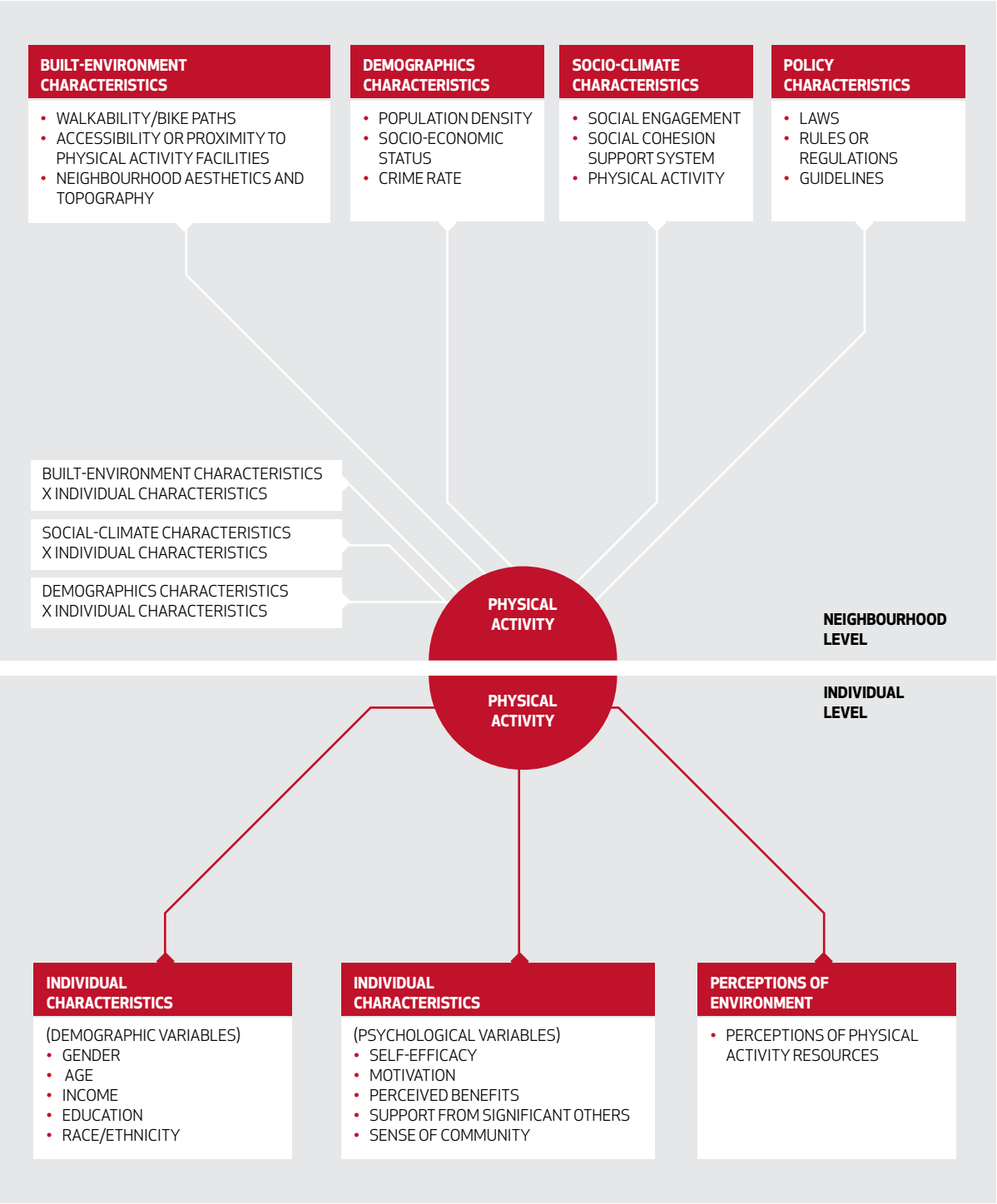
Why do levels of physical activity decline?

Older people are among the groups who can benefit most from physical activity, yet levels decline with age. There are several reasons for this. Barriers to Sports and Physical Activity Participation, a NI Assembly research paper, indicates that barriers to older age groups participating in physical activity include self-perception that they are not capable, safety concerns and lack of access to activities specifically designed for them (NI Assembly, 2010).

A study of older people in Scotland showed that almost all participants (95%) believed that physical activity was beneficial. Yet 36% did no leisure time physical activity. Lack of interest was found to be the most important deterrent to older people participating in physical activity. Other factors included lack of daily access to a car, shortness of breath, joint pain, dislike of going out alone or in the evening, perceived lack of fitness, lack of energy, doubting that exercise can lengthen life, not belonging to a group and doubting that meeting new people is beneficial (Crombie, et al., 2004).

Research by Li and Fisher (2005) shows that the factors affecting participation in physical activity among older people are complex, interacting and wide-reaching. Figure 3 on the next page shows the neighbourhood level and individual level factors that influence participation in physical activity among older people.

Figure 3: Factors affecting participation in physical activity among older people — Li & Fisher, 2005



Policy implications

The research and analysis conducted by Murtagh et al. (2014) highlights the low levels of physical activity among older adults in Ireland, North and South. It shows that levels of physical activity decline with age, and that women have lower levels of activity than men of the same age. As a result, interventions focusing on significantly maintaining physical activity with advancing age and targeting older women may be useful in Ireland, North and South.

The high proportion of older adults who reported walking in all five surveys highlights the importance of this as a source of physical activity and suggests that the promotion of walking in this group may help increase their physical activity. A 2009 review by researchers from Oxford University shows that adherence to new physical activity regimes is poor (Foster, Hillsdon, & Thorogood, 2009). Thus policymakers should consider public health campaigns and promotions which aim to increase the volume of existing activities such as walking rather than promoting novel fitness regimes or programmes. Evidence suggests that access to aesthetically pleasing public open spaces is conducive to higher rates of walking, implying that health gains can be achieved by providing access to such environments (Giles-Corti, et al., 2005).

Older adults are more likely to take part in individual exercise rather than team sports which are more common among younger age groups. It is important that older adults have opportunities to stay active in a sporting context. Older adults who do stay active cite participation in sports such as cycling, swimming, golf, aerobics, dance and jogging as their preferred exercise, so it is important that a transition from team to individual sports is available for middle-aged to older adults (Murtagh et al., 2014).

Policy in NI

The overall aim of the first NI Physical Activity Strategy, *Be Active – Be Healthy* 1996- 2002, was to increase levels of health-related physical activity, particularly among those who exercise least (DHSSPS, 1996). The cross-departmental public health strategy *Investing for Health*, was published in March 2002 and it identifies physical activity as a key determinant of good health (DHSSPS, 2002).

Fit & Well is a 10 year public health strategic framework for NI published in 2012. It notes the deterioration in levels of physical activity among older people. The framework notes that engaging in physical activity later in life is one factor that can prevent disease and functional decline, extend longevity and enhance quality of life. Under the framework, a targeted outcome for 2012-2015 is for an increased proportion of older people to meet physical activity guidelines (DHSSPS, 2012). Sport NI has identified older people as a priority group for increasing participation rates in the NI sports strategy 2009-2019 (Department of Culture, Arts and Leisure / Sport NI, 2009).

The NI *Active Ageing Strategy* 2014-2020 was published for consultation in February 2014. A home safety assessment scheme is planned which will make the home safer for older people. As part of this project, an increase in levels of physical activity is to be a targeted outcome (OFMDFM, 2014). One of the strategic aims of the strategy under consultation is to "promote education, training, leisure and arts opportunities which will support the development of life skills, positive mental, emotional and physical health and well-being" (OFMDFM, 2014).

Policy in ROI

The second national goal of the ROI *Positive Ageing Strategy* is to "Support people as they age to maintain or improve their physical and mental health and wellbeing". Promoting physical activity is designated as an area for action in the strategy, under the aegis of the Department of Health and Health Service Executive (Department of Health, 2013).

Healthy Ireland, the framework for improving the health of the ROI population has a target of increasing by 20% the proportion of the population undertaking regular physical activity, to be achieved by 2025 (Department of Health, 2013). A *National Grant Scheme for Sport and Physical Activity for Older People* encourages older members of the community to participate in sport and physical activity while *Go for Life* is an Age & Opportunity initiative, funded by the Irish Sports Council and run in co-operation with the Health Service Executive. It is a national programme for promoting physical activity in the older population (Citizens Information, 2014).

The *Green Prescription* is an innovative, community-based physical activity programme piloted in Donegal in 2011 and 2012. Health workers refer people to a programme involving four weeks of indoor gentle exercise training and then eight weeks of participating in volunteer-led community walks. An evaluation showed that participants recorded health benefits, included increased mental well-being. The referral by a health professional was cited as a reason for uptake in the programme by participants (Stirrat, McCallion & Youell, 2013).

Conclusion

Murtagh et al. (2014) show that older people in Ireland, North and South are not engaging in enough physical activity to help maintain and improve their health and well-being. Physical activity levels decline with age and women are less likely than men to be getting enough exercise. Given the impact physical activity has on health and wellbeing, it is important to promote physical activity, particularly walking, to groups with low current levels, especially those aged 75+ and older women. Older people are one of the groups with low levels of physical activity, yet can also benefit most from that activity (Morgan et al.,2011).

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