



This is a repository copy of *Reaching beyond the 'worried well': pre-adoption characteristics of participants in 'Men on the Move', a community-based physical activity programme.*

White Rose Research Online URL for this paper:
<https://eprints.whiterose.ac.uk/142217/>

Version: Accepted Version

Article:

Kelly, L., Harrison, M., Richardson, N. et al. (4 more authors) (2019) Reaching beyond the 'worried well': pre-adoption characteristics of participants in 'Men on the Move', a community-based physical activity programme. *Journal of Public Health*, 41 (2). e192-e202. ISSN 1741-3842

<https://doi.org/10.1093/pubmed/fdy134>

This is a pre-copyedited, author-produced version of an article accepted for publication in *Journal of Public Health* following peer review. The version of record Liam Kelly, Michael Harrison, Noel Richardson, Paula Carroll, Steve Robertson, Aisling Keohane, Alex Donohoe; Reaching beyond the 'worried well': pre-adoption characteristics of participants in 'Men on the Move', a community-based physical activity programme, *Journal of Public Health* is available online at: <https://doi.org/10.1093/pubmed/fdy134>

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Title: Reaching beyond the ‘worried well’: Pre-adoption characteristics of participants in ‘Men on the Move’, a community-based physical activity programme.

Authors: Liam Kelly¹, Michael Harrison², Noel Richardson¹, Paula Carroll², Steve Robertson³, Aisling Keohane², Alex Donohoe²

Affiliations: ¹ National Centre for Men’s Health, Institute of Technology Carlow, Ireland, R93 V960.

² Centre for Health Behaviour Research, Waterford Institute of Technology, Ireland.

³ Leeds Beckett University, City Campus, Leeds, United Kingdom, LS1 3HE.

Emails: Liam Kelly; Liam.Kelly@itcarlow.ie
Dr Michael Harrison; MHarrison@wit.ie
Dr Noel Richardson; Noel.Richardson@itcarlow.ie
Dr Paula Carroll; PCarroll@wit.ie
Prof Steve Robertson; s.s.robertson@leedsbeckett.ac.uk
Aisling Keohane; Aisling.Keohane@postgrad.wit.ie
Alex Donohoe; ADonohoe@wit.ie

Corresponding Author: Michael Harrison

Key Words: Men’s Health, Gender Sensitised, Community, Physical Activity

Abstract (200 Words)

Background; Issues surrounding gender and men's health have become an increasing focus of public health globally. Unhealthy lifestyles and lower engagement in health promotion initiatives contributed to lower life expectancy and higher mortality rates among men. This study presents the pre-adoption characteristics of men who registered for 'Men on the Move' - a community-based physical activity (CBPA) programme, to ascertain whether the programme reached its intended target group, i.e. 'at-risk' adult men who did not meet physical activity (PA) guidelines and were likely to have multiple risk factors for cardiovascular disease (CVD). **Methods;** Multiple recruitment strategies were adopted to engage the target group and baseline data collection included a range of demographic, self-report and outcome measures. **Results;** The recruitment strategy succeeded in reaching the target group, with the majority (n=927) presenting being previously inactive (89.0%), overweight/obese (89.7%) and having multiple CVD risk factors (53.1% \geq 2 risk factors). However, the strategy was less successful in engaging 'hard-to-reach' groups, with the majority being middle-aged, white, married/cohabiting, educated and employed. **Conclusions;** A gender-sensitised, partnership and community outreach recruitment strategy can maximise the reach and recruitment of an 'at-risk' cohort for CBPA initiatives, but more targeted approaches are needed to recruit marginalised groups of men.

Introduction:

Within Ireland, and indeed globally, issues surrounding gender and men's health have become an increasing focus of public health¹⁻³. Whilst advancements in medical care and the treatment of chronic diseases are contributing to overall increases in life expectancy⁴, significant disparities in health outcomes between the sexes remain. Contributing to lower life expectancy and higher rates of mortality among men are unhealthy lifestyles and lower engagement in preventative health or health promotion initiatives^{1,5,6}. Modifiable health behaviours such as diet, exercise, substance use, use of social supports and safety practices have been identified as important 'lifestyle contributors' to health⁷. Physical activity (PA) is a prophylactic to many chronic conditions associated with obesity and sedentary behaviour^{8,9}. Given the low prevalence rates of PA, particularly among older and lower socio-economic groups^{10,11}, it is imperative that interventions effectively promote the adoption and maintenance of active lifestyles within communities to those 'at-risk' population groups (i.e. men who are least active and have multiple cardiovascular disease (CVD) risk factors)¹² and that these are monitored in terms of effectiveness and reach¹³.

It has been well documented that whilst males may be more vulnerable to certain diseases and illnesses than females¹⁴, such differences fail to account for more than a small proportion of overall sex differences in health outcomes and for any of the differences in health outcomes between different male population groups⁶. The intersection of gender with other aspects of identity draws into focus those sub-populations of men for whom health outcomes are significantly worse than the general male population. There is a well-established social gradient in mortality¹⁵ that has, within an Irish context, widened between the 1980s and 2000s, with a greater widening of the gap being evident among men¹⁶. This has drawn attention in Ireland on disparities in health outcomes among so-called 'hard-to-reach'¹⁷ population groups of men (i.e. lower socioeconomic and marginalised groups), and has important implications in terms of the targeting of health interventions to those most in need.

In practice, however, creating the right interventions in the right environments that can support men to change health practices has proved difficult¹. Men's 'unwillingness' to engage in health promotion programmes also reflects a failure to account for gender as a key driver of health behaviours, including the need for gender-specific approaches to effectively engage men¹⁸⁻²⁰. Gender-specific strategies related to community-engagement, programme

development and delivery, partnerships and capacity-building, are necessary in creating sustainable health promotion activities that appeal to men – both ‘at-risk’ and ‘hard-to-reach’ population groups of men ^{19,21,22}.

‘Men on the Move’ (MOM) is a gender-specific and community-based physical activity (CBPA) programme for adult, inactive men in Ireland – a cohort who are likely to be more ‘at-risk’ of CVD. The primary focus of this paper is to present the pre-adoption characteristics of men who registered for the MOM programme; to ascertain whether the programme reached those for whom it was intended, i.e. ‘at-risk’ adult men who did not meet PA guidelines and were likely to have multiple risk factors for CVD. A secondary consideration was to establish whether the programme succeeded in engaging ‘hard-to-reach’ men, such as lower socio-economic or marginalised groups of men.

Methods

Ethical approval was obtained from Waterford Institute of Technology ethics committee [15/Dept-HSES/13]. This study has been registered with the ‘International Standard Randomised-Controlled Trial Number’ registry [ISRCTN55654777]. For details of full study protocol, refer to Carroll et al (2018) ²³. Written informed consent was provided by all study participants.

The Men on the Move Programme

In brief, MOM is a free 12-week community-based ‘beginners’ PA programme for inactive adult men. The programme design was informed by evaluating a pilot programme, reflective practice and reviewing effective practice elsewhere ²⁴⁻²⁷. Men were recruited across 8 counties in Ireland by Local Sports Partnerships (LSPs – recreational sport providers) who coordinated and delivered the programme locally.

The Recruitment Strategy

A flexible recruitment strategy model was designed to reach beyond the ‘worried well’ ²⁸ and involved the input of multiple service providers. LSP co-ordinators partnered a variety of community organisations that hosted the MoM programme. In total, 13 sports clubs (9 Gaelic, 3 soccer, 1 rugby), 8 community sports facilities, 8 family resource/community centres, and 1

local men's shed were used as host venues. In some instances, local health promotion and primary care services providers supported the recruitment strategy and programme delivery.

The recruitment strategies used were diverse and consistently used imagery of 'real men' to whom the target group could relate and language that was gender sensitised and health literacy proofed (see Figure I). Recruitment strategies included; (i) In-person text and email invitations via existing databases (including women's groups as 'gatekeepers' to healthcare for men), using messages consistent with the branded materials produced e.g. that the programme was for inactive men who wanted to become active, free, for men only and locally based. Notably, General Data Protection Regulations (GDPR) did not apply given the timing of recruitment; (ii) advertising using branded materials on service websites and social media; (iii) a local media campaign that involved a local press release targeted at both the local and regional print and radio media. Air time was typically given to promote the programme, and; (iv) GP referral. Men who expressed an interest were invited to a formal registration evening one week before the programme began. All men measured at registration were provided with a MOM health information booklet that included information on PA, diet, stress management, a PA log book and contact numbers for potential referral options.

The recruitment strategy and programme itself, including the initial registration evening, were also gender-sensitised in relation to approach (using PA as 'a hook'), context (e.g. men only groups, community based settings that appealed to men), and adopted strengths-based approaches based on creating safety, trust, rapport, and meaningful relationships with men^{18,24,29,30}. All staff involved in MOM attended men's health training (ENGAGE) focused on developing gender competency in the provision of health services for men³⁰. The format of the registration evenings was standardised across sites. The LSP Co-ordinator and local service providers were present to welcome the men, before a local medical professional spoke to the group about the benefits of PA. The men were then invited to have their baseline assessments completed, as well as providing self-reported outcomes via self-administered questionnaires. Men were individually and privately provided with details of their recorded measurements. At the end of the registration evening, service providers sought out opportunities to speak to all of the men in person over tea/coffee.

The Participants

Men were eligible for inclusion in the study if they were aged at least 18 years, did not meet the recommended PA guidelines, completed the PA readiness questionnaire (PAR-Q) and provided written consent.

Data Collection

Participants were assessed at baseline and outcome measures included height, weight, body mass index (BMI), waist circumference (WC) and time-to-complete one mile. In the context of this study (a CBPA programme), BMI and WC were the preferred methods of measuring and classifying an individual's weight as both are universal, replicable, cost-effective, and easy to administer methods of measurement suitable for community-based health assessments. Self-administered questionnaires were used to gather data on participant demographics (date of birth, ethnic origin, educational attainment, relationship status, housing and employment status), self-reported outcomes (PA, consumption of fruit and vegetables, smoking, consumption of alcohol, use of primary care services and prescription medicine, perception of health, mental well-being and social integration), and how participants had heard about the programme.

Data Analysis

Questionnaire data were computed in accordance with defined protocols ¹. All data were checked for normality and presented as mean±SD or median (IQR) accordingly. Frequency data is also presented. Inferential statistical analysis was undertaken using SPSS version 22.0 (Chicago, Illinois, USA).

Results:

The results presented report on the effectiveness of the recruitment strategy for the programme, and present data for the men who were assessed at registration. The efficacy of the intervention will be presented in a follow-up manuscript.

In total, 927 men completed the MOM baseline assessments across 25 community sites. The profile of participants (Table I) was that of a middle aged (50.7±10.9 yr), predominantly white (97.7%), married/cohabiting (77.6%), in full-time work (64.8%) population, with almost half (47.7%) having completed third level education. These characteristics are indicative of the

general population in Ireland ³¹. The vast majority (81.6%) were aged between 40–70 years of age.

Table II reports baseline self-reported health status and lifestyle characteristics. A small minority (5.2%) reported their health as poor. Approximately a third reported a health problem (34.9%) and having visited a GP in the past 12 weeks (32.9%). The most common reported health problems were BP, overweight/obesity, diabetes, cholesterol and asthma. Almost half (47.4%) reported taking prescription medication in the previous 12 weeks, with 16.5% reporting doing so for chronic conditions (8.9% BP; 7.6% cholesterol). Over half (54.5%) reported hearing about the programme through word of mouth (31.2%) or newspaper/media/social media (23.3%) with just 5.8% (n=53) hearing about the programme through health services.

Baseline health indicators show that the programme was attended by predominantly overweight/obese men (Table III). Mean measurements for BMI and WC were 30.2 ± 4.9 (n=926) and 105.1 ± 13.0 (n=918) respectively. Overall, 45.5% of men were in the 'obese' BMI categories (31.6% class 1, 9.5% class 2, 4.4% class 3), with an additional 44.2% classified as 'overweight'. Only 10.2% of men were in the normal BMI category. Waist circumference results placed 54.5% (n=500) and 29.4% (n=270) in the 'high-risk' and 'increased-risk' categories respectively for metabolic complications ^{32,33}. Just one in six (16.1%) were within the 'healthy' WC range. The mean time-to-complete 1 mile was 13.27 ± 3.54 min:dec-min, range 6:17–30:77 min:dec-min. Aerobic fitness was estimated ³⁴ and the mean VO_{2max} (ml/kg/min) was 21.21 ± 7.45 ml/kg/min (range 5.62–46.91), which corresponds to a 6.06 ± 2.13 METS (1.60–13.40) approximation. Baseline ACSM age-standardised fitness levels ³⁵ placed the majority (89.0%, n=709) in the 'poor' category (expressed in VO_{2max} ; ml/kg/min). The vast majority (84.0%, n=755) did not meet National PA Guidelines criteria; at least 30 mins on 5 or more days per week ³⁶. Similarly, 84.1% (n=765) did not meet recommended daily consumption of 5 or more portions of fruit and vegetables, whilst 13.3% (n=122) were current smokers (with 37.2% reporting as former smokers).

Based on international guidelines ³⁷, six self-reported modifiable CVD risk factors were identified; 'inactive (<3 days PA per week)', 'obese' (WC >102cm), 'current smoker', 'excess alcohol consumption' (>14 units per week), 'on BP medication', 'on cholesterol medication'. Data were analysed to establish incidence and prevalence of CV risk factors (Table IV). Age

was considered, but as a non-modifiable risk factor was not included. Over half were found to be 'at-risk' by being 'inactive' (59.2%) and/or 'obese' (57.3%). Some 19.5% were 'at-risk' based on 'excess alcohol consumption'. Approximately one in ten were 'at-risk' by being current smokers (13.3%), on blood pressure (8.9%) or on cholesterol (7.6%) medication. The vast majority (85.5%) presented with at least one risk factor, whilst over half (53.1%) had two or more risk factors (Table IV).

The dataset was examined to determine if level of educational attainment, marital status, home status or employment influenced any CVD risk factor. Men with a third level education had a higher level of fitness compared to those who did not (METs; Primary or Secondary Education = 5.7, Third Level Education = 6.4, $p < 0.001$), men who lived alone had a lower level of fitness (METs; Living Alone = 5.4, Living with others = 6.2, $p = 0.002$). These socio-demographic factors did not influence any other risk factor.

Discussion

Main findings of this study / What is already known on this topic

The aim of this paper was to outline the pre-adoption characteristics of men who registered for a CBPA programme ('MOM') in Ireland. A key priority was to recruit 'at-risk' men who did not meet national PA guidelines³⁶ and were likely to have multiple risk factors for CVD. The programme succeeded in reaching its main target population, with 84.0% not achieving 30 mins or more of PA on at least 5 days per week – a figure far greater than the 66% reported among the adult male population in Ireland³⁸. Not surprisingly, the physical fitness level of the vast majority of men in this study (89.0%) was classified as 'poor'. The absence of the prophylactic effect that being sufficiently active offers^{9,39} coupled with their poor fitness levels, exposes these men to increased risk of adverse health outcomes including all-cause mortality⁸, CVD⁸, diabetes⁴⁰, cancer⁴¹, and dementia⁴².

The proportion of 'normal' weight men (10.2%) was considerably less than the national average for adult males (31%)⁴³, while the proportion in the 'at-risk' categories for BMI (45.5% 'obese') and WC (54.5% 'high risk') is a cause for considerable concern. Men are more likely to accumulate adipose tissue in the trunk/abdomen⁴⁴, with central

adiposity/abdominal obesity now considered more important than overall obesity in the evaluation of CVD and coronary heart disease risk ^{45,46}. Indeed, a waist-reduction of 5-10cm can result in improvements in several CVD risk factors ⁴⁷, and reaffirms the relevance of recruiting this 'at-risk' cohort in a PA programme.

Results show that 80.5% consumed alcohol which is in-line with national figures for adult males, (79%) ⁴⁸, while 9.1% reported that they drank 17 or more units per occasion, which is considerably lower than the national average of 33% reported for adult males ⁴⁹. Notably, the comparatively low proportion of current smokers (13.3% v 21.6% national average for males ⁵⁰), might imply that smokers are less likely than non-smokers to self-select for a PA programme and that other strategies might be necessary to reach those men. Additionally, 47.4% of men who presented were on prescription medication (19.6% for chronic conditions). It is well established that an increase in PA can reduce the prevalence of chronic diseases, such as hypertension and diabetes; thus reducing the reliance on prescription medication ⁵¹⁻⁵⁶.

Data from this study is in keeping with that reported elsewhere ⁵⁷ in terms of attracting men with high CVD risk, including key areas of risk such as PA, consumption of fruit and veg, smoking, weight, and alcohol consumption. Indeed, the majority of men recruited were 'at-risk' of CVD as evidenced by high BMI and WC results and low fitness and PA levels. In fact, some 53.1% of men who presented at baseline had two or more CVD risk factors, highlighting a paradox between how men rated their health and the health-indicators. Despite their largely unhealthy profile, almost two-thirds of participants (62.9%) rated their health as 'good'/'excellent' with only 5.2% reporting their health as 'poor'. This paradox is not unique to this study ^{57,58} and may be indicative of the need for an increased focus on health literacy being integrated into future public health interventions for men. Whilst it was noteworthy that two-thirds (67.1%) had not visited their GP in the 12 weeks prior to baseline, a distinction needs to be made between being 'at-risk' of ill-health versus suffering from ill-health - with a CBPA programme perhaps being a more appropriate place to address the former.

A secondary consideration was to establish whether the community-based outreach nature of the programme could succeed in engaging 'hard-to-reach' men. Disappointingly, this proved not to be the case, with the vast majority who presented being 'White Irish (97.7%)', in shared living accommodation (86.4%) and in a relationship (83.0%). The programme was

not successful therefore in reaching more marginalised groups, such as migrants, ethnic minority groups, or Travellers⁵⁹. Recruitment for future programmes should incorporate more specific and targeted strategies directed at these 'hard-to-reach' groups.

What this study adds

Findings clearly show that the gender-sensitised recruitment strategy (as described earlier) was effective in reaching an 'at-risk' group of men for whom this public health intervention was intended. The strategy also succeeded in reaching 'older' men (81.6% aged between 40–70 years), possibly due to the non-competitive nature of the programme. Although not modifiable, age is one of the most critical CVD risk factors. Indeed, any increase in PA, regardless of age, can help reduce the risk of CVD; particularly amongst those previously inactive.

The community-based partnership driven nature of this study, allied to the gender-sensitive approaches that were used, appear to have been successful in overcoming previously identified difficulties^{18–20} in engaging 'at-risk' men. The success of word-of mouth and newspaper/media/social media recruitment strategies is consistent with previous work by Robertson et al. (2013)²⁹. This highlights the importance of partnering with and anchoring recruitment strategies with local community groups to maximise the reach of community-based health promotion initiatives. However, MOM did not appeal to all men. Despite the gender-sensitive, partnership and community outreach recruitment strategies that were adopted, these were not enough to recruit more marginalised or 'hard-to-reach' groups of men.

Limitations of this study

One of the key strengths of the MOM programme was that it was delivered by LSPs as part of a unique partnership network under 'real world' conditions. However, this approach brings some limitations. Firstly, much of the data was self-reported, and while every effort was taken to ensure that a trained practitioner/research team member assisted with data collection, this was not always possible due to the large sample size. Secondly, all objective data were gathered by trained practitioners, but reliability was not assessed. To overcome this 'limitation', the complexity of the objective measures gathered were considered at the design stage to allow for ease of replication. Thirdly, baseline data collection took place on a specified

evening (up until the end of the second week) in each location which might not have suited all men interested in the programme. Fourthly, a high percentage of the baseline data collection took place in sports clubs which may not have appealed to men who do not identify with 'sport'.

Conclusion

Findings demonstrate that the recruitment strategy was highly effective in reaching the 'at-risk' group of men for whom it was intended, with the majority of men presenting as inactive, overweight/obese and having multiple CVD risk factors. This demonstrates that gender-specific programmes, such as MOM, can support service providers to effectively engage inactive men in public health interventions. Findings suggest that service providers can maximise the reach and recruitment of an 'at-risk' cohort for community-based health promotion initiatives through partnership-based and gender-sensitised recruitment strategies anchored within community groups. Results also highlight, however, that a one-size-fits-all recruitment strategy is not enough to reach more marginalised cohorts and that more targeted approaches are needed to engage 'hard-to-reach' groups of men.

Table 1; Participant Baseline Demographic Characteristics

Physical Measures	Mean±SD (N)
Age (years)	50.7±10.9 (916)
Height (m)	175.2±6.6 (927)
Weight (kg)	92.7±16.0 (927)
Age Year Bands (years)	% (N)
15 – 19	0.4 (4)
20 – 24	0.6 (5)
25 – 29	2.3 (21)
30 – 34	2.0 (18)
35 – 39	8.7 (80)
40 – 44	14.8 (136)
45 – 49	18.2 (167)
50 – 54	17.8 (163)
55 – 59	14.7 (135)
60 – 64	9.7 (89)
65 – 69	6.4 (59)
70 – 74	2.2 (20)
75 – 79	1.4 (13)
80 – 84	0.5 (5)
85 – 89	0.1 (1)
Ethnicity	% (N)
White ■	97.7 (887)
Other ■	2.3 (21)
Education Attainment	% (No)
Primary education only	9.6 (88)
Some or completed secondary education	42.7 (392)
Some or completed Third Level education	47.7 (438)
Marital Status	% (N)
Married/Cohabiting	77.6 (712)
Separated/Divorced	4.7 (43)
Widowed	2.0 (18)
Single	10.3 (95)
In a relationship	5.4 (50)
Housing Status	% (N)
Live Alone	13.4 (122)
Live with family/wife/partner	85.2 (776)
Live with friends	1.4 (13)
Employment Status	% (N)
Employed (full time)	46.9 (431)
Self-employed	17.9 (164)
Looking after home/family	2.1 (19)
Student	1.6 (15)
Unable to work due to long term illness/disability	3.6 (33)
Employed (part time)	8.2 (75)
Unemployed and looking for work	7.2 (66)
Retired from paid work	12.0 (110)
Volunteer	0.5 (5)
<i>Paid Employment Only</i>	
Time off work in last 12 weeks	15.0 (140)

Key: SD = Standard Deviation; N = number; m = metres; kg = kilograms; ■ White = Irish, Irish Traveller, Any other white background, Other = Any other African, Asian, black or mixed background.

Table II; Participant Baseline Self-reported Health Status and Lifestyle Factors

Health Status	% (N)
Excellent	4.8 (44)
Very Good	23.3 (213)
Good	34.8 (319)
Average	31.8 (291)
Poor	5.2 (48)
<hr/>	
Health Problems	% (N)
Yes	34.9 (326)
No	56.7 (530)
<hr/>	
Health Services (attended in the last 12 weeks)	% (N)
<hr/>	
General Practitioner	
Yes	32.9 (286)
No	67.1 (582)
<hr/>	
Physiotherapist	
Yes	12.1 (91)
No	87.9 (663)
<hr/>	
Other Health Related Services	
Yes	13.6 (103)
No	86.4 (656)
<hr/>	
Prescription Medication (in the last 12 weeks)	% (N)
Yes	47.4 (427)
No	52.6 (473)
<hr/>	
Active Participation in Groups	% (N)
Yes	53.0 (424)
No	45.4 (363)
Unknown	1.6 (13)
<hr/>	
How often do you attend religious services?	% (N)
Never or almost never	25.0 (199)
Once or twice a year	13.3 (106)
Every couple of months	13.9 (111)
Once or twice a month	14.9 (119)
Once a week	27 (215)
More than once a week	4.0 (32)
Unknown	1.9 (15)
<hr/>	
How participants found out about MoM	% (N)
Word of mouth	31.2 (286)
Referred	3.8 (35)
Health Professional	2.0 (18)
Local service club	16.2 (148)
Newspaper/Media/Social Media	23.3 (213)
Local Sports Partnership	10.3 (94)
Family	8.4 (77)
Other	4.9 (45)

Key: N = number

Table III; Participant Baseline Health Indicators

Physical Measures	Mean±SD (N) / Mean (IQR)
Weight (kg)	92.7±16.0 (927)
Waist Circumference (cm)	105.1±13.0 (918)
BMI (kg/m ²)	30.2±4.9 (926)
Time-to-complete 1 mile (min:dec)	13.3±3.5 (797)
VO _{2max} (ml/kg/min)	21.2±7.4 (797)
METS	6.1±2.1 (797)
Number of days Physical Activity per week totalling 30 minutes or more	3.0 (1.0 – 4.0)
Portions of Fruit and/or Vegetables consumed day prior to Health Check	4.0 (3.0 – 5.0)
Number of Cigarettes per day	15.0 (5.0 – 20.0)
Number of Alcohol Units consumed on average	9.0 (6.0 – 12.0)
Number of days per week Alcohol consumed	2.0 (1.0 – 3.0)
Waist Circumference (cm) (WHO, 2010)	% (N)
Healthy (<94cm)	16.1 (148)
Increased Risk (94 – 102cm)	29.4 (270)
High Risk (>102cm)	54.5 (500)
BMI (kg/m²) (WHO, 2010)	% (N)
Underweight (<18.50)	0.1 (1)
Normal (18.50 – 24.99)	10.2 (94)
Overweight (25.00 – 29.99)	44.2 (409)
Obese Class 1 (30.00 – 34.99)	31.6 (293)
Obese Class 2 (35.00 – 39.99)	9.5 (88)
Obese Class 3 (≥40.00)	4.4 (41)
Baseline level of fitness; Estimated VO_{2max} (ml/kg/min)	% (N)
Poor	89.0 (709)
Fair	5.0 (40)
Average	2.9 (23)
Good	1.5 (12)
Excellent	0.0 (0)
Other	1.6 (13)
Number of days Physical Activity per week totalling 30 minutes or more	% (N)
Never	25.7 (231)
1 Day	17.5 (157)
2 Days	15.9 (143)
3 Days	17.2 (155)
4 Days	7.7 (69)
5 Days	5.9 (53)
6 Days	2.8 (25)
7 Days	7.2 (65)
Portions of Fruit and/or Vegetables consumed day prior to Health Check	% (N)
None	5.9 (54)
1	12.2 (111)
2	22.4 (204)
3	25.2 (229)
4	18.4 (167)
5	9.6 (87)
6	3.5 (32)
7+	2.8 (25)
Smoking Status	% (N)
Never Smoked	49.5 (454)
Former Smoker	37.2 (341)
Current Smoker	13.3 (122)
<i>If current smoker, how many per day?</i>	
1-10 cigarettes per day	11.9 (54)
11-20 cigarettes per day	12.1 (56)
20+ cigarettes per day	2.7 (12)
Weekly Alcohol Consumption	% (N)
Yes	80.5 (737)

No	19.5 (179)
<i>Number of days per week alcohol consumed?</i>	
0	2.0 (13)
1	45.2 (298)
2	26.7 (176)
3	15.6 (103)
4	4.1 (27)
5	3.2 (21)
6	1.1 (7)
7	2.1 (14)

Key: SD = Standard Deviation; N = number; kg = kilograms; cm = centimetres; BMI = Body Mass Index; m² = metres squared; yrs = years; ACSM = American College of Sports Medicine; VO_{2max} = maximal oxygen consumption; ml/kg/min = millilitres per kilogram per minute. BMI & WC based on World Health Organisation Classifications ³³

Table IV; Most prevalent modifiable cardiovascular disease risk factors presented at baseline

Risk Factor	% (N)
<3 Days Physical Activity	59.2 (532)
Waist Circumference >102cm	57.3 (526)
Alcohol Consumption \geq 14 Units (Europe)	19.5 (141)
Alcohol Consumption \geq 17 Units (Ireland)	9.1 (66)
Current Smoker	13.3 (122)
Blood Pressure Medication	8.9 (83)
Cholesterol Medication	7.6 (71)
Prevalence of Risk Factors	% (N)
Zero Risk Factors	14.5 (135)
1 Risk Factor	32.4 (303)
2 Risk Factors	35.7 (333)
3 Risk Factors	13.2 (123)
4 Risk Factors	3.7 (35)
5 Risk Factors	0.5 (5)

Key: N = number; cm = centimetres. WC based on World Health Organisation Classifications³³.

¹ Note, the WHO (2016) criteria for 'inactive (<3 days per week) and therefore 'at risk' of CVD is different to National PA Guidelines (30mins or more at least 5 days per week;³⁶)

Figure 1; Examples of gender-sensitised branded promotional material

Men on the Move
The best MOVE you'll ever make

KRSP
Kilburn Road Sports Partnership

Need Energy!

Get NCT'd!

MEN WANTED

Could you do with a health service?

We all need a little maintenance, so why not come along for your **FREE HEALTH CHECK** (Blood Pressure, Cholesterol etc.)

Check your pressure!

Come along to our Health Check: [Blank space]

For further details contact: [Blank space]

Supported by: [Logos for Active, Bupa Health, etc.]

This programme is being offered in conjunction with a **National Research Evaluation**

What is the Men on the Move programme?

Men on the Move is a physical activity programme that is aimed at adult men to get them active, have fun and improve their fitness levels. It involves:

- twice-weekly physical activity sessions over 12 weeks that are led by a qualified instructor to meet your needs.
- structured physical activity sessions so that you can find a level and pace that suits you.
- workshops on nutrition and well-being for men.

What does the Health Check involve?

The FREE Health Check includes measures such as blood pressure, cholesterol, fitness and body weight. You will also receive health information from professionals and a copy of the Men on the Move, health information booklet. All health checks will take place in a local community facility.

What do I need to wear?

- Wear a tracksuit/jogging bottoms and a t-shirt/sweat shirt.
- Wear trainers/running shoes.
- Bring a bottle of water.

What will YOU get from being part of the evaluation?

FOUR FREE HEALTH CHECKS between September 2015-2016

The FREE health checks are part of the evaluation of the Men on the Move programme. We are evaluating the Men on the Move programme so that we can learn how it may be helpful for men. By doing this, we hope to be able to continue to deliver this programme to more men, across the country. Your participation in this evaluation is important for us to be able to do this.

As part of the evaluation we will:

- Ask you questions about your health and take measurements such as your height, weight, blood pressure, cholesterol and carry out a fitness test.
- Take these measurements and ask you questions four times over 12 months - September and December 2015 and again in February and September 2016.

By attending at all of these dates, you will HELP RAISE much needed FUNDS for a LOCAL service in your COMMUNITY. A monetary contribution will be awarded to your local community service in recognition of your participation.

You will also be invited to participate in the full Men on the Move programme in your local community in September 2016.

KRSP
Kilburn Road Sports Partnership

Men on the Move
The best MOVE you'll ever make

Men on the Move
The best MOVE you'll ever make

KRSP
Kilburn Road Sports Partnership

MEN WANTED

Want to start exercising?

Want to feel fitter and have more energy?

We are delivering a **FREE, MEN ONLY, 12-week physical activity programme in your LOCAL AREA.**

Come along to our Information Evening: [Blank space]

For further details contact: [Blank space]

Supported by: [Logos for Active, Bupa Health, etc.]

This programme is being offered in conjunction with a **National Research Evaluation**

What is the "Men on the Move" programme?

Men on the Move is a physical activity programme that is aimed at adult men to get them active, have fun and improve their fitness levels. It involves:

- twice-weekly physical activity sessions over 12 weeks that are led by a qualified instructor to meet your needs.
- structured physical activity sessions so that you can find a level and pace that suits you.
- workshops on nutrition and well-being for men.

What do I need to wear?

- Wear a tracksuit/jogging bottoms and a t-shirt/sweat shirt. Jeans are uncomfortable when doing physical activity and when wet.
- Wear layers. It may be cold some nights but you will warm up quickly so a couple of layers are much easier than one big jumper.
- Bring lightweight, waterproof top and bottoms in case of rain.
- Wear trainers/running shoes to all sessions.
- Bring a bottle of water to all sessions.

What will YOU get from being part of the evaluation?

Being part of the evaluation will give you the opportunity to measure your own health improvements over a twelve-month period. Trained instructors will be on hand to give you feedback on your weight, fitness etc., so you can measure your progress.

We are evaluating the Men on the Move programme so that we can learn how it may be helpful for men. By doing this, we hope to be able to continue to deliver this programme to more men across the country. Your participation in this evaluation is important for us to be able to do this.

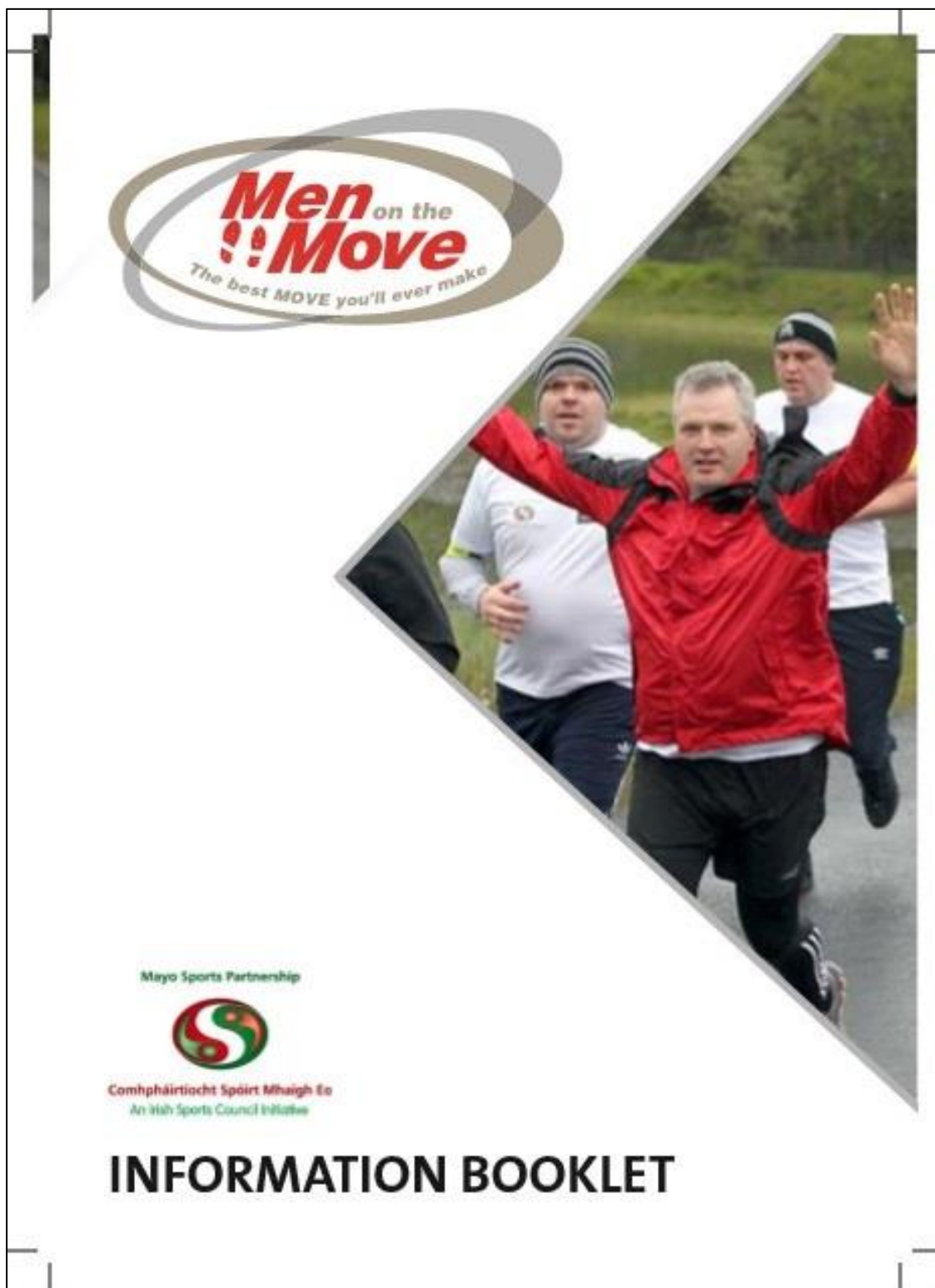
As part of the evaluation we will:

- Ask you questions about your health at the registration evening and on the first week of the programme.
- Take measurements such as your height, weight, waist circumference, BMI and carry out a fitness test at the registration evening and on the first week of the programme.
- Repeat these measurements and ask these questions again at the end of the programme and in February and August 2016.

KRSP
Kilburn Road Sports Partnership

Men on the Move
The best MOVE you'll ever make

Figure II; Men on the Move Health Information Booklet Cover



References

1. White A, Sousa B De, Visser R De, et al. *EU 2011 . The State of Men's Health in Europe Report.*; 2011. doi:10.2772/60721.
2. Department of Health and Children. *National Men's Health Policy 2008 - 2013.*; 2013.
3. WHO Regional Office for Europe. Health 2020 A European policy framework and strategy for the 21st century. In: Intergovernmental Panel on Climate Change, ed. *Climate Change 2013 - The Physical Science Basis*. Cambridge: Cambridge University Press; 2013:1-30. doi:10.1017/CBO9781107415324.004.
4. Lunenfeld B, Stratton P. The clinical consequences of an ageing world and preventive strategies. *Best Pract Res Clin Obstet Gynaecol*. 2013;27(5):643-659. doi:10.1016/j.bpobgyn.2013.02.005.
5. Healthy Ireland. *Healthy Ireland Survey 2015: Summary of Findings.*; 2015.
6. Courtenay WH. Key Determinants of the Health and Well-Being of Men and Boys. *Int J Mens Health*. 2003;2(1):1-30. doi:10.3149/jmh.0201.1.
7. Mahalik JR, Burns SM, Syzdek M. Masculinity and perceived normative health behaviors as predictors of men's health behaviors. *Soc Sci Med*. 2007;64(11):2201-2209. doi:10.1016/j.socscimed.2007.02.035.
8. Kodama S, Saito K, Tanaka S, et al. CLINICIAN ' S CORNER Cardiorespiratory Fitness as a Quantitative Predictor of All-Cause Mortality and Cardiovascular Events. *Am Med Assoc*. 2009;301(19):2024-2035.
9. Soares-Miranda L, Siscovick DS, Psaty BM, Longstreth WT, Mozaffarian D. Physical Activity and Risk of Coronary Heart Disease and Stroke in Older Adults. *Circulation*. 2016;133(2):147-155. doi:10.1161/CIRCULATIONAHA.115.018323.
10. Hanson S, Cross J, Jones A. Promoting physical activity interventions in communities with poor health and socio-economic profiles: A process evaluation of the implementation of a new walking group scheme. *Soc Sci Med*. 2016;169:77-85. doi:10.1016/j.socscimed.2016.09.035.
11. O'Donoghue G, Perchoux C, Mensah K, et al. A systematic review of correlates of sedentary behaviour in adults aged 18-65 years: a socio-ecological approach. *BMC Public Health*. 2016;16(1):163. doi:10.1186/s12889-016-2841-3.
12. US Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. *Heal San Fr*. 2000;2nd.:62 p.

<http://www.healthypeople.gov/2010/%5Cnhttp://www.nih.gov/clearcommunication/healthliteracy.htm>.

13. Kahn E, Ramsey L, Brownson R, et al. The effectiveness of interventions to increase physical activity: A systematic review. *Am J Prev Med*. 2002;22(4):73-107. doi:10.1016/S0749-3797(02)00434-8.
14. Kraemer S. Lessons from everywhere. *Br Med J*. 2000;321:1609-1612.
15. Marmot M. Social determinants of health inequalities. *Lancet*. 2005;365(9464):1099-1104. doi:10.1016/S0140-6736(05)71146-6.
16. Layte R, McCrory C. *Growing Up in Ireland National Longitudinal Study of Children Overweight and Obesity among 9 Year Olds; Report 2; Growing Up in Ireland National Longitudinal Study of Children.*; 2011.
17. Pra B, Dp F, Soares J, Al W, Foster C. Community wide interventions for increasing physical activity (Review) SUMMARY OF FINDINGS FOR THE MAIN COMPARISON. 2015;(1). doi:10.1002/14651858.CD008366.pub3.www.cochranelibrary.com.
18. Carroll P, Kirwan L, Lambe B. Engaging 'hard to reach' men in community based health promotions. *Int J Heal Promot Educ*. 2014;5240(June):1-11. doi:10.1080/14635240.2013.876185.
19. Lefkowich M, Richardson N, Robertson S. "If We Want to Get Men in, Then We Need to Ask Men What They Want": Pathways to Effective Health Programing for Men. *Am J Mens Health*. 2015:1-34. doi:10.1177/1557988315617825.
20. Robertson C, Archibald D, Avenell A, et al. Systematic reviews of and integrated report on the quantitative, qualitative and economic evidence base for the management of obesity in men. *Health Technol Assess (Rockv)*. 2014;18(35):1-424. doi:10.3310/hta18350.
21. Heath GW, Parra DC, Sarmiento OL, et al. Evidence-based intervention in physical activity: Lessons from around the world. *Lancet*. 2012;380(9838):272-281. doi:10.1016/S0140-6736(12)60816-2.
22. WHO. a Guide for Population-Based Approaches To Increasing Levels of Physical Activity: *Implement Who Glob Strateg Diet, Phys Act Heal*. 2007:24.
23. Carroll P, Harrison M, Richardson N, et al. Evaluation of a Gender-Sensitive Physical Activity Programme for Inactive Men in Ireland: Protocol Paper for a Pragmatic Controlled Trial. *J Phys Act Res*. 2018.

24. Hunt K, Wyke S, Gray CM, et al. A gender-sensitised weight loss and healthy living programme for overweight and obese men delivered by Scottish Premier League football clubs (FFIT): A pragmatic randomised controlled trial. *Lancet*. 2014;383(9924):1211-1221. doi:10.1016/S0140-6736(13)62420-4.
25. Bottorff JL, Seaton CL, Johnson ST, et al. An Updated Review of Interventions that Include Promotion of Physical Activity for Adult Men. *Sport Med*. 2015;45(6):775-800. doi:10.1007/s40279-014-0286-3.
26. Pringle A, Zwolinsky S, McKenna J, Robertson S, Daly-Smith A, White A. Health improvement for men and hard-to-engage-men delivered in English Premier League football clubs. *Health Educ Res*. 2014;29(3):503-520. doi:10.1093/her/cyu009.
27. Wyke S, Hunt K, Gray CM, et al. Football Fans in Training (FFIT): a randomised controlled trial of a gender-sensitised weight loss and healthy living programme for men – end of study report. *Public Heal Res*. 2015;3(2):1-130. doi:10.3310/phr03020.
28. Smith RC. Minor Acute Illness: A Preliminary Research Report on the “Worried Well.” *J Fam Pract*. 2002;51:6. doi:10.1249/MSS.0b013e318222cf71.
29. Robertson S, Zwolinsky S, Pringle A, McKenna J, Daly-Smith A, White A. “It is fun, fitness and football really”: a process evaluation of a football-based health intervention for men. *Qual Res Sport Exerc Heal*. 2013;5(3):419-439. doi:10.1080/2159676X.2013.831372.
30. Lefkowich, M., Richardson, N. & Robertson S (2015). Engaging Men as Partners & Participants: Guiding Principles, Strategies, and Perspectives for Community Initiatives & Holistic Partnerships.
31. Central Statistics Office. Vital Statistics Yearly Summary 2015. 2015;(May). http://pdf.cso.ie/www/pdf/20160628033934_Vital_Statistics_Yearly_Summary_2015_summary.pdf.
32. WHO WHO. Global recommendations on physical activity for health. *Geneva World Heal Organ*. 2010:60. doi:10.1080/11026480410034349.
33. World Health Organization. Waist Circumference and Waist-Hip Ratio: Report of a WHO Expert Consultation. *World Heal Organ*. 2008;(December):8-11. doi:10.1038/ejcn.2009.139.
34. Daniels G. *Human Blood Groups: 3rd Edition.*; 2013. doi:10.1002/9781118493595.
35. Brubaker P, Otto R, Whaley M. American College of Sports Medicine: ACSM’s

- guidelines for exercise testing and prescription. *Am Coll Sport Med*. 2006.
http://scholar.google.co.uk/scholar?hl=en&q=whaley+brubaker+otto+american+&btnG=&as_sdt=1,5&as_sdtp=#1.
36. Department of Health and Children, Health Service Executive. The National Guidelines on Physical Activity for Ireland. *Children*. 2009;1-32.
doi:10.1152/japplphysiol.00137.2005.
 37. WHO. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. *World Heal Organ*. 2013;102. doi:978 92 4 1506236.
 38. Department of Transport tourism and sport. The National physical activity plan for Ireland. *Heal Irel*. 2013.
 39. Shook RP, Hand GA, Drenowatz C, et al. Low levels of physical activity are associated with dysregulation of energy intake and fat mass gain over 1 year 1 , 2. *Am J Clin Nutr*. 2015;102(March):1332–8. doi:10.3945/ajcn.115.115360.1332.
 40. Goodrich KM, Crowley SK, Lee D chul, Sui XS, Hooker SP, Blair SN. Associations of cardiorespiratory fitness and parental history of diabetes with risk of type 2 diabetes. *Diabetes Res Clin Pract*. 2012;95(3):425-431. doi:10.1016/j.diabres.2011.10.045.
 41. Peel JB, Sui X, Matthews CE, et al. NIH Public Access. *Cancer Epidemiol Biomarkers Prev*. 2010;18(4):1111-1117. doi:10.1158/1055-9965.EPI-08-0846.Cardiorespiratory.
 42. Liu R, Sui X, Laditka JN, et al. Cardiorespiratory fitness as a predictor of dementia mortality in men and women. *Med Sci Sports Exerc*. 2012;44(2):253-259.
doi:10.1249/MSS.0b013e31822cf717.
 43. Healthy Ireland. *Healthy Ireland Survey 2015: Summary of Findings*.; 2015.
 44. Krotkiewski M, Bjorntorp P, Sjostrom L, Smith U. Impact of obesity on metabolism in men and women. Importance of regional adipose tissue distribution. *J Clin Invest*. 1983;72(3):1150-1162. doi:10.1172/JCI111040.
 45. Larsson B, Svardsudd K, Welin L, Wilhelmsen L, Bjorntorp P, Tibblin G. Abdominal adipose tissue distribution, obesity, and risk of cardiovascular disease and death: 13 year follow up of participants in the study of men born in 1913. *Bmj*. 1984;288(6428):1401-1404. doi:10.1136/bmj.288.6428.1401.
 46. Rexrode KM, Carey VJ, Hennekens CH, et al. Abdominal adiposity and coronary heart disease in women. *JAMA*. 1998;280(21):1843-1848. doi:joc72253 [pii].
 47. De Koning L, Merchant AT, Pogue J, Anand SS. Waist circumference and waist-to-hip

- ratio as predictors of cardiovascular events: Meta-regression analysis of prospective studies. *Eur Heart J*. 2007;28(7):850-856. doi:10.1093/eurheartj/ehm026.
48. Healthy Ireland. Healthy Ireland Survey 2017; Summary of Findings. January 2017. doi:10.1080/000164702753671623.
 49. Long J, Mongan D. *Alcohol Consumption in Ireland 2013: Analysis of a National Alcohol Diary Survey.*; 2013.
http://alcoholireland.ie/download/reports/how_much_do_we_drink/Alcohol_Consumption_in_Ireland_2013_web_version.pdf.
 50. Gravely S, Giovino GA, Craig L, et al. Implementation of key demand-reduction measures of the WHO Framework Convention on Tobacco Control and change in smoking prevalence in 126 countries: an association study. *Lancet Public Heal*. 2017;2(4):e166-e174. doi:10.1016/S2468-2667(17)30045-2.
 51. Mughal M, Alvi I, Akhund I, Ansari K. The effects of aerobic exercise training on resting blood pressure in hypertensive patients. *J Pak Med Assoc*. 2001;51(6):222-226. <http://www.ncbi.nlm.nih.gov/pubmed/11475778>.
 52. Colberg SR, Sigal RJ, Fernhall B, et al. Exercise and type 2 diabetes: The American College of Sports Medicine and the American Diabetes Association: Joint position statement. *Diabetes Care*. 2010;33(12). doi:10.2337/dc10-9990.
 53. Keith M. Diaz, and Daichi Shimbo. Physical Activity and the Prevention of Hypertension. *Curr Hypertens Rep*. 2013;15(6):659-668. doi:10.1007/s11906-013-0386-8.Physical.
 54. Fernandez-Navarro P, Aragonés MT, Ley V. Leisure-time physical activity and prevalence of non-communicable pathologies and prescription medication in Spain. *PLoS One*. 2018;13(1):1-13. doi:10.1371/journal.pone.0191542.
 55. Viña J, Sanchis-Gomar F, Martínez-Bello V, Gómez-Cabrera MC. Exercise acts as a drug; The pharmacological benefits of exercise. *Br J Pharmacol*. 2012;167(1):1-12. doi:10.1111/j.1476-5381.2012.01970.x.
 56. Pedersen BK, Saltin B. Exercise as medicine - Evidence for prescribing exercise as therapy in 26 different chronic diseases. *Scand J Med Sci Sport*. 2015;25:1-72. doi:10.1111/sms.12581.
 57. Pringle A, Zwolinsky S, Smith A, Robertson S, McKenna J, White A. The pre-adoption demographic and health profiles of men participating in a programme of men's

health delivered in English Premier League football clubs. *Public Health*.
2011;125(7):411-416. doi:10.1016/j.puhe.2011.04.013.

58. Richardson N. Getting inside men' s health. 2004. www.healthpromotion.ie.
59. Nolan, B and Maitre B. A Social Portrait of Communities in Ireland. 2008;5:1-4.