

# Evaluating 8 years of Football Fans in Training in Swindon

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# Background

## Football Fans in Training (FFIT)

- People living with overweight or obesity – public health challenges
- Benefits of weight loss cut across many health and non-health dimensions
- Men significantly **under-represented** in commercial & NHS **weight management programmes**
- FFIT - a radical redesign of weight management programmes in Scotland, with a **Gender-sensitised setting** and **delivery style**
- Initial target: 35-65 year old male football fans living with overweight/obesity
- 12-weeks course of coach-led classroom and physical activity components in football club grounds – successful recruitment strategy
- Participant weight (and other characteristics) recorded at start and end of training programme
- Gray et al (2013)<sup>1</sup> - pilot randomised control trial (RCT) delivered at two Scottish Football Clubs. Treatment group lost significantly more weight at programme end + reported improvements in self-reported diet and activity
- Hunt et al (2014)<sup>2</sup> - larger scale RCT study delivered at 13 professional Scottish Football Clubs. Treatment group lost about 5 kg more than control group
- Gray et al (2018)<sup>3</sup> - follow up of FFIT participants, with significant long-term weight loss observed
- Bunn et al (2018)<sup>4</sup> - demonstrated feasibility , acceptability and demonstrated weight loss potential of FFIT for female participants

# Background

## FFIT in Swindon

- Swindon – 65% classified as overweight/obese in 2020-21 (OHID)
- **Swindon** became the **first place in England** to deliver FFIT
- Modelled closely on Scottish FFIT and implemented as a pragmatic within-subject design study
- First cohort in January 2015 and still running
- Followed all protocol developed in the Scottish pilot FFIT programme (including buying training of coaches)
- Could other types of participants also benefit (females, non-fans of football, younger individuals)?

# Aims and Methods

## Aim

- To assess the effectiveness of eight years of FFIT in Swindon

## Data

- Weight (kg)
- Waist Circumference (cm)
- Age (years)
- Height (cm)
- Blood pressure
- Gender (male, female)
- Passion for football (fans, non-fans)
- January 2015 – April 2022

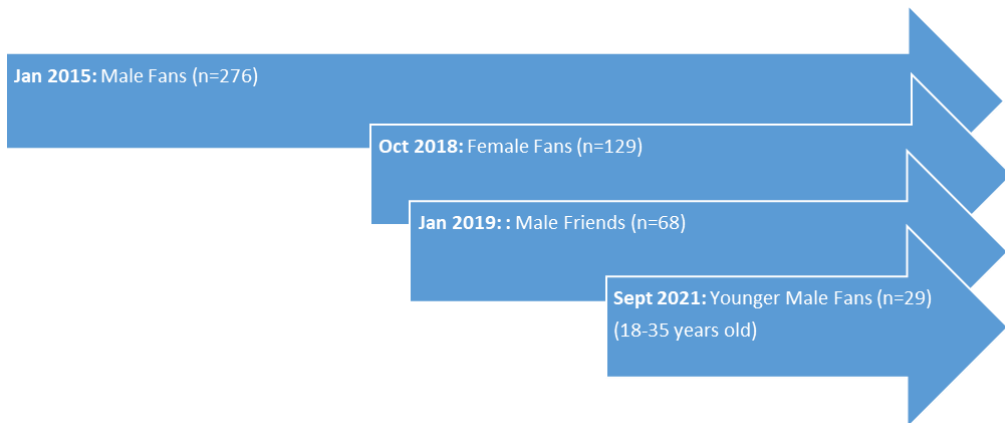
## Sample

- 611 participants in total
- 502 meet criteria for completion, age and minimum waist size

## Methods

- Paired t-tests on outcomes (weight and waist circumference) for participant groups by timeline
- Mean comparison t-tests on outcomes across participant groups

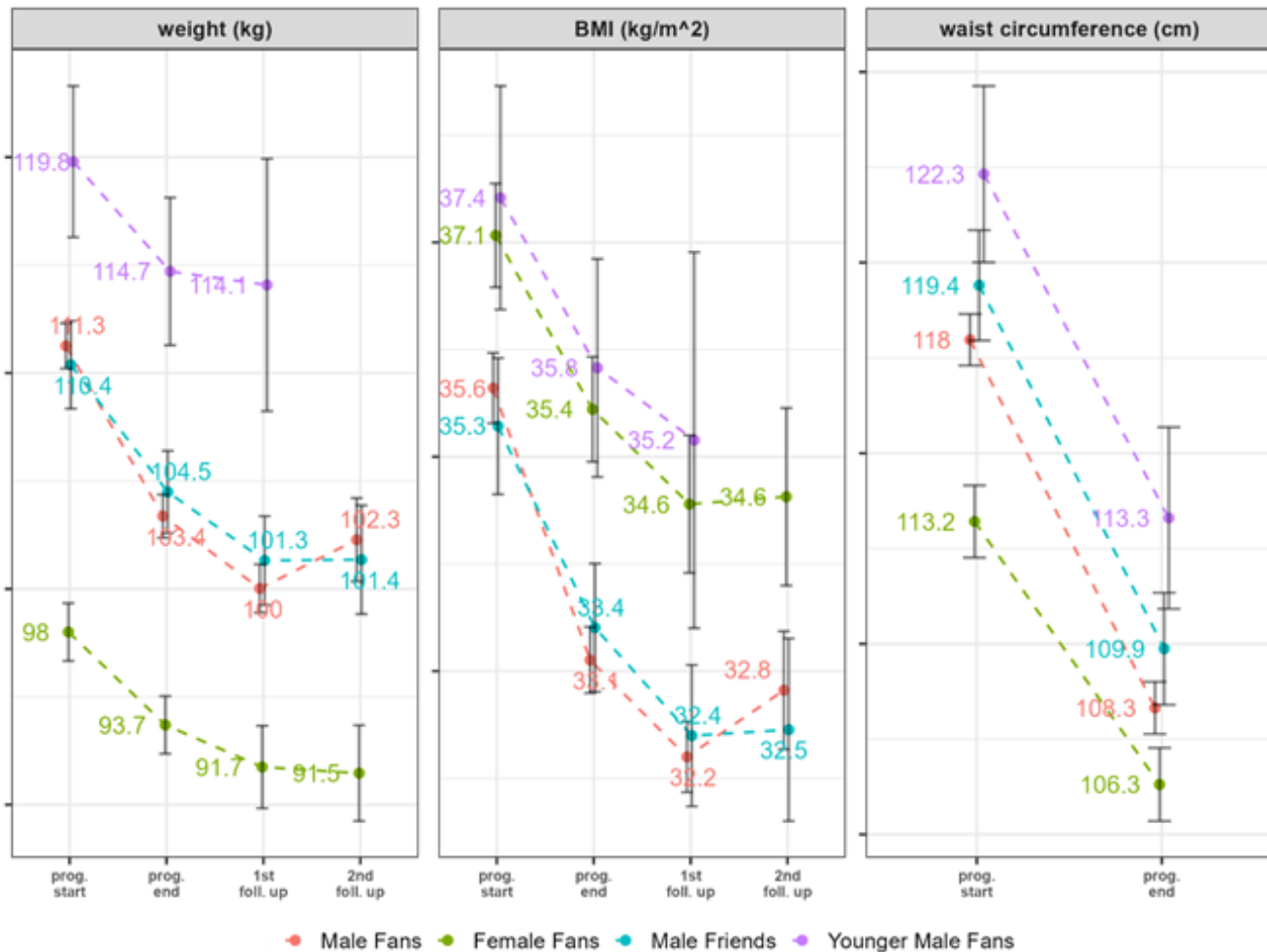
## Participant groups (n=502)



# Findings

- Reduction in average weight and average waist circumference at programme end for all groups
- Some follow up (but incomplete) data on weight only shows further/sustained weight reductions at follow up

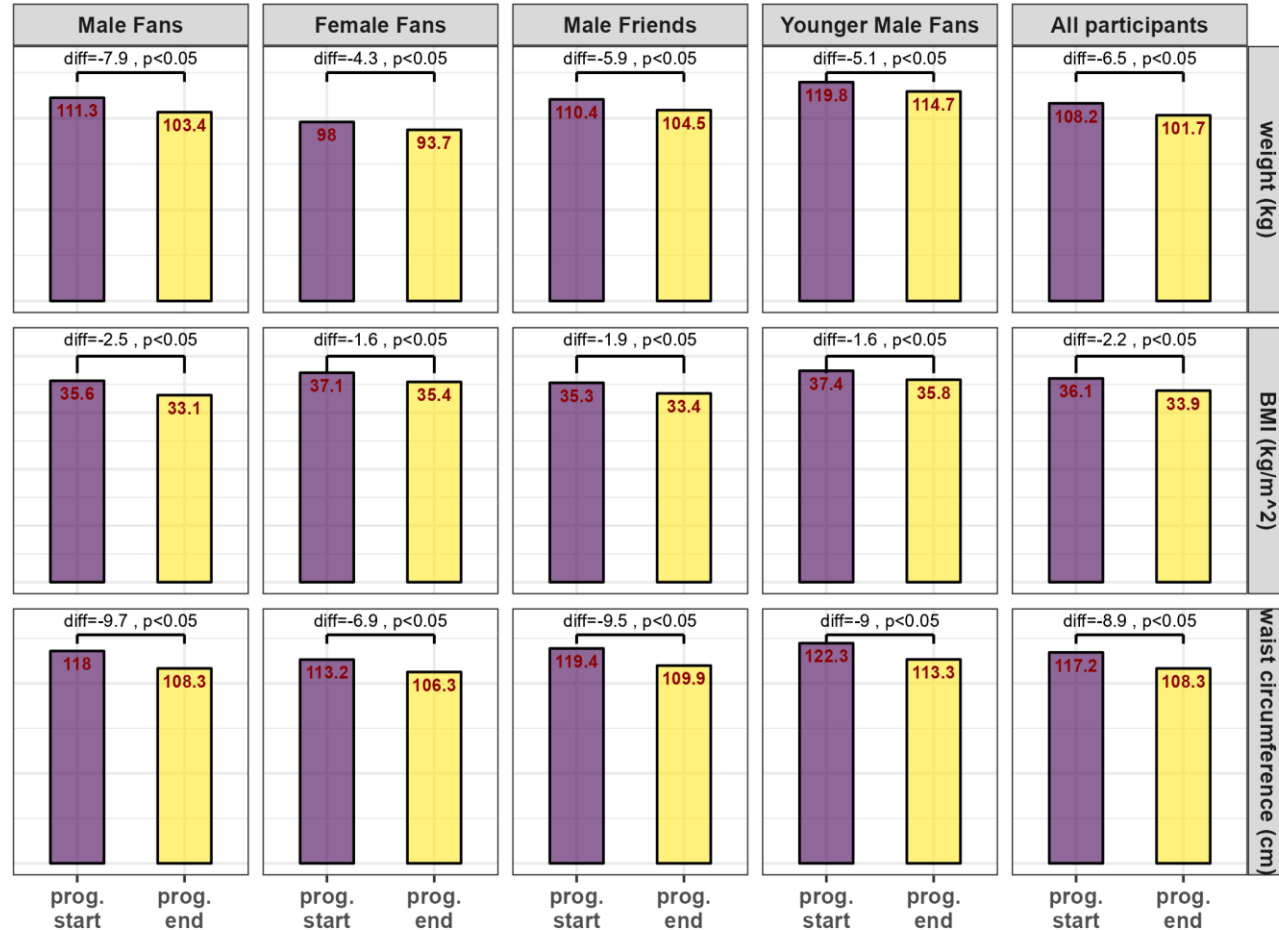
Average Weight, BMI and Waist Circumference  
Participant Groups and Measurement Timeline



## Average Change in Weight, BMI and Waist Circumference Programme Start to Programme End

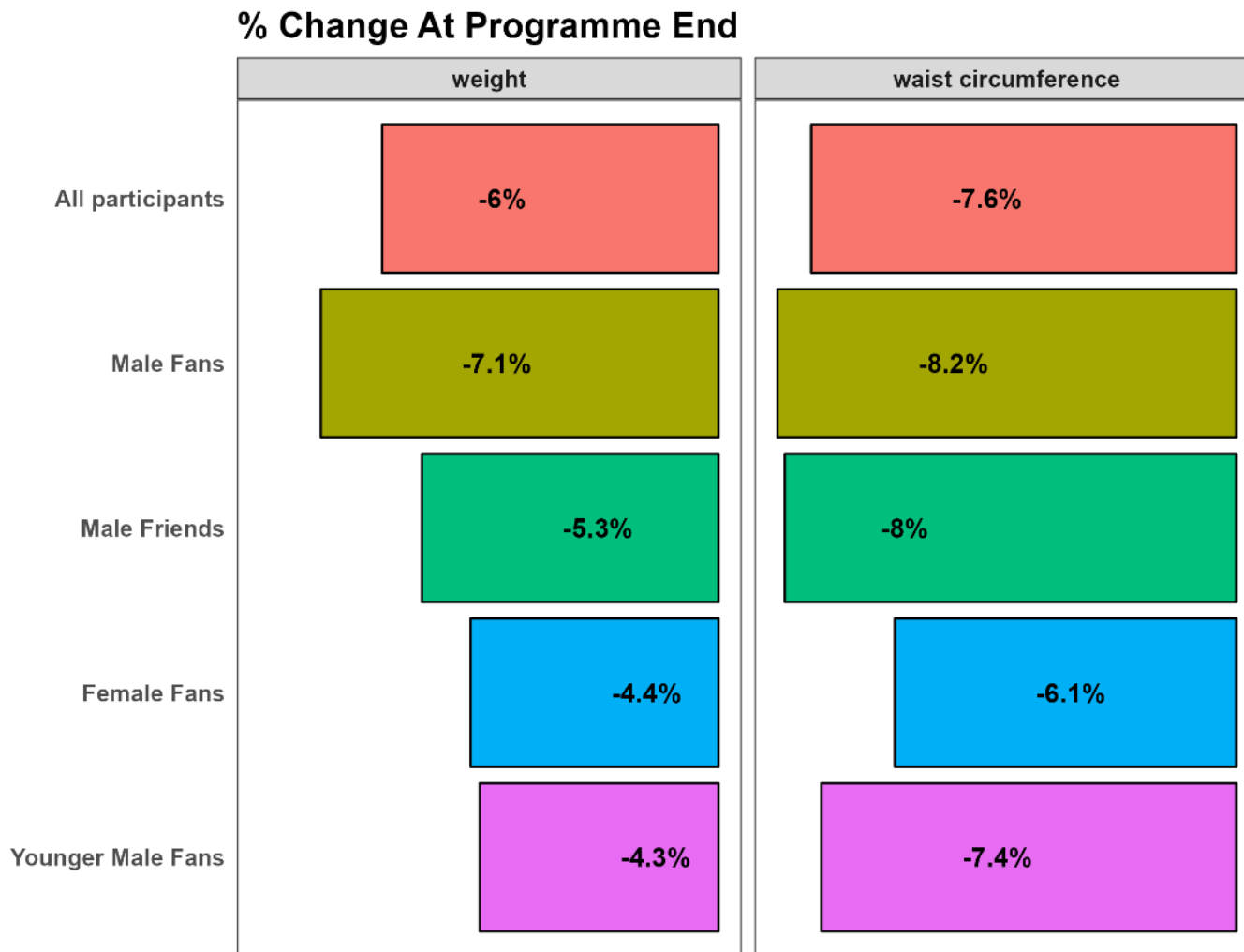
# Findings

- All participant groups experienced statistically significant ( $p < 0.05$ ) reductions in weight and waist circumference at programme end
- Male participants (all ages) experienced the largest weight reductions, but effect of training programme appeared to have been most beneficial to initial target group (35-65 years old male football fans)



# Findings

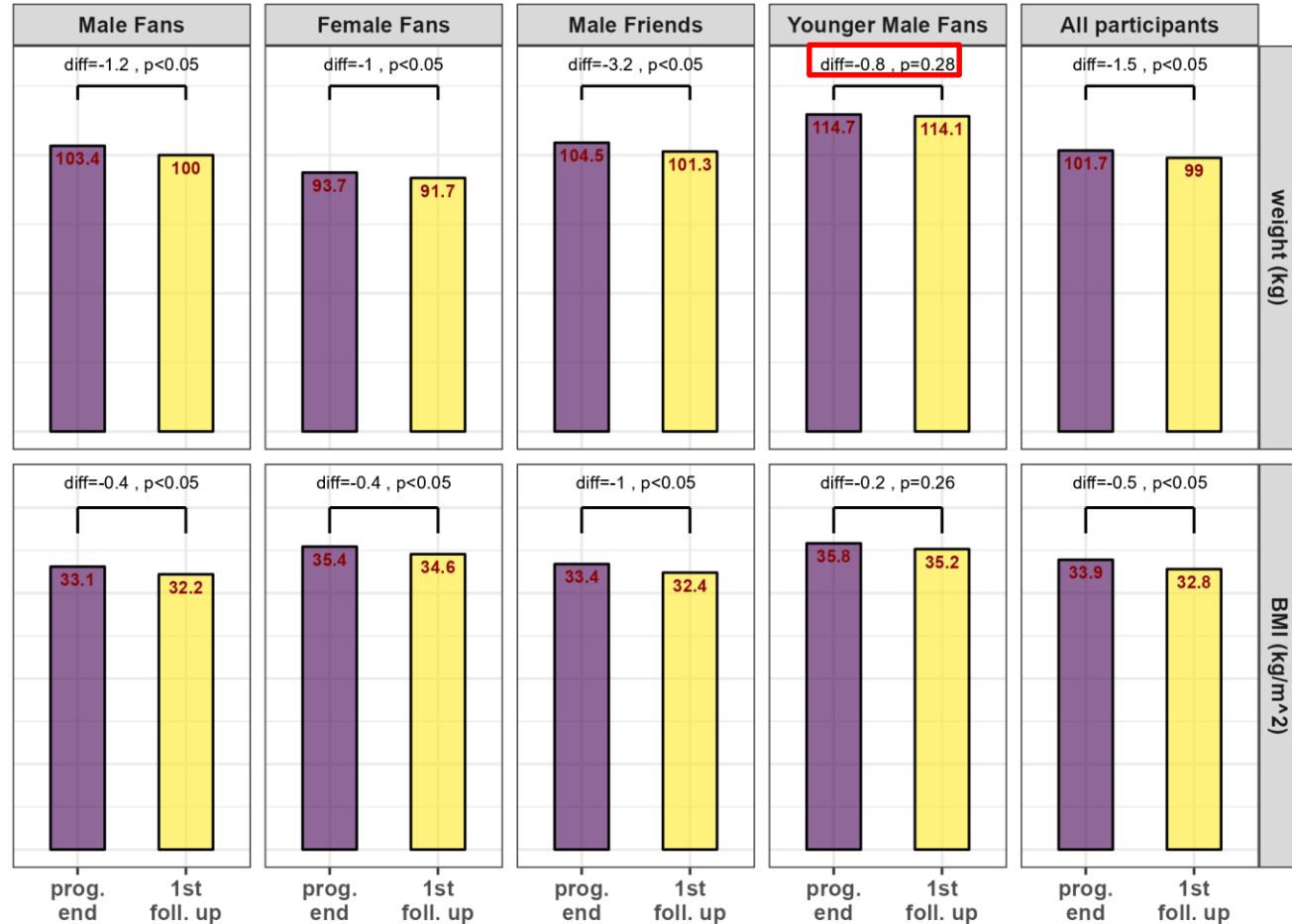
- How big are the observed weight loss figures?
- Average weight reduction was 6% (clinically important >5%)



## Average Change in Weight and BMI Programme End to 1st Follow Up

# Findings

- About two thirds of participants (n=336) also reported weight data at 1<sup>st</sup> follow up
- All groups, except Younger Male Fans show statistically significant (p<0.05) further weight reductions at 1<sup>st</sup> follow up



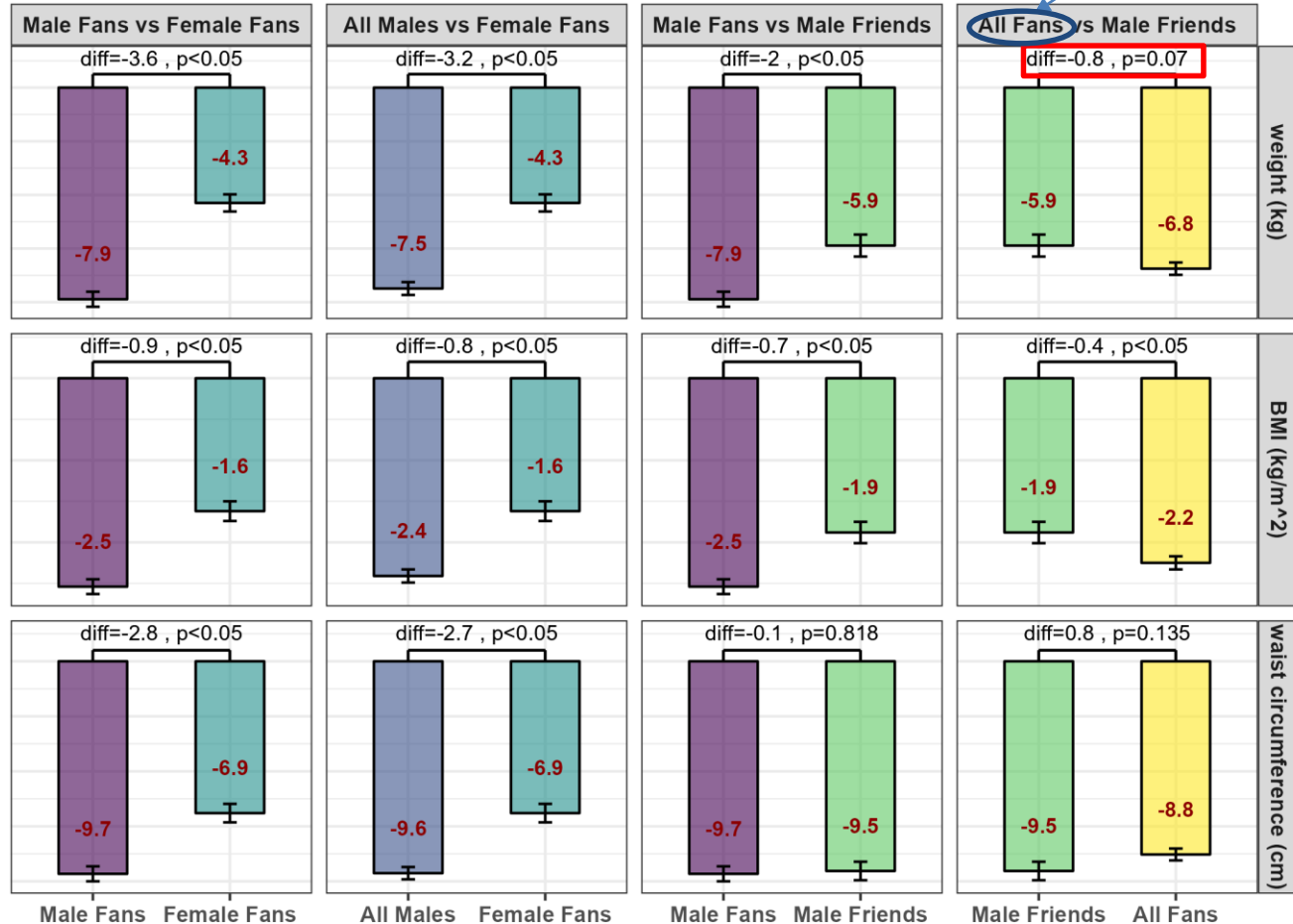


# Average Change in Weight, BMI and Waist Circumference Programme Start to Programme End

Males and Female Fans

## Findings

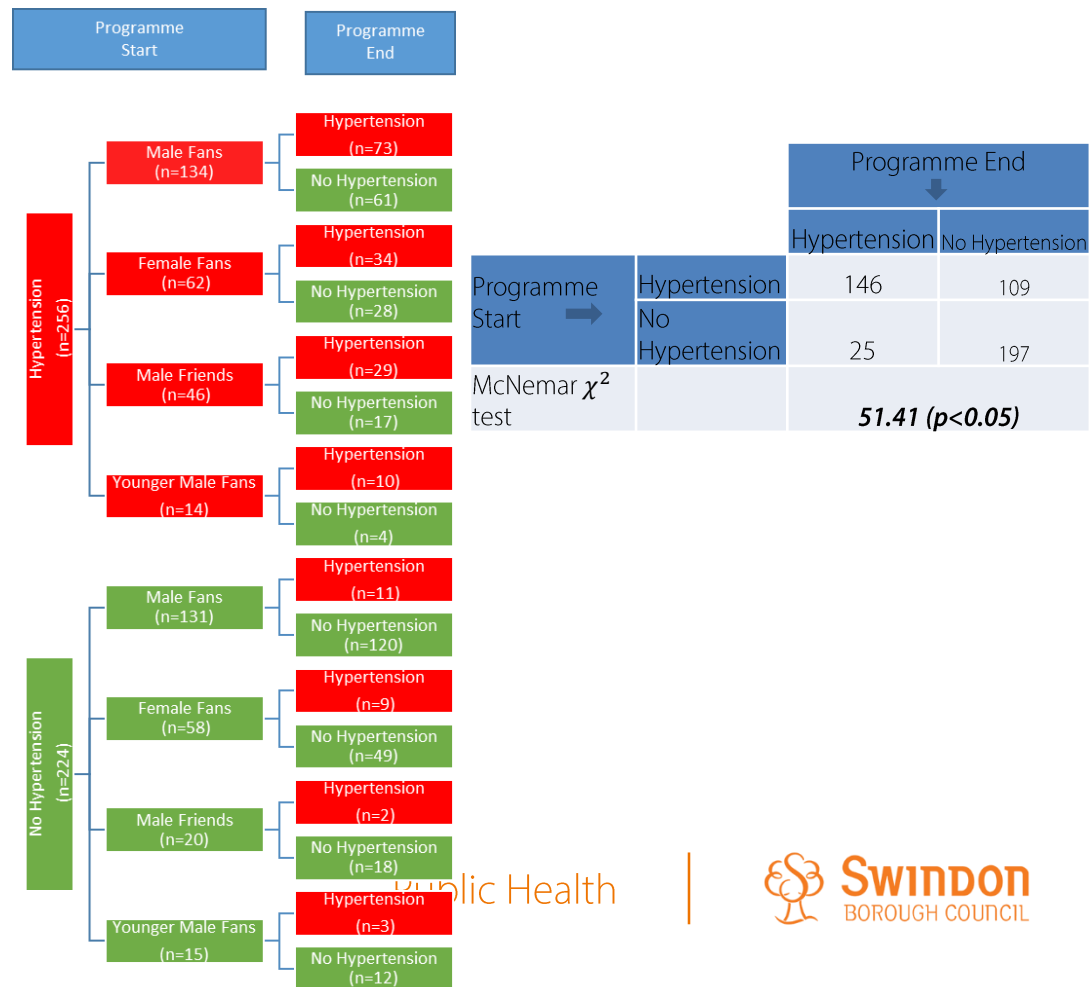
- Differential outcome – **similarly aged** group comparisons (i.e. excludes Young Male Fans)
- Statistically significant differences in weight ( $p < 0.05$ ) between groups except for one.
- Largest gap is between Male Fans and Female Fans (3.6 kg)
- Difference between Male Fans and Male Friends (2 kg)



# Findings

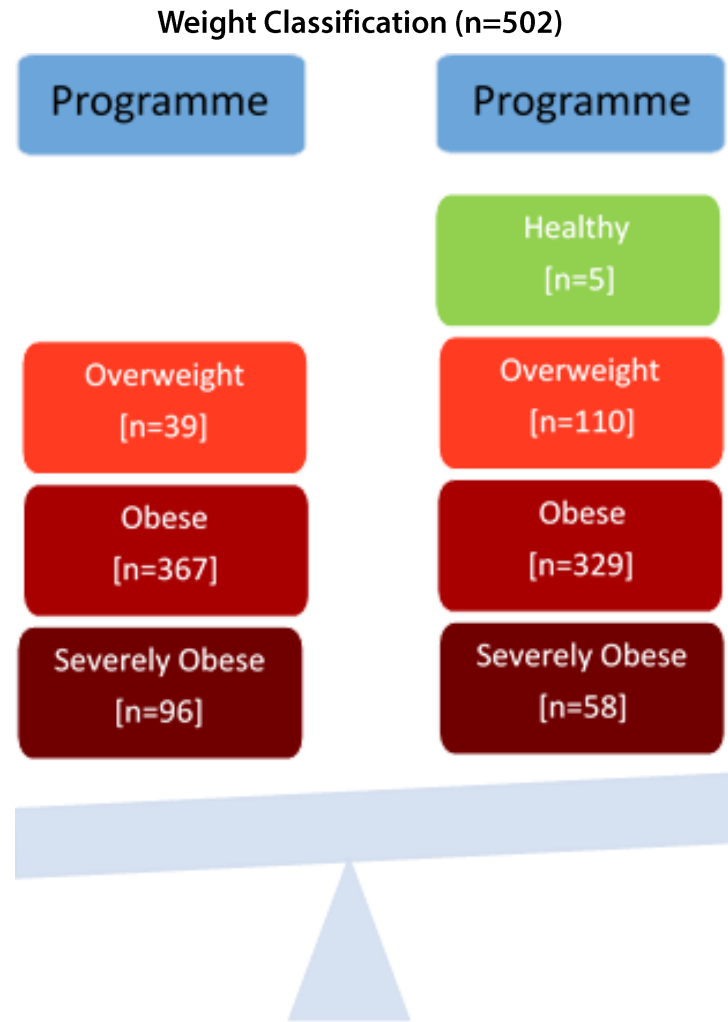
- Blood Pressure readings recorded at programme start and end
- At start, hypertensive participants directed to consult with their GP prior to training, with possible medication prescription
- 255 participants (53%) were classified as hypertensive at programme start.
- At programme end, 109 of the 255 hypertensive participants (43%) switched to non-hypertensive status.
- McNemar test – statistically significant ( $p < 0.05$ ) switch.
- Possible effect of (i) training programme; (ii) medication (iii) White Coat effect or combination of these?

## Hypertensive Status (n=477)



# Findings

- Participants grouped into one of five NHS weight classification categories
- At programme end, 118 participants (23.5%) switched to a less unhealthy weight classification



# Findings

- Regression of weight change at programme end (mostly negative) on participant characteristics (excludes Younger Males)
- Aim to quantify (possibly linear) relationship between weight change at programme end and participant characteristics.
- Initial weight, gender and passion for football have a **statistically significant** impact on direction and magnitude of weight change.
- Everything else the same, on average:
  - For every additional 10kg in initial weight, weight loss increases by an additional 0.7kg
  - Male participants (fans and friends) lose about 3kg more than female participants
  - Football Fans lose about 2kg more than non-football fans.

## Regression Results: Determinants of Weight Change

	coefficient	std. error	t statistic	p value
Intercept	0.89	6.07	0.15	p≥0.10
Height (cm)	0.03	0.03	1.02	p≥0.10
Age (years)	-0.02	0.03	-0.77	p≥0.10
Initial Weight (kg)	-0.07	0.02	-2.81	p≤0.05
Initial Waist Circumference (cm)	-0.01	0.03	-0.33	p≥0.10
Hypertensive	0.48	0.38	1.27	p≥0.10
Gender (Male=1)	-3.11	0.6	-5.21	p≤0.05
Football Fan (Fan=1)	-1.89	0.56	-3.38	p≤0.05
Observations	471			
R-Squared	0.2			
Adjusted R-Squared	0.18			

# Conclusions

- In Swindon, FFIT has helped overweight and obese participants to **lose a clinically important amount of weight.**
- **Expanded access** to female football fans, male non-football fans and younger male football fans shows **benefits to groups other than traditional target group.**
- FFIT works as a pragmatic weight loss programme that can be delivered to any group in a local context. It is now offered more widely in England and Wales (called **FIT Fans**) via the English Football League Trust
- **Key limitation:** programme **not scalable** at population-level due to intensive delivery model
- **Future work:** Analyse pre- and post-training questionnaires on self-reported lifestyle behaviour of participants

# References

1. Gray et al, 2013. Weight management for overweight and obese men delivered through professional football clubs: a pilot randomized trial. *International Journal of Behavioral Nutrition and Physical Activity*; 10(121)
2. Hunt, K. et al, 2014. 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*; 383(9924): 1211–1221
3. Gray, C. et al, 2018. Long-term weight loss following a randomised controlled trial of a weight management programme for men delivered through professional football clubs: the Football Fans in Training follow-up study. *Public Health Research*; 6(9)
4. Bunn, C. et al, 2018. Can professional football clubs deliver a weight management programme for women: a feasibility study. *BMC Public Health*; 18(1330)

# Thank you

[www.swindon.gov.uk](http://www.swindon.gov.uk)

