

Football Cooperative, a Community Based Physical Activity Social Initiative for Men: Protocol Paper for a Pragmatic Feasibility Trial

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Abstract The case for a focus on men's health is unequivocal; men, and poorer men in particular, continue to experience an excess burden of ill-health, mortality and premature death and both national and European policy has called for gender competent service provision to address this fundamental inequality in health. While lessons have been learned in recent years with respect to developing gender competency in service provision, there is value in considering how they can be applied to other settings, other sub populations of men and other types of initiatives (beyond the limitations of a structured programme). Such initiatives may appeal beyond the 'worried well' to more 'hard to reach' (HTR) groups of men who are most in need of such initiatives thereby ensuring that all men are reached in health promotion and preventative efforts. Football Cooperative (FC) is uniquely Irish and is a community-based initiative that provides social 'pick up football' games for men aimed at improving their overall health and wellbeing. In a series of papers, we propose to evaluate FC, however, we are not proposing to create something to be trialed but rather to use research to assess the social return on investment (SROI) and health and economic impact of a 'real world' organic initiative so that the feasibility for scale up can be determined. If feasible, plans will be put in place to upscale the FC initiative to improve reach (population and geographical access) and equitable access to the games and the games benefits. The purpose of this paper is to detail the protocols used in the evaluation of the FC initiative and by doing so, others engaged in translational research may be supported to ensure that efficacious initiatives translate into practice for the benefit of population health.

Keywords: protocol, men's health, recreational football, community based, social return on investment

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1. Introduction

The need to focus a spotlight on men's health is unequivocal; men, and poorer men in particular, continue to experience an excess burden of ill-health, mortality and premature death [1]. However, despite this inequality in health, there is an obvious deficit in health policy for men at national and global level [2]. In 2008, Ireland became the first country in the world to publish a national men's health policy and remains only one of four countries to do so [3]. In 2018, the World Health Organisation (WHO) European Region published its first men's health strategy

[4]. Notably, in recognition of men's under representation at traditional health services [5], a central focus of all policy has been the provision of gendered approaches to health-related services for men.

In recent years, there has been a growing body of evidence of good practice of such services that include programmes such as Farmers Have Hearts (FHH) [6], Men on the Move (MOM) [7] and Sheds for Life (SFL) [8] all of which have scaled up to regional or national level in Ireland. The Football Fans in Training (FFIT) programme [9], which originated in Scotland, has scaled up across Europe (EuroFIT) [10] and scaled out across a number of other sporting codes e.g. Aussie-FIT (Aussie rules football in Australia) [11] and RUFIT-NZ (rugby in

New Zealand) [12]. Underpinning the success of these programmes has been an understanding by service providers, researchers and policy makers of the complex biopsychosocial factors and the environmental and sociocultural contexts that influence men's health and gendered patterns of health behaviours and practices. As such, these programmes a) use an appropriate "hook" that appeals to men e.g. focusing on exercise rather than nutrition in weight loss programmes [13], b) use community settings [14] or sports clubs [9] rather than healthcare settings [13], c) base interventions upon the behaviour change theory and include family and friends [15], d) adopt strengths-based approaches that revolve around creating safety, trust, rapport, and meaningful relationships with men [16], e) use strong, positive messages that encourage men to engage with services without amplifying shame or blame [17], f) connect positive masculine identities with being healthy and productive [18], g) reflect the wishes of men to maintain control and to engage with services on their own terms and in their 'own way' [19] and h) and create opportunities to share men's stories to show common challenges, to foster peer-support and to create a community of mutual help [20,21,22]. Notably, these programmes (FFIT, EuroFIT, Aussie-FIT, RUFIT-NZ, FHH, MOM, SFL) were delivered for a defined period of time (10-52 weeks; whereby men would engage in a group setting or receive individual health coaching (in person/by text) and appealed to different age profiles of men (mean age of 41 – 69 years). The lessons learned from the implementation of these programmes have demonstrated how to engage men in health and there is value in considering how they can be applied to other settings, other sub populations of men and other types of initiatives (beyond the limitations of a structured programme). Such initiatives may appeal beyond the 'worried well' to more 'hard to reach' (HTR) groups of men who are most in need of such initiatives thereby ensuring that all men are reached in health promotion and preventative efforts.

While football settings have been used to host weight loss [9,10] and health-related programmes [23] for men, it has been well established that playing recreational football is an effective health initiative for a variety of health conditions and is in fact, an effective form of 'medicine' [24,25]. The multiple activity and movement patterns (e.g., high-speed runs, sprints, turns, jumps, tackles) and intensity profile (moderate and high) of recreational football provide exposure to a variety of areas of fitness (i.e., metabolic fitness, cardiovascular fitness and musculoskeletal fitness) which provoke adaptive changes in a number of physiological systems in the body [26]. Recreational football elicits positive effects on cardiorespiratory fitness, blood pressure, bone density, glycemic control, resting heart rate, postural control and fat mass [27,28,29,30] and produces broad-spectrum physical fitness benefits which are all related to non-communicable diseases (NCDs) [31]. Recreational football can also be effective in addressing lack of motivation, a key component in physical (in)activity [31,32,33].

Football has been viewed as an important medium to engage men who are seen as reluctant to access traditional health services [34]. Football is believed to allow the safe

expression of emotion, allowing men to express feelings that are usually less normalised within traditional masculine environments e.g., sentimentality, fear, pain, hurt, doubt, and the need to be nurtured [35]. Robertson [36] suggested that men 'do' emotion through action (like engaging in football), and that this emotional connection that many men have with football appears to enable men to feel safer engaging with football-based health initiatives. The emphasis on participation, supportiveness, and relationships in football initiatives may provide a useful model for health promotion work [37].

Football Cooperative (FC) is a social enterprise (SE) that is unique to Ireland and was established in 2017 for men, by men and uses 'pick-up-football' as the vehicle to bring men together to improve their overall health and achieve social gains for local communities. FC games are a) accessible i.e. local amenities are used for games; b) flexible regarding attendance (played 2-3 nights/week), c) affordable to ensure inclusion of all and d) offered to all levels of fitness and football capacity. 'Pick-up-football' differs from Association Football in terms of the pitch and player numbers. Games (60-90 mins depending on pitch availability) are played on a rectangular pitch with floodlit capability and an astroturf surface to ensure year-round activity. Games create a team environment (5-9 a-side depending upon attendance); team formation is crucial to ensuring both the game and social experience is maximised. The Match Coordinator will tactfully select the teams for the game with the objective to find a cumulative balance of football ability while also ensuring the make-up of teams is unique from one game to the next. The values upon which the SE is driven are cultivation of community, inclusivity, sportsmanship and life-long learning (see <https://www.facebook.com/footballcooperative>).

A core team of volunteers at FC oversees the governance responsibilities for managing the venue (health and safety, insurance, bookings), driving the strategic direction of the SE (securing funding, training and learning for members, expansion planning), communicating with all FC members, organising social activities around games (e.g. BBQs, fundraising activities) and ensuring that the values of FC are upheld. Match Coordinators are responsible for the FC games; they will publish a game notification to the participant pool via their 'bespoke game portal' in advance of the activity, they ensure that equipment is on site and that the FC values are followed by all participants. Games are not refereed and therefore, via leadership from Match Coordinators, the onus is on all participants to manage the situations on the pitch to achieve a fluid, enjoyable and competitive game. After games, the Match Coordinator submits a game report for review by the FC core team; optional details include final score, goal scorers, match incidents i.e. participant red card, injury as well as pitch or location problems i.e. lights, parking. Notably, FC games are volunteer led and a sophisticated infrastructure (bespoke game portal) has been developed to ensure self-sufficiency using minimal resources.

The initial site was followed by a second site in 2019 which together, at the time of writing, have a total of 807 registered members. The vision of the SE is to scale up the FC initiative to bring 'pick up football' games to men in communities across Ireland and beyond to reduce isolation

and to improve their overall health and well-being at a population level.

In a series of papers, we propose to evaluate this community-based football social initiative for men under ‘real world’ conditions to assess feasibility for scale up. While the community setting boasts many benefits in terms of implementing initiatives, these settings are highly variable and unpredictable [38]. Therefore, the challenges of implementing and sustaining initiatives within these complex settings require a shift from focusing on tightly controlled efficacy trials to evaluation in the real world context from the outset [39]. If feasible, plans will be put in place to upscale the FC initiative to improve reach (population and geographical access) and equitable access to the games and the games benefits [40]. The purpose of this paper is to detail the protocols used in the evaluation of the FC initiative and specifically the:

- a) Feasibility of the FC initiative using a Social Return on Investment (SROI) framework,
- b) Adoption characteristics of those men to whom this type of initiative appeals,
- c) Health impact of participation up to 12 months (12M), and
- d) Health economic impact of participation up to 12M.

Detailing these protocols may support others engaged in translational research to ensure that efficacious initiatives translate into practice for the benefit of population health.

2. Materials & Methods

An advisory board consisting of ten organisations representing football and sporting organisations (FC), Football Association of Ireland (FAI), Union of European Football Associations (UEFA), Sport Ireland (SI), national health charities (Irish Heart Foundation and Irish Cancer Society), the Irish national health service, the Department of Health, a philanthropic organisation (Rethink Ireland) and academics oversaw the design and implementation of this study. All decisions taken were focused on what would work feasibly in practice with a view to planning for scale up.

a) Feasibility of the FC initiative using a Social Return on Investment (SROI) framework.

A SROI methodological approach was adopted and informed the research design. Furthermore, the implementation of this methodological approach requires adherence to the principles of SROI which are integrated throughout the research process (see Figure 1 below).

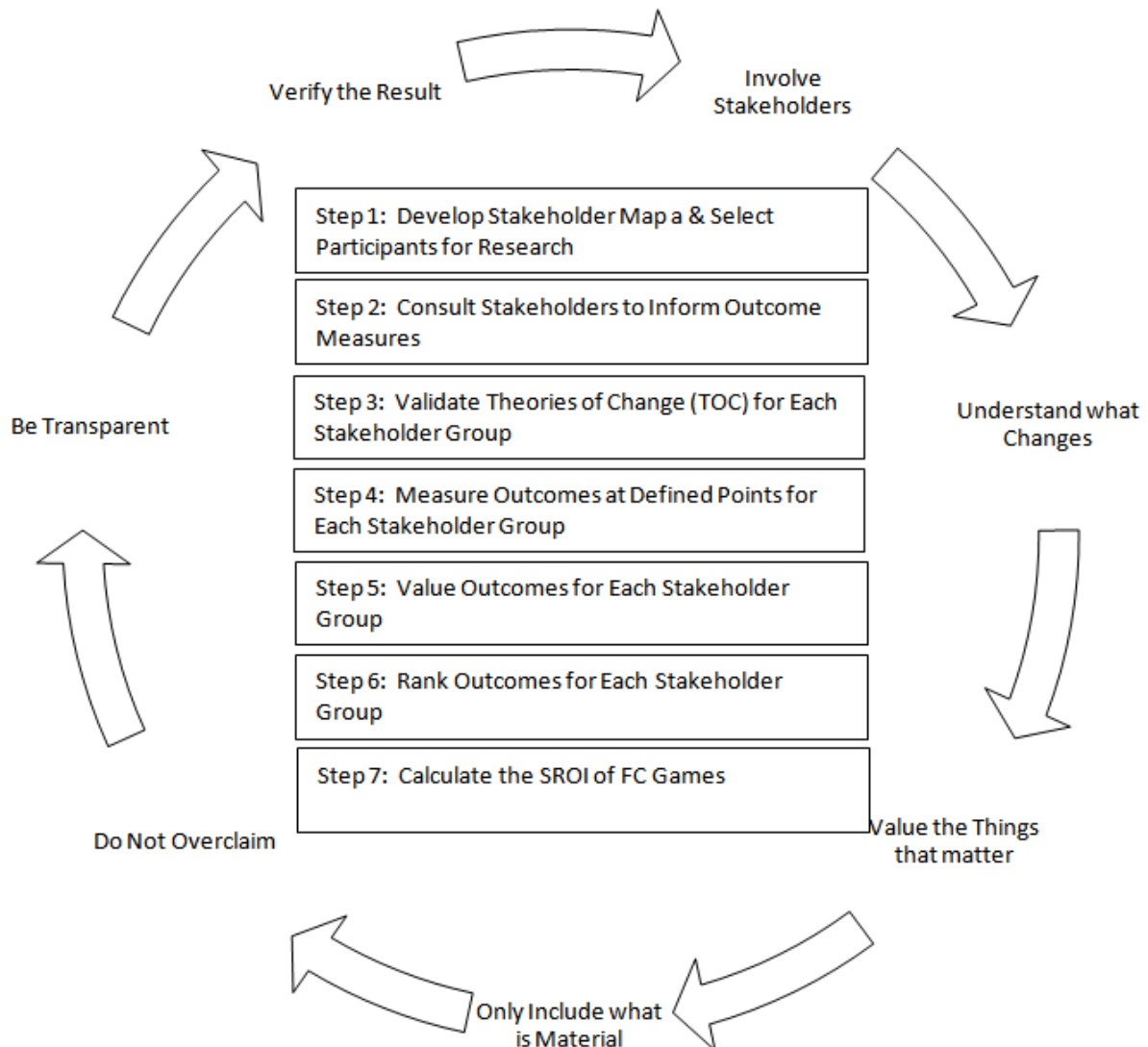


Figure 1. An overview of the seven step SROI methodological approach underpinned by the principles of SROI (Adapted from Social Value UK) [41]

In the following sections, each of the seven steps in the SROI methodological approach will be presented separately and where appropriate, the research design, participant recruitment, data collection and analysis approaches will be detailed. Convenience sampling methods were used for all stakeholder groups in this study with the exception of Significant Others (SOs) who were recruited via snowball sampling. Notably, this methodology was initiated in the weeks prior to lifting COVID-19 restrictions in the Republic of Ireland as it was imperative that Steps 1 and 2 were completed prior to the resumption of games. Games were postponed from Dec 5th 2020 and resumed on May 17th 2021. Therefore, given the absence of five months of games, the resumption of play was viewed as a baseline for data collection from participants. Consequently, the research team operated under a very tight timeframe to determine the outcomes to be measured in Step 4 which began for participants when they returned to play.

All data collection instrumentation and processes for data collection were the subject of considerable discussion at advisory board meetings; data collection instruments were reviewed with a view to optimising acceptability to FC participants. The timeframe for the seven-step data collection and management process is detailed in Figure 2 below. Notably, while steps 1-6 have been completed, at the time of writing, SROI data analysis is ongoing and is in the planning stages for studies b)-d).

Step 1: Develop Stakeholder Map & Select Participants for Research

In keeping with the principles of SROI [41], multiple stakeholder groups were included in this study. A stakeholder was defined as any group that may potentially have experienced positive or negative outcomes from FC games. Four stakeholder groups were identified; a) participants [P], b) volunteer coordinators [VC], c) community partners [CP] and d) significant others [SO].

Ps: As of May 2021, prior to the resumption of games, FC had a database of 123 members who were eligible to participate in this SROI evaluation. Following the resumption of games, new participants joined the FC initiative and were eligible to be included from Step 4 of the evaluation i.e. outcomes could be measured from these

participants. It was agreed that men were eligible for inclusion in the evaluation if they a) were aged at least 18 years, b) were a registered member of the FC initiative, c) completed the physical activity readiness questionnaire (PAR-Q) d) could read and write in English and e) provided written consent. Answering 'yes' to any item on the PAR-Q did not warrant inevitable exclusion from the evaluation. In practical terms, these men attended the FC initiative to participate and would play whether they were part of the evaluation or not. Therefore, as per the Men on the Move trial [42], men were advised to discuss any issues arising from PAR-Qs with their own GP.

VCs: This stakeholder group were defined as those who engaged in a voluntary role within FC [n=6]. This role incorporated administrative, logistical and functional demands such as the registration and induction of new players, organising games, dealing with issues arising on/off the field, managing payments, creating social events, rating participants and fostering and safeguarding the FC values and ethos. All VC's identified were FC members and had been involved since its inception in 2017. Members of the VC stakeholder group were eligible for inclusion if they a) were at least 18 years old, b) could read and write in English and c) provided written consent.

CPs: The CP stakeholder group were volunteers of a local sports club from whom the FC initiative hired the Astro turf pitch for games [n=2]. Those in this stakeholder group acted in the capacity of facility managers. They personally enabled FC member's access to the pitch and managed the payment for its rental. Volunteers were eligible for inclusion if they a) were at least 18 years old, b) could read and write in English and c) provided written consent.

SOs: SOs [spouses, partners or close family members] were typically individuals who would have been well placed to observe (i) changes in the men attributable to their participation in FC games and/or (ii) experienced an impact on themselves/their families through their acquaintance with a FC participant [n=123]. SOs were eligible for inclusion if they a) were at least 18 years old, b) could read and write in English and c) provided written consent.

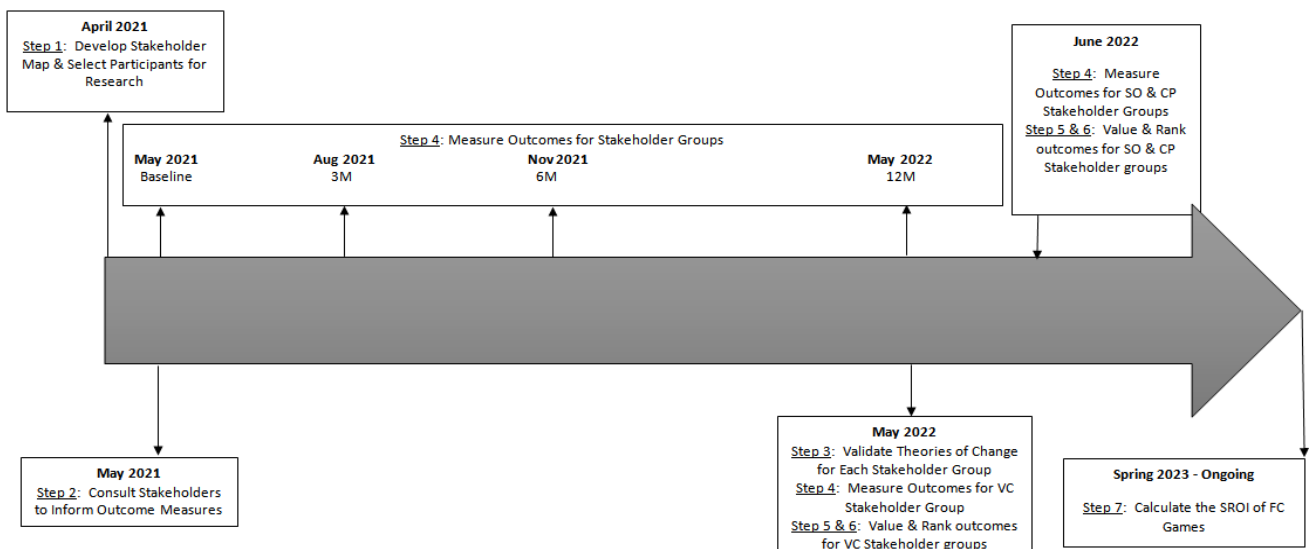


Figure 2. An overview of the timeframe for the seven-step data collection and management process for the study

Step 2: Consult Stakeholders to Inform Outcome Measures

All stakeholders, with the exception of SOs, were contacted by the FC gatekeeper and invited to participate in this study. SOs were recruited via snowball sampling. Those who expressed an interest in becoming involved in the research contacted a member of the research team [SD].

Prior to the resumption of games, interviews were conducted with Ps [n=14; 23-50 mins] and a focus group was held with VCs [n=3; 64 mins] [SD, PC]. As games resumed, interviews were conducted with SOs [n=2; 21-23 mins] [SD] and a focus group with CPs [n=2; 25 mins] [SD]. Interviews and focus groups sought to ascertain motivation to get and stay involved in the FC initiatives [Ps, VCs] and the impact of participation on them personally, their family [Ps, VCs, SOs] and their organisation [CPs]. Data collection was conducted on the Zoom platform and transcribed verbatim. Transcripts were analysed deductively using predefined codes namely, a) the environmental factors that influenced their experience [inputs and activities], b) participant characteristics [outputs], c) the impact of the programme on them and d) the outcomes they experienced as a result of this experience [SD, PC]. A Theory of Change [ToC], which is a comprehensive description and illustration that not only defines outcomes that are expected to happen in a particular context but also describes how and why those outcomes are expected [43], was drafted for each stakeholder group [SD]. Each draft ToC was then discussed with the wider research team [SD, PC, TE] and refined following review of the data and examples in literature.

Step 3: Validate Theories of Change for Each Stakeholder Group

The final ToC for each stakeholder group was validated via a workshop style focus group prior to 12M data collection. Several attempts were made to complete this step from December 2021 [dates were scheduled each month from December 2021 – May 2022] which were continually thwarted for a variety of reasons including a spike in COVID 19 cases and the unavailability of stakeholders due to logistical reasons and/or COVID 19. Naturally it was imperative that ToCs were validated before final data collection.

Ps: Two focus groups were held with the P stakeholder group [n=7: 60 mins; n=10: 60 mins] via Zoom [SD, TE]. The participants were given an opportunity to discuss a) what it is about the environment created by the FC initiative that appeals, b) what do participants have in common, c) what impact their participation in the FC initiative has had on them and d) outcomes experienced from those impacts, both positive and negative.

VCs: A focus group was held with the VC stakeholder group [n=3: 65 mins] via Zoom [SD, TE]. Stakeholders were given the opportunity to discuss a) what drew them to get involved in organising the FC initiative and define what they have in common, b) how they work together i.e. the environment they have created and what makes it effective and what might need improving, c) what impact their role as volunteer has had on them and d) outcomes gained as a result of being a VC.

CPs: A focus group was held with the CP stakeholder group [n=2: 45 mins] in-person [TE]. Stakeholders were given the opportunity to discuss a) the duties they perform for the FC initiative as volunteers for their organisation, b) the impact the relationship between the FC initiative and their organisation has had on their organisation and c) the impact this relationship has had on them personally (i.e. their role as volunteer with their organisation to liaise with the FC initiative).

SOs: A focus group was held with the SO stakeholder group [n=4: 45 mins] via Zoom [SD, PC]. Stakeholders were given the opportunity to discuss a) what it is about the environment created by the FC initiative that appeals to them, b) what impact their SOs participation in the FC initiative has had on them, their family and/or community and c) the outcomes gained for them, their family and/or community as well as adverse outcomes.

During the focus groups, the draft ToC for each stakeholder group was shown to that stakeholder group; following discussion edits were suggested. All data were recorded on the computer desktop and stored appropriately. Post data collection, members of the research team [PC, TE, SD] independently, deductively analysed the focus groups via review of the recordings to draft a final ToC. All ToCs were discussed at a team meeting to achieve consensus on the final draft. The final draft for each stakeholder group was then sent to the participant stakeholders of each focus group for validation. No additional edits were made by participants so the stakeholder ToCs were adopted.

The outcomes identified by each stakeholder group to be measured (see Step 4 below) were as follows: a) Ps - improved social, physical and mental health and increased injuries, b) VCs - improved self-esteem/self-worth and social connection and reduced stress, c) CPs - improved self-esteem/self-worth and a time commitment on them personally along with an increased revenue stream for the club, and d) SOs - improved mental and physical health along with an improved partner/family dynamic. Figure 3 below is an example of a validated ToC.

Step 4: Measure Outcomes for Each Stakeholder Group

In addition to identifying the outcomes to be measured, the research team also needed to consider the level of involvement each stakeholder group had in the FC initiative along with a likely timeframe in which change could reasonably be expected to occur. All of this was considered in research designs to capture outcomes for each stakeholder group and are detailed below.

Ps: Research Design: A pragmatic quasi-experimental one site repeated measures study without a control or waitlist condition was adopted to enable the influence of the FC initiative on a range of biopsychosocial outcomes to be determined with a modest sample size. This design was chosen as it was neither logistically feasible nor ethical to conduct a randomised controlled trial; participants had already been restricted from play for 5 months so therefore we could not ethically ask men to delay returning to play further given the importance of participation on mental health issues arising from COVID 19 restrictions [44]. Also, given the small sample size

available to test the efficacy of the FC initiative, randomization was not a viable option [45]. Furthermore, locating an alternative ‘group in waiting’ was not practicable given the ongoing COVID situation throughout this evaluation. Therefore, men acted as their own control post a 5-month lag in games. We recognise the limitation of non-randomisation and the absence of a control but assert that the decisions taken regarding the study design are a natural occurrence in action-based research in real world settings and under the constraints of public health restrictions during the COVID 19 pandemic.

Sample Size Estimates and Study Participant Numbers: Sample size calculations based on $p < 0.05$ and 90% power to detect differences in a repeated measures design indicated that a small sample size (~15 participants) would be needed to detect a 1 level (320 m) increase in Yo Yo Intermittent Recovery Test (YYIR Level 1) performance and a 5 cm reduction in waist circumference. These calculations were based on data available in Grgic et al.

[46] and Schmitz et al., [47] but also from the Men on the Move dataset [7]. The decision was taken to attempt to recruit all 123 active participants at the site into the evaluation for the following reasons: 1. In adhering to SROI principles, the primary outcome measure(s) cannot be identified in advance and the sample size must be sufficiently large to ensure that each of the biopsychosocial outcomes can be evaluated should they be prioritised in the SROI evaluation; 2. Previous experience of the research group with the Men on the Move evaluation [7] indicates that when participants are tested on 4 occasions over a 12 month period without any possibility for additional testing opportunities should they not be available on a designated evening, that a full dataset may only be achieved in 25% of the study cohort; 3. A larger sample size allows for the primary outcome measures to be evaluated separately in subsets of participants, in particular the need to evaluate the influence of participation levels identified *a priori*.

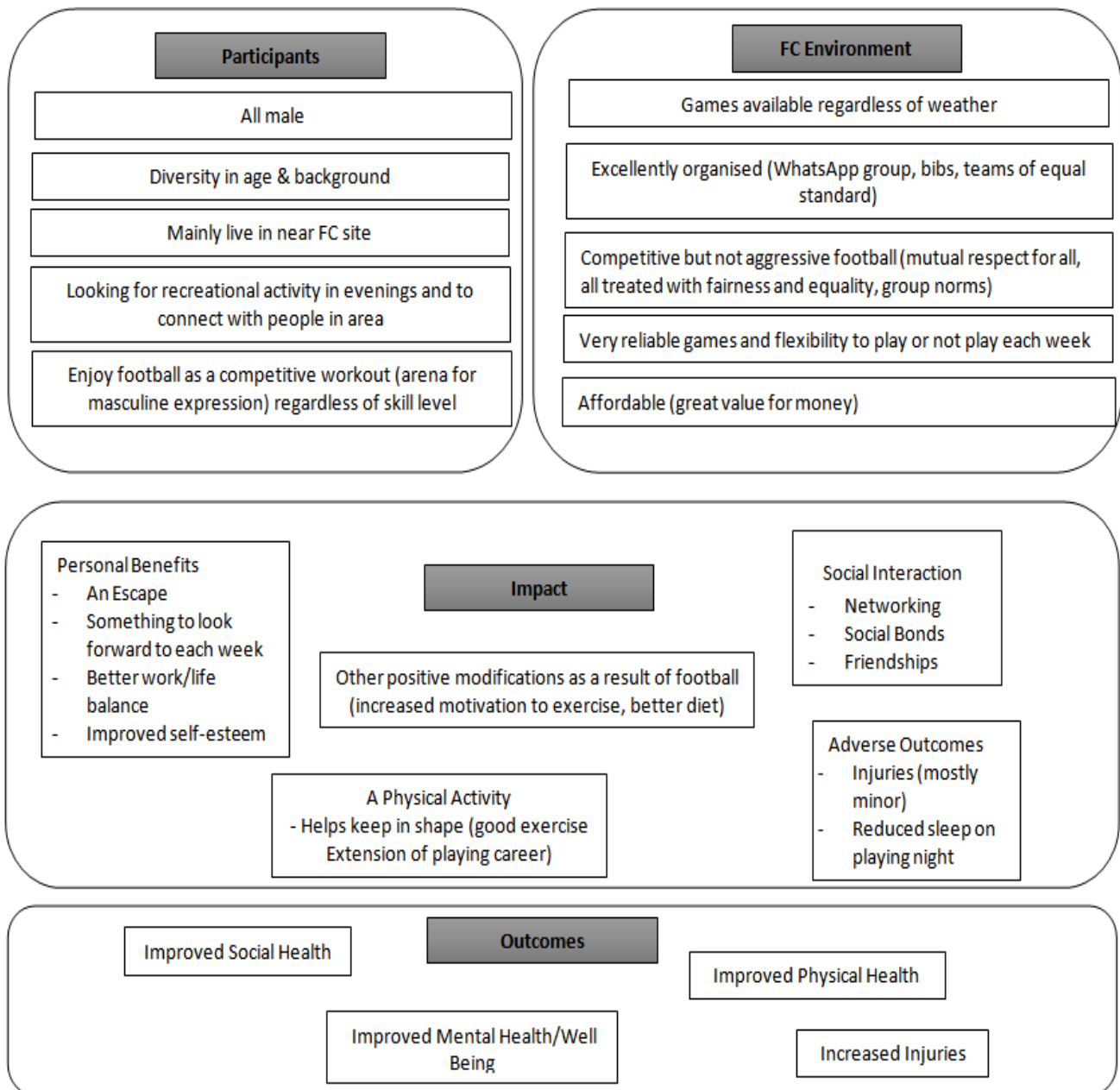


Figure 3. The validated ToC for the Participant stakeholder group

Data Collection: Quantitative measures were obtained at baseline (B), 3 months (3M), 6 months (6M) and 12M to investigate the outcomes identified by this stakeholder group in Steps 2 and 3 above. Notably, the outcomes identified in the draft participant ToC (May 2021) remained unchanged in the validated ToC (May 2022). To safeguard against inter-tester errors, the same personnel conducted anthropometric and fitness measures across all time points [SD, PC]. To maximise retention at 3M, 6M and 12M, men were contacted by the FC Gatekeeper via their WhatsApp group and email database in the days before data collection; the link to the survey was attached and in addition, they were reminded to attend the games for physical measures. At 12M, participants were informed of their data at B, 3M and 6M to act as a non-monetary incentive to show up. In addition, a subsidised¹ ticket for a corporate box was arranged for a Republic of Ireland football game which was offered to all participants as a thank you for supporting the research and to incentivise participation at 12M.

Self-reported outcomes were recorded via self-administered questionnaires [see Table 1 below]. The FC gatekeeper mediated the administration of questionnaires via their IT system when men signed up for games. Participants were directed to a link to the survey on the Qualtrics online survey platform. A number of measures were recorded at baseline, including participant demographics (date of birth, ethnic origin, educational attainment, relationship status, housing and employment status and financial strain), how participants had heard about FC games, their motivation to play, travel time to perceived play and ability to play. As the study progressed, participants were asked about the benefits and adverse outcomes they experienced as a result of playing and whether they were engaged in other forms of physical activity (PA) that could account for the benefits and adverse outcomes recorded.

At all-time points, self-reported health outcomes were measured that included quality of life (SF-12), sleep quality [48], self-esteem (Rosenburg Self-Esteem Scale) [49], loneliness (UCLA Loneliness Scale) [50] and adapted versions of lifestyle behaviours including PA, fruit and vegetables consumption, smoking and alcohol consumption.

The three objective outcome measures for this study were aerobic fitness, body mass index and waist circumference. Weight (kg) was measured using a Seca 813 electronic weighing scales with participants wearing light clothing, no shoes and with empty pockets. Height (cm) was measured without shoes using a portable Seca 213 stadiometer. Body mass index (kg/m²) was measured using weight and height measurements. Waist circumference was measured using a standard tape measure. All equipment was calibrated prior to commencing fieldwork. Aerobic fitness was assessed via the YYIR Level 1 in accordance with standard protocols [51]. On-site data collection of anthropometric and physical fitness data complied with COVID regulations.

VCs, CPs, & SOs: Research Design: A cross sectional survey design was used to assess outcomes.

Data Collection: Self-reported outcomes were recorded via self-administered questionnaires at 12M; the FC gatekeeper mediated the administration of questionnaires (Qualtrics link) to VCs via WhatsApp. The Qualtrics link was sent via email to CPs and via spouses to SOs. At 12M, members of these stakeholder groups were simply asked whether they experienced the outcomes identified by that stakeholder group as defined in the ToC.

Table 1. An overview of the self-reported outcomes collected from FC participants at each time point throughout the study

Variable	Baseline	3M	6M	12M
<i>Demographics</i>				
Age	√	√	√	√
Ethnicity	√			
Nationality	√			
Level of Education	√			
Relationship Status	√	√	√	
Change in your relationship status in the last 3M		√	√	
Living Arrangements – Who & Number	√	√	√	
Employment Status	√	√	√	
Change to your employment status in the last 3M		√	√	
Financial Strain	√	√	√	
Change in financial strain the last 3M		√	√	
<i>[Name of Site] Astro Football</i>				
Heard About It	√			
Primary Motive for Playing	√			
Travel Time	√			
Self-Rated Ability to Play	√	√	√	√
Benefits from playing in last 3M		√	√	
Benefits from playing in the last 12M				√
Adverse outcomes from playing in last 3M		√	√	
Adverse outcomes from playing in last 3M (Mild injury, Moderate injury, Major injury, other, none)				√
Engagement in other PA in the last 3M		√	√	√
<i>About Your Health</i>				
Quality of Life	√	√	√	√
Sleep Quality	√	√	√	√
Self Esteem	√	√	√	√
Loneliness	√	√	√	√
Physical Activity Frequency	√			
Vigorous Physical Activity Frequency		√	√	√
Fruit & Vegetable Consumption	√	√	√	√
Smoking Status	√	√	√	√
Alcohol Consumption	√	√	√	√
Modifications to lifestyle behaviors over last 3M		√	√	
Modifications to lifestyle behaviors over last 6M				√
Has playing FC games influenced the modification of behaviors		√	√	√

Step 5: Value Outcomes for Each Stakeholder Group

It was hoped to give stakeholder groups an opportunity to value and rank outcomes via in-person workshops. However, this was not possible and it was agreed that this would be done via the 12M survey. At 12M, stakeholders

¹ This was €10 for the ticket as opposed to its original price of €60

in each group were asked to place a financial value (from €0- €10,000) on each of the benefits and adverse outcomes they experienced from their direct or indirect involvement in FC games. They were asked to consider this value either as a direct benefit from having this outcome or as an opportunity cost (an estimate of how much they would be willing to pay to avoid not achieving this outcome).

Step 6: Rank Outcomes for Each Stakeholder Group

At 12M, participants in each stakeholder group were asked to rank the outcomes in order of importance via the 12M survey. To do so, participants were given a virtual '10 units' to share among the benefits and the adverse outcome(s). They were instructed to give as many or as little of their units to each but the total was required to be equal to 10. For example, they may have ranked the physical benefits they experienced as 4 units, the mental benefits as 3 units, the social benefits as 2 units and the adverse outcome as 1 unit, totaling 10 units.

Step 7: Calculate the SROI of FC Games

This step is yet to be completed and will entail completion of a value map which initially looks at the various inputs (costs of the FC initiative) and compares this to the outputs (for each stakeholder, this is the various outcomes x number of participants x duration x value per outcome). However, it has been well documented that not all of those within a defined stakeholder group may experience outcomes to the same degree [41]; outcomes experienced may be related to the level of participation [52]. Therefore, value per outcome will be defined based upon participation levels in the FC initiative and this will influence the final outputs value. From the final outputs value, four deductions will be made to account for deadweight (would the outcomes have happened without the FC initiative?), displacement (did the FC initiative displace any activity?), attribution (did anything else contribute to the outcome?) and drop-off (does the outcome drop off in future years). Thereafter, discounting will be applied to reflect the timing of such outputs. This leads to the final calculation of the SROI which divides the final value of outputs (benefits) by the final value of inputs (costs).

a) Adoption characteristics of those men to whom this type of intervention appeals

Similarly to Kelly et al., [7], the adoption characteristics of the men who participate in the FC initiative will be detailed to determine the reach of the FC initiative and the associated risk factor profile of these men. This assessment will be largely descriptive in nature based on the baseline data collected as part of the 12M intervention with a particular emphasis on cardiovascular risk factors (fitness, physical activity, smoking, alcohol, fruit and vegetable intake, sleep quality and waist circumference), loneliness and self-esteem but also demographic factors (age, ethnicity, educational attainment, relationship status and financial stress). This assessment will be important in order to justify further research, investment and scale up based on the health and isolation risk profile of the men who attend.

b) Health impact of participation up to 12M

The health impact of participation in the FC initiative over the 12M evaluation period will be determined using

simple repeated measures inferential statistics. The treatment of missing data will take into account ongoing attendance at the FC initiative, a distinction will be made between those who were participating regularly but not available for testing at the designated time and those who had clearly ceased involvement.

c) Health Economic impact of participation up to 12M

As shown in Table 1, a quality of life measure (SF-12) was gathered at all time intervals. This is a self-reported outcome measure which assesses the impact of health on an individual's everyday life. It can be used with the general population and the 12 questions asked address issues such as limitations in physical activities, limitations in social activities, and general mental health. The replies to these 12 questions for each participant will be amalgamated into a utility score which is available from QualityMetric. Analysis of this data across various demographic variables and participation levels will allow an assessment of which participants achieve the most quality of life benefits from the FC initiative.

3. Ethics, Consent and Data Management

Ethical approval for the study was sought and obtained from the ethics committees at the South East Technological University [SETU] [WIT2021REC006]. This study has been registered with the 'International Standard Randomised Controlled Trial Number' registry [ISRCTN17438373].

Details of the research were clearly explained to participants through written instruction prior to data collection [via survey and interview/focus group] and verbally immediately before data collection [interview/focus group]. Written informed consent was provided by all study participants.

In light of the COVID-19 pandemic at the time of data collection, all qualitative data [with the exception of the CPs ToC validation focus group] was collected via Zoom as per SETU's protocol. In brief, only the audio recording was saved on a desktop before being stored on the principal investigator's (PIs) [PC] password protected OneDrive to be transcribed. When saved to OneDrive, the audio-recording was deleted from the desktop. Transcription was completed within 7 days post data collection and audio files deleted from OneDrive.

Confidentiality and anonymity of participants was ensured through the study's compliance with SETU's protection policy. Namely, all identifiable information such as consent forms were stored securely on OneDrive separately from the transcribed research and questionnaires and only accessible by named researchers [PC, SD]. All data sets were kept on the PI's [PC] OneDrive and only members of the research team had access to specific data sets [SD, TE, MH, PC]. No data was stored on portable devices or desktop computers. Research data was fully anonymised; participants in qualitative research were assigned a unique code/pseudonym and all identifying information e.g. places were de-identified in any reporting of data; the only identifiers collected for quantitative data were participants date of birth and mother's maiden name so that they could

be tracked over time and linked with their participation data.

4. Discussion

Since the publication of Ireland's first National Men's Health Policy in 2009 [53], a rich landscape in men's health research [54], policy [55] and practice [56,57] has emerged in Ireland. However, despite this progress, many men remain unreached by health and health promotion initiatives. Therefore, it is imperative that efforts continue to build upon this knowledge base to ensure the ongoing development of good practice in this field in order to improve the health outcomes of all men.

FC is an Irish, community-based initiative designed by men, for men, that uses recreational 'pick up' football to improve their overall health and achieve social gains for local communities. Adopting many of the strategies known to engage men e.g. connecting positive masculine identities via playing football with being healthy and productive, the FC initiative has grown from an initial registration at one site in May 2021 of 123 members to a membership of 807 across two sites at the time of writing. It is evident that this initiative shows promise in engaging men and may be feasible for scale up. Therefore, the purpose of this evaluation was not to create something to be trialed but rather to use research to assess the SROI and health and economic impact of a real world organic initiative so that the feasibility for scale up could be determined.

This research highlights the challenges of developing a research design that can respond effectively to a variable and sporadic environment where football is prioritised and there is no compulsion to participate in research. Indeed, due regard was given to the time constraints of participants and other meaningful commitments beyond the FC initiative as well as ensuring the research did not encroach upon the valuable time participants had to play football. Moreover, playing performance and time was rightly prioritised by participants meaning that there may have been hesitancy in reaching true exhaustion during fitness testing as they lacked motivation to do so which is essential to reach a true maximum [58]. Coupled with the COVID-19 pandemic, which led to rescheduling of critical data collection points (e.g. ToC workshops), the barriers of data collection in real-world trials were discerning. However, given the SROI methodological approach adopted that required the involvement of men and indeed all stakeholders as drivers of SROI research to ensure that what is meaningful to them in their lives is assessed and valued in the research process [41], the research team were pragmatic and flexible in their approach to engaging with stakeholders. There is also value in capturing the messiness of conducting research under 'real world' conditions to truly understand contextual factors as an intervening variable; we know that population-based intervention programmes in the 'real world' face far greater challenges than the implementation of small efficacy trials that are controllable [59]. Therefore, while feasibility testing, establishing appropriate protocols under real world conditions also afforded the research team the opportunity to understand determinants of successful

implementation of the FC initiative [60] which is critical when planning for scale up at a population level.

5. Conclusion

While it may be viewed that men experience privilege and a 'patriarchal dividend' in terms of opportunities and access to resources, this has not translated into positive health outcomes for men [4]. Yet, this privilege can reinforce a narrative that there is a lesser need to prioritise men's health and that it may further compromise health care for women and children [60]. On the contrary, the process of improving men's health contributes towards greater gender equality in health as it not only benefits men but also has a profound impact on women, children and society [61,62]. An enhanced focus on men's health alongside women and children's health stands to benefit whole populations through reduction in healthcare costs and the prevention of chronic diseases that ripple through entire family and community networks through loss of work, disability and financial stress, irrespective of gender [4]. However, in order to improve male health at a population level, we need to develop good practice that can be replicated and disseminated at scale. Evaluating initiatives under real world conditions, while challenging, is essential to ensure that the transition from feasibility trials to replication and dissemination translates more readily.

Statement of Competing Interests

The authors have no competing interests.

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