Football Fans and Betting (FFAB): a feasibility study and randomised pilot trial of a group-based intervention to reduce gambling involvement among male football fans

Study Protocol
V2.0
09-03-2023

This protocol has regard for the HRA guidance

FULL/LONG TITLE OF THE STUDY

Football Fans and Betting (FFAB): a feasibility study of a group-based intervention to reduce gambling involvement among male football fans

SHORT STUDY TITLE / ACRONYM

FFAB

PROTOCOL VERSION NUMBER AND DATE

Protocol Version: 2.0

Date: 09-03-23

RESEARCH REFERENCE NUMBERS

IRAS Number:	This project has not been approved through the IRAS system, as it does not involve NHS patients, staff or institutions, or any of the other organisations, agencies or categories covered by IRAS. The study has been registered with Research Registry and has been allocated reference number: researchregistry5256
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SIGNATURE PAGE

The undersigned confirm that the following protocol has been agreed and accepted and that the Chief Investigator agrees to conduct the study in compliance with the approved protocol and will adhere to the principles outlined in the Declaration of Helsinki, the Sponsor's SOPs, and other regulatory requirement.

I agree to ensure that the confidential information contained in this document will not be used for any other purpose other than the evaluation or conduct of the investigation without the prior written consent of the Sponsor

I also confirm that I will make the findings of the study publicly available through publication or other dissemination tools without any unnecessary delay and that an honest accurate and transparent account of the study will be given; and that any discrepancies from the study as planned in this protocol will be explained.

For and on behalf of the Study Sponsor:

Signature: **Date: 09-03-23**

Name (please print): Debra Stuart

Position: Research Governance Manager

Chief Investigator:

Signature:  **Date: 09-03-23**

Name (please print): Prof. Gerda Reith

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KEY STUDY CONTACTS

Chief Investigator	Prof. Gerda Reith; gerda.reith@glasgow.ac.uk; Adam Smith Building, University of Glasgow, G12 0QQ; 0141 330 3849
Study Co-ordinator	Dr Blair Biggar; blair.biggar@glasgow.ac.uk; Adam Smith Building, University of Glasgow, G12 0QQ; 0141 330 2000
Sponsor	Dr. Debra Stuart, University of Glasgow, Glasgow, G12 0QQ; 0141 330 2000
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Key Protocol Contributors	Prof. Gerda Reith; gerda.reith@glasgow.ac.uk; Adam Smith Building, University of Glasgow, G12 0QQ; 0141 330 3849 Dr Christopher Bunn; Christopher.bunn@glasgow.ac.uk; 27 Bute Gardens, University of Glasgow, G12 0QQ; 0141 330 3670 Prof. Cindy Gray; cindy.gray@glasgow.ac.uk; 25-29 Bute Gardens, University of Glasgow, G12 8RS; 0141 330 6274. Dr Heather Wardle; heather.wardle@glasgow.ac.uk; Adam Smith Building, University of Glasgow, G12 0QQ; 0141 330 3849 Prof Robert D Rogers; School of Psychology, Bangor University, Brigantia Building, Penrallt Road, Bangor, LL57 2AS; 01248 382095 Blair Biggar blair.biggar@glasgow.ac.uk; Adam Smith Building, University of Glasgow, G12 0QQ; 0141 330 2000

Committees	University of Glasgow, College of Social Science Research Ethics Committee.

STUDY SUMMARY

Study Title	Football Fans and Betting (FFAB): a feasibility study of a group-based intervention to reduce gambling involvement among male football fans
Internal ref. no. (or short title)	Football Fans and Betting (FFAB): a feasibility study and pilot trial
Study Design	A mixed methods feasibility study
Study Participants	Male football fans who are heavily engaged in gambling who want to reduce their gambling involvement and improve their health and wellbeing.
Planned Size of Sample (if applicable)	Phase 1: 12 – 16 Phase 2a: 30 Phase 2b: 20-30
Follow up duration (if applicable)	12 months
Planned Study Period	24 months
Research Question/Aim(s)	***Overall Aims*** i) To develop and incorporate insights about UK sport bettors' behaviours into the current version of the FFAB programme and thus refine it for initial delivery (Phase 1: refinement); ii) To test the feasibility of delivering the FFAB programme within four professional football clubs (Phase 2a and 2b: feasibility); **Phase 1.** ***Refinement of FFAB for initial delivery*** RQ1. Is FFAB acceptable to the target population (men who are regular sports bettors who want to reduce their gambling involvement)? RQ2. What (if any) further adaptations are needed to enhance acceptability, usability and engagement with the FFAB programme and associated smartphone gambling diary in the professional football setting? RQ3. How can the football club setting be used to best effect in recruitment strategies to attract and recruit men to FFAB? ***Phase 2a and 2b. Feasibility of FFAB***

	RQ4. To what extent does FFAB succeed in attracting and retaining the target population?RQ5. To what extent do football clubs, coaches and participants find FFAB and the associated smartphone app acceptable, and what changes (if any) are required? RQ6. How well is FFAB implemented by coaches and what changes are needed to optimise coach training to deliver the FFAB programme? RQ7. To what extent can the smartphone app be used to assess men's engagement with the programme, self-reported money and time spent gambling and physical activity? RQ8. Are the research procedures acceptable to FFAB participants (men, coaches, and clubs)? RQ9. Is there evidence that delivery and acceptability of FFAB varies by features of the football club context, such as gambling sponsorship? RQ10. Does FFAB have the potential to encourage male sports bettors to reduce their gambling involvement and improve wellbeing? RQ12. Are there other intended and unintended (positive or adverse) consequences? RQ13. Does the FFAB logic model need refinement? ***Phase 2b*** RQ14. How effective are our enhanced recruitment strategies in attracting our revised target population? RQ15. How effective are our enhanced retention strategies in retaining our revised target population? RQ16How acceptable is the FFAB programme among a mixed-severity group? RQ17. How acceptable are our enhanced safeguarding procedures for participants and coaches?

FUNDING AND SUPPORT IN KIND

FUNDER(S)	**FINANCIAL AND NON FINANCIALSUPPORT GIVEN**
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Beacon Counselling Trust Head Office: 263 Townsend Lane Liverpool L13 9DG 0151 226 0696	In-kind delivery support funding

ROLE OF STUDY SPONSOR AND FUNDER

The University of Glasgow will sponsor the study, providing the necessary insurance to indemnify the study.

The NIHR will fund the study, providing the necessary resources to conduct the study. Beyond this function, the funder will exercise no influence or control over data analysis and interpretation, manuscript writing, or dissemination of results.

ROLES AND RESPONSIBILITIES OF STUDY MANAGEMENT COMMITEES/GROUPS & INDIVIDUALS

Study Steering Groups

Two groups are involved in the co-ordination and management of this study. Complying with best practice, this project will be managed by a Project Management Committee (PMC) and overseen by an independent Study Steering Committee (SSC).

The PMC will comprise of members of the study Investigators, including Gerda Reith, Kate Hunt, Cindy Gray, Heather Wardle, Sally Wyke, Chris Bunn, Robert Rogers and Nicola Greenlaw. They will be responsible for overseeing all aspects of the project design and delivery and co-ordinating the work of other partners, such as Healthy Stadia, and the team at Northumbria responsible for designing and delivering the smartphone diary app. They will function as the executive committee responsible for all decisions to be made on the project. The PMC will meet face to face, on average, once every six weeks to review progress, make key decisions and agree any risk migration actions required. During Phases 1 and 2, they will supplement face to face meetings with video conference calls. There will also be a further core delivery team of Gerda Reith, Heather Wardle and the research associate who will meet on a weekly basis to plan actions and review

progress, referring to the PMC where necessary. The full project team will meet at key milestones to agree actions.. Detailed notes of all meetings with action points will be produced and agreed, and the PI will be responsible for ensuring that these actions are taken. A detailed project timetable will be produced, with dependencies clearly marked and shared with the whole team and used to track progress against key milestones.

The independent SSC will function as the executive committee overseeing the project, ensuring that the research is ethical and robust and providing advice to the PMC where needed. Membership of this independent group will be voluntary, with no remuneration or formal arrangements made (beyond the terms of reference, which will be drafted and agreed by the group). For this project, the SSC will be asked to operate as a critical friend to the PMC and this will be reflected in their terms of reference. Independent membership will include the following: Chair: Prof Sir Ian Gilmore, a specialist in public health and alcohol research; additional members: Shaun Treweek, an expert in trials; Darragh McGee, a sociologist with expertise in gambling and football; Sarah Tipping, a statistician; Tim Miller, Executive Director of the Gambling Commission;; and representing public and patients, Andy Gray, a recovering problem gambler who has been assisting with the preparation of this proposal. Gerda Reith and Kate Hunt will represent the study team and Debra Stuart will represent the University of Glasgow's sponsorship team. The SSC will meet approximately twice throughout the duration of the project

PROTOCOL CONTRIBUTORS

The University of Glasgow will sponsor the study, providing the necessary insurance to indemnify the study. Beyond this function, the sponsor will exercise no influence or control over data analysis and interpretation, manuscript writing, or dissemination of results. The sponsor exerted no control or influence over the final research design.

The NIHR will fund the study, providing the necessary resources to conduct the study. Beyond this function, the funder will exercise no influence or control over data analysis and interpretation, manuscript writing, or dissemination of results. The funder exerted no direct control or influence over the final research design, but did administer the peer review process through which the final design was arrived at.

Service providers and those with lived experience of gambling harm have been involved in, and contributed to, every stage of the development of this protocol. Members of two counselling organisations are included as Investigators on the project: Neil Platt, Clinical Director of Beacon Counselling Trust, and Frankie Graham, former problem gambler and founder of BetKnowMore, an organisation which specialises in peer-peer support. Another person with lived experience of gambling harms, Andy Gray, is also involved in the project and has been invited onto the Study Steering Committee. All three have provided input and feedback on every stage of the protocol development; from research design, recruitment strategies and target population, to co-development of the intervention with the research team. They have provided particular advice on programme content and delivery, and in the adaption of techniques for supporting problem gamblers for our specific population of heavily engaged male bettors.

KEY WORDS: Gambling harm, behaviour change, sports betting, football clubs, gender sensitisation.

STUDY PROTOCOL

Football Fans and Betting (FFAB): a feasibility study of a group-based intervention to reduce gambling involvement among male football fans

1 BACKGROUND

This study addresses an urgent and growing public health problem: gambling among the high-risk population of male sports bettors. Sports betting is a particularly male dominated form of gambling and is a major and highly visible area of growth for the gambling industry. Between 2014/15 and 2017/18 the online sports betting sector grew from £456m to £2.4bn, with online football betting increasing from £160m to £1bn, rising by £340m in the last year alone [1]. One in six men have placed sports bets in the past year [2]. Gambling companies are now the primary sponsor of half of the English Premier Football clubs, with in-play betting being heavily advertised and marketed to sports fans. Global trends in football-related sports betting indicate this trajectory will be sustained. It is likely that the gambling industry considers sports betting a large, untapped market. In the run up to the 2018 football World Cup, there was a notable increase in international operators launching sportsbooks aimed at the UK market, signalling the strategic importance of the UK market to businesses.

Gambling is associated with a range of adverse consequences and harms, affecting the health and wellbeing of individuals, families, communities, and society. These can have enduring consequences that can exacerbate existing inequalities [3]. Gambling behaviour exists on a spectrum ranging from those who gamble and experience no adverse consequences, to those who experience some difficulties, to those whose gambling behaviour is defined as problematic against a range of validated criteria (e.g. health problems including stress, depression and anxiety) [4, 5]. The health harms from gambling can be severe, including self-harm, suicidal ideation, and suicide attempts [6,7]. Longitudinal research has shown that stasis in gambling behaviour is not the norm, with people moving along the gambling-harms spectrum [8]. In Britain, a follow-up study of regular gamblers showed that nearly 1 in 3 (29%) of those who had previously reported no adverse consequences from gambling saw an increase in their experience of harms when re-interviewed one year later [9].

The experience of gambling-related harms is associated with higher levels of engagement in gambling activities [2]. Those who gamble 49+ times a year (i.e., ~weekly or more) are at greatest risk of experiencing harms, with around 1:10 estimated to experience adverse consequences as a result of their gambling, versus 1:100 of those who do not gamble/gamble under this threshold [10].

This study will first refine and then assess the feasibility of providing an independent, theoretically-informed and systematic intervention to regular male sports bettors who would like to reduce their involvement in gambling in the context of improving health and wellbeing. The intervention consists of an 8-week, face-to-face group-based programme that aims to engage men in reducing their gambling involvement. It will be delivered by fully trained community coaches at professional football club home stadia. Each session lasts 90 minutes and includes 'classroom based' education round gambling behaviour,

motivations, and impacts, followed by group-based physical activity sessions. Each session will be designed to be highly interactive, using whole group discussions, games and small group working to allow men to support each other to practice and build skills to monitor and reduce the amount of money and time spent gambling. A purpose-built smartphone app will allow the men to record time and money spent gambling, as well as their daily step count, in a diary like format.

The study population will be male regular sports bettors who feel their gambling may be affecting their health, wellbeing, or relationships *and* who would like to make positive steps to change their gambling behaviour. In Phase 2a, the study population were aged 18- 44 with a Problem Gambling Severity Index (PGSI) score of 14 or less. In Phase 2b, the study population will be aged 18-55 with a PGSI score of 14 or less.

2 RATIONALE

The overall aim of the FFAB programme itself is to deliver an intervention to support men who are heavily involved in sports betting to reduce their involvement in gambling in the context of improving health and wellbeing. The research aims to refine and then test the feasibility of the intervention in four football clubs..

Our target population are at risk of experiencing harms related to gambling, with attendant social and economic impacts and there are currently few interventions aimed at reducing these harms amongst this group. For this reason, it is important to test our ideas, in the feasibility stage, to find out if the intervention is acceptable to the target population of male sports bettors, to the coaches who will deliver it, and to the football clubs whose premises will be used.

Male sports bettors are an important population because sports betting, and online sports betting specifically, is one of the few gambling activities that has seen significant growth in levels of engagement. Between 2007 and 2016, the proportion of the British population betting online doubled (4% in 2007; 8% in 2016) [2]. Sports bettors are disproportionately male and younger, which are both well-established risk factors for the experience of harms [2]. It is therefore important to identify effective preventative interventions to limit the escalation and incidence of harms among this group.

Gambling not only strongly impacts on individuals' quality of life, but also represents a substantial economic burden to the NHS and wider society. In the UK, the excess fiscal cost associated with gambling has been estimated at around £1.6 billion per annum [11]. This is a conservative estimate as this figure includes only observable and measurable social costs (health; employment; housing; and criminal justice). Evidence has also shown that greater levels of harms (and so social costs) from gambling accrue to those who are at low or moderate risk of problems because of the greater population number [12]. Given the strong societal impact of gambling, finding effective and cost-effective interventions to reduce gambling involvement and, ultimately, incidence of regular and problem gambling, is a key policy issue. However, few studies have analysed the effectiveness of interventions directed towards reducing gambling involvement, and none for the target group of our proposed study, men who are regular sports bettors.

Interventions targeting those with severe problems– cognitive-behavioural therapies and (brief) motivational interviewing – show some benefits in terms of clinical symptoms and sometimes decreased financial losses over relatively short follow-up times [16,17]. Only a very small number of studies have linked interventions to formal theories of change, most commonly trans-theoretical ('stages of change') models [18] and information-motivation-behavioural skills models (IMB) [19]. Very little is known about the characteristics that distinguish successful from unsuccessful interventions. A recent study developed a taxonomy of gambling interventions in an attempt to draw out components with potentially greater or lesser effectiveness [19]. This Gambling Intervention System of CharacTerization (GIST)] lists 35 characteristics of interventions but stresses the need for further research to identify their efficacy. Other recent evidence has suggested that interventions that involve certain behaviour change techniques (self-monitoring, goal setting, personalized feedback and reflection on behaviour) show promising results for sustained changes in gambling behaviour over time, particularly when targeted at high-risk groups [20,21].

One of the major hurdles to reducing gambling harms is the potential to identify and attract those of higher risk of harms to a programme. There is strong evidence of using professional sports settings to attract men [22,23] including attracting men at high risk of other adverse health-related outcomes, to successful behaviour change interventions, including, but not limited to, those developed by members of the current team [24]. The Football Fans in Training (FFIT) programme, for example, has been shown to be effective in attracting and supporting obese/overweight men (a traditionally hard-to-reach group) from across the socio-economic spectrum to make sustained weight and behavioural changes, with benefits clearly evident to 3.5 years [25]. This model has also demonstrated sustainable post-research roll-out and ongoing public health impact. It works by attracting men who want to improve their health ('get fitter and lose weight'). Men are encouraged to make achievable and sustainable changes using a 'toolkit' of behaviour change skills -such as self-monitoring and goal-setting- in a supportive group that enables mutual learning in an enjoyable and valued setting. It fosters sports-related socially supportive environments that enable men to incorporate new, healthier, behaviours into their identities and daily lives [26]. In the field of gambling, the PI's research has similarly highlighted the importance of social networks, environments, and gender in reducing gambling involvement (in terms of time and money spent, frequency of gambling and range of activities undertaken) and in shaping non-gambling identities [8,27]. This evidence supports the potential for the careful adaptation of learning from FFIT to the FFAB (Football Fans and Betting) programme, specifically drawing on the power of professional sports clubs, and social support and interaction to encourage behaviour change (reductions in gambling behaviour and increases in other more positive behaviours e.g., physical activity) promoting better health and wellbeing outcomes in a context of symbolic value to participants, the football club.

This protocol has been updated according to learning from phases 1 and 2a of the study. During the initial phases of the study we encountered several unprecedented challenges. This included having to pause the study due to Covid-19, the loss of one of our flagship clubs, problems with recruitment of participants, and with retention.

We undertook in-depth consultation with the National Institute for Health Research (NIHR), the Study Steering Committee (SSC), and the wider FFAB research team. Following these discussions, it was decided not to progress to 'Phase 3' as originally proposed, but rather to continue with more feasibility work. This second version of our protocol therefore includes an additional Phase 2b of feasibility testing, using revised recruitment and retention strategies. The revised strategies are based on learning from Phase 2a's delivery, and focus groups undertaken before starting recruitment for Phase 2b. According to this learning, we have refined our recruitment messaging and updated our website and recruitment materials accordingly.

Due to the loss of one of our flagship clubs in Phase 2a, we were able to apply some of the learning from challenges in recruitment and retention from the first club we delivered through. At the first club in Phase 2a we identified that people with a greater severity of PGSI scores were attracted to the study. As a result, in the second club in Phase 2a we widened our recruitment criteria. This decision was taken after insight from the ongoing Phase 2a delivery and guidance from the NIHR and our SSC. We decided to use a cut-off of 14 on the Problem Gambling Severity Index (PGSI) screen, meaning that those who score 14 or under will be eligible for inclusion in the Programme. A score of 15 and over deems individuals ineligible for the study. This is a means of balancing need against safeguarding.

For Phase 2b, we continued our consultation with the SSC and our safeguarding partners to add a further enhancement of our strategy. According to this, we have decided to extend the age range to include men aged 18-55 years (expanded from 18-44 years in the previous phase of the research).

This feasibility study represents the first independent, theoretically informed, and systematic intervention for male sports bettors. Our approach is also distinct because it is independent of industry; most 'responsible gambling' initiatives are industry led or funded. By contrast, our independent team will draw on sports club affiliation to encourage men to establish strategies to support behaviour change. In developing this proposal, we have consulted with individuals who have been harmed by gambling; one person who was in recovery from gambling addiction who reviewed an early draft told us: 'I wish I had signed up to something like this a couple of years ago then perhaps my life would be a lot different to what it currently is'.

3 THEORETICAL FRAMEWORK

Theories of behaviour change around gambling interventions are very under-developed. Part of the process of this pilot study is to refine our understanding of how, and why, certain features of the intervention may be more or less effective for changing behaviour than others. As such, our conceptual approach is a pragmatic and multi-faceted one that draws on the best currently available evidence on what works for reducing involvement in gambling. This involves insights from several approaches.

In particular, FFAB draws on the principles of self-determination theory, to build autonomy, competency and relatedness, to motivate men who are heavily engaged in gambling and who want to regain control over their betting behaviour, to reduce time

and money spent gambling, and thus improve self-esteem, health and wellbeing and social relationships. It also incorporates ideas from the information-motivation-behavioural skills (IMB) model, in which learning about gambling harms (e.g. impacts on social relationships) and benefits of reducing gambling (e.g. better financial wellbeing and, relatedly, better social and emotional wellbeing) is underpinned by motivational support and skills development [28].

The programme is also informed by theories of the influence of social contexts, social networks, and gender on behaviour [29]. First, setting FFAB in professional football clubs is designed to attract men to the programme in ways that are congruent with their existing identities. Second, the men-only group setting of FFAB is designed to tap into the ways that positive behaviour change, i.e., reductions in gambling involvement, is fostered, encouraged, and sustained through a supportive peer group. Third, the positive motivational climate created by coaches by the informal, interactive but structured style of the delivery is designed to support men to discuss and tackle potentially challenging and sensitive problems. These aspects were developed and shown to be successful in FFIT [24]. Although we recognise that gambling is a very different behaviour change to weight loss and associated behaviours, we are aware of the importance of social context in gambling behaviour [3,8], and believe that the specifically *social* element of the programme is something that gambling behaviour change can also be embedded in. In the social setting of the club, participants will be introduced to behaviour change techniques such as self-monitoring, information gathering, behavioural substitution, goal setting, feedback on behaviour, and relapse prevention [19] to help them better understand their gambling, and to develop strategies to change it. Following from findings of the process evaluation of FFIT, the *context, content, and style of delivery* of the FFAB programme is designed to allow men to discuss potentially sensitive topics around their betting in a mutually supportive environment and apply strategies to manage betting in ways that taps into important aspects of their sense of identity and so support change [8,27,30].

The FFAB intervention will also use engagement in group-based physical activities (PA) within the social setting of the football club to foster a socially supportive network of men. Unlike FFIT, where improvement in PA was an important secondary outcome, PA in the FFAB programme has a very different role. It is used primarily as a mechanism to strengthen social networks and peer support, and as a form of behavioural substitution by providing a displacement activity for gambling that men can focus on and bond around between sessions. To help to encourage this feature, the smartphone app is designed to allow participants to record and monitor their step counts, drawing on learning about the importance and enjoyment of this type of self-monitoring [31]. This feature will also encourage more general engagement with the app itself as a form of self-monitoring as well as goal setting, both of which are important in the generation of autonomy. It will allow participants to track the amounts of time and money they spend on gambling on a daily basis, which can be used in weekly group feedback sessions in which men set their own spending goals.

Our logic model incorporates core elements to test SDT as a provisional theory of change; but also includes other elements to explore complementary perspectives

including maintenance processes, and IMB, which have also been used to understand gambling behaviour [32, 33] (see Figures 2&3). In this way, if successful, our feasibility study will afford the material required to develop a model of change in a subsequent RCT of FFAB.

Figure 2: Logic Model for FFAB

Inputs	Activities				Outcomes	
	Attracting men	**Engaging men**	**Initiating change**	**Maintaining change**	**Short term**	**Long term**
Relational • Club and coach commitment to engage with programme training package, and preparation for each session **Physical** • Access to club facilities • Programme manuals • Self-monitoring app **Financial** • Resources to pay for materials and facilitator and coach time	Draw on multiple motivations: • desire to reduce gambling • desire to (re)gain control of time/finances • love of football club and behind-the-scenes access • desire to play football Appeal in ways that are congruent with existing identities (e.g. men only; at football club) Reassure men they will not stand out, they will be with other men 'like them'	Ensure men feel their decision to join the programme is valued Encourage a team spirit (relatedness) through: • promoting similar interests (e.g. football club, PA as part of the session) • demonstrating and sharing similar challenges in relation to gambling • use of social media Facilitate enjoyment in the sessions through interactions, fun and football	• Demonstrate and encourage practice of self-monitoring, goal setting (through the app), problem solving and feedback around gambling behaviours • Promote men's understanding of their own gambling behaviours and how gambling works in favour of industry • Appeal to men's sense of wanting to be in control of their (gambling) behaviours, and help them identify ways they can do this (autonomy) • Promote substitution of gambling for other (positive) behaviours (e.g. PA) • Promote stimulus control and financial restraint to limit access, time and money spent gambling • Promote competence in performances of new gambling behaviours including limiting gambling and abstinence • Promote development of a socially supportive network to support behaviour change A	• Build skills and competence through: i) Practice of behaviour change techniques ii) Optimal challenges in relation to gambling iii) Promoting self-referenced feedback • Encourage men to pursue a new interest (e.g. a form of PA they enjoy) that they can substitute for gambling • Encourage recognition of the personal benefits of changing gambling behaviour (e.g. more money, higher self-esteem, more connected to important people in their lives) • Encourage practice of strategies to avoid negative social influences • Encourage a deepening sense of positive social connectedness with peers (outside group session), family, friends • Help men to understand how to avoid and overcome setbacks	**Behaviours** • Men spend less time gambling • Men spend less money gambling • Men gamble less frequently • Men engage in a lesser range of gambling activities **Psycho-social** • Men improve their wellbeing • Men improve their self-esteem • Men feel more connected to important people in their lives • Men have more social support to facilitate behaviour change	**Behaviours** • Men continue to spend less time and money gambling • Men continue to gamble less frequently on fewer activities **Psycho-social** • Continued increased in wellbeing and self-esteem • Decreased relationship /problems breakdowns • Decreased levels of financial hardship • Men continue to feel well supported socially

4 RESEARCH QUESTION/AIM(S)

The primary aim of Phases 2a and 2b of the research is to test the feasibility of the FFAB programme

4.1 Objectives

Specific objectives:

i) To develop and incorporate insights about UK sport bettors' behaviours into the current version of the FFAB programme and thus refine it for initial delivery (Phase 1: refinement);

ii) To test the feasibility of delivering the FFAB programme within professional football clubs (Phase 2a: feasibility);

iii) To test the feasibility of delivering the FFAB programme to a revised target population, utilising enhanced recruitment, retention and safeguarding procedures (Phase 2b: feasibility)

Specific research questions associated with these objectives are:

1. *Refinement of FFAB for initial delivery*
RQ1. Is FFAB acceptable to the target population (men who are regular sports bettors who want to reduce their gambling involvement)?
RQ2. What (if any) further adaptations are needed to enhance acceptability, usability, and engagement with the FFAB programme and associated smartphone gambling diary in the professional football setting?
RQ3. How can the football club setting be used to best effect in recruitment strategies to attract men to FFAB?

2a. Feasibility of FFAB
RQ4. To what extent does FFAB succeed in attracting and retaining the target population?
RQ5. To what extent do football clubs, coaches and participants find FFAB and the associated smartphone app acceptable, and what changes (if any) are required?
RQ6. How well is FFAB implemented by coaches and what changes are needed to optimise coach training to deliver the FFAB programme?
RQ7. To what extent can the smartphone app be used to assess men's engagement with the programme, self-reported money and time spent gambling and physical activity?

RQ8. Are the research procedures acceptable to FFAB participants (men, coaches, and clubs)?
RQ9. Is there evidence that delivery and acceptability of FFAB varies by features of the football club context, such as gambling sponsorship?
RQ10. Does FFAB have the potential to encourage male sports bettors to reduce their gambling involvement and improve wellbeing?
RQ12. Are there other intended and unintended (positive or adverse) consequences?

RQ13. Does the FFAB logic model need refinement?

2b. Feasibility of Refinements to FFAB

RQ14. How effective are our enhanced recruitment strategies in attracting our revised target population?

RQ15. How effective are our enhanced retention strategies in retaining our revised target population?

RQ16 How acceptable is the FFAB programme among a mixed-severity group?

RQ17. How acceptable are our enhanced safeguarding procedures for participants and coaches?

4.2 Outcome

Our study outcomes include refinement of our recruitment and intervention approach (phase 1) and feasibility of the FFAB intervention within clubs (phase 2) Our outcome measures are commensurate with the objectives for each phase.

Phase 1: Our broad outcomes from Phase 1 include qualitative feedback from focus groups on:

- The acceptability of the FFAB programme to our target group
- Revision and refinement of the recruitment strategy

Thematic analysis will present data on participant's views of target recruitment material; what works, what does not and why; which elements of the FFAB programme are most/least attractive to our target group and why; recommendations for changes to the recruitment strategy and suggestions for how to find, access and recruit our target group.

Other outcomes from this phase include:

- Production of the final FFAB intervention protocol and coach manual, based on feedback from the co-development group
- Qualitative feedback from a pilot test of the smartphone app diary data to include ease of use, frequency of use and quality of data entered.

Phase 2: Our outcomes for phase 2a and 2b focus on

- Data on the acceptability of the FFAB programme to participants by i) reviewing data on recruitment, retention, participation and drop-out rates. This will include monitoring: the number of enquiries made; number of hits to project website/social media pages; number of people screened; number of eligible candidates identified; co-operation rates among eligible candidates; attrition rates throughout the programme; number of sessions completed by each participant; ii) qualitative feedback from focus groups among those who completed the programme and in-depth interviews among those who did not (exit interviews) and iii) review of smartphone app data relating to use and quality of data

recorded, including number of participants who used this, frequency of use per participant and quality of data (by reviewing reported data for extreme outliers and consistency).

- Data on the acceptability of FFAB delivery by coaches collected by i) focus groups with feasibility coaches after the full delivery of FFAB to produce thematic insight into: the confidence of the coaches to deliver FFAB; what worked and what did not; challenges and how to overcome these and revisions to coach training and the FFAB programme and ii) team observation of each session of FFAB in phase. Team observations will generate field notes identifying key themes for discussion by the full FFAB team in revising the programme.

We will collect information on attendance and logged data of app diary usage. Analysis of app data will be done post-intervention. We will conduct interviews with intervention participants after they have completed the programme to understand their experiences of FFAB, of making and sustaining reduction in their gambling behaviours, and of the research procedures (RQs8&10). Post intervention, we will also conduct exit interviews with non-completers, and interviews with coaches and football club representatives to understand their views and experiences of delivering FFAB and of involvement in the pilot (RQs5,6,8,9).

5 STUDY DESIGN and METHODS of DATA COLLECTION AND DATA ANALYIS

The research design is a mixed methods feasibility study. It comprises 2 phases

Phase 1. Refinement of FFAB for initial delivery (months 0-6)

In Phase 1 we will *refine the FFAB intervention materials* and associated *smartphone diary* by working iteratively with a co-development group including representatives from Healthy Stadia, football clubs, Beacon Counselling Trust, BetKnowMore (who both provide specialist support services for people experiencing problem gambling), those in recovery from gambling harms and male sports bettors.

Members of the co-development group have already contributed to the development of the FFAB programme. In Phase 1 they will meet twice, in months 2 and 3. The first meeting will consider the results of the Focus Groups (described below) to assess whether/how the programme and app should be adapted and develop recruitment strategies and branding of FFAB to maximise recruitment to and engagement with the programme (RQs 2&3). Between the first and second meetings, any necessary adaptations will be made to the programme and app to allow them to be reviewed again and any further changes made. The second meeting will also consider a draft of the coach training programme.

Data collection: Two focus groups with sports bettors in the target population (regular gamblers who want to reduce their gambling involvement) will be conducted in two football clubs (c.6-8 participants per club). Participants will be recruited through publicity campaigns at the clubs, online publicity, and advertising and through local media. This will be facilitated by our co-development partners, Healthy Stadia, who have a close relationship with club management and clubs Community Trusts.

The focus groups will take place on club premises at a time that suits most participants and will be facilitated by two researchers from the FFAB team. They will be audio-recorded and transcribed verbatim. Participants will be offered a 'thank you' gift card of £20 for their participation and travel expenses. The discussions will be designed to better understand the behaviours and motivations of sports bettors and explore views on the programme content and delivery (RQs 1&2). We will seek men's responses to different branding for FFAB, including the programme's proposed name, descriptions of key elements and taglines which describe FFAB's purpose. Our current ideas include: *'love the game, not the gamble'*, *'reclaim the game', 'play it safe'* to express notions of rebalancing the relationship between sport and gambling (RQ3).

Analysis will be thematic and focussed on designing recruitment strategies and improving the FFAB programme for delivery in the professional sports setting. The findings will be used by the co-development group to refine the recruitment strategies and content of FFAB for Phases 2 & 3. This will include insight into how best to brand and 'sell' FFAB to the target audience.

Phase 1 will also include development of the *coach training programme* for FFAB. We will draw on our team's experience of training coaches to deliver related programmes, as well as our specialist expertise in counsellor training around gambling harms. As coaches employed by professional football clubs' community organisations are not likely to have practical experience and knowledge about supporting men to change their gambling behaviour, experts with in-depth knowledge of gambling behaviour and harms will be heavily involved in training and support. The 2-day training will include learning on the rationale for each part of the programme and practice in delivery of each essential element (e.g. teaching and practising BCTs, engendering a supportive motivational climate in which mutual learning can take place). Training will be experiential and led by research team members from University of Glasgow and Beacon Counselling Trust. Members of the research team will attend an early delivery of FFAB at each club to provide initial support and feedback and will be available for further email/telephone support if required throughout feasibility and pilot trial deliveries.

Finally, during Phase 1, a *personal tracking application* will be implemented and trialed with users (drawing on the app technology and experience developed for EuroFIT) (RQ2). The application will be cross-platform (available for use via web browsers and natively on Android and iOS devices). To suit the majority of participants, including those from low socio-economic groups, the app will be functional on low-end devices, and use of data will be minimised. The app will enable self-monitoring of time and money spent gambling, support goal setting, and produce weekly reports for discussion at sessions. The app will centre on self-report data so that users can track any gambling they do and can include the time they spend thinking about and researching bets as well as that spent in gambling applications. Engagement data will be logged. In Phase 1, the app will be tested by c.4 regular gamblers, recruited from those who took part in our focus groups and agreed to participate in future research. Feedback telephone interviews will be conducted to understand usability and use (RQ2). A beta version of the app will be available for Phase 2, with a fully developed version ready for Phase 3.

Phase 2a and 2b: feasibility study (months 4-24)

Phase 2a and 2b will assess the feasibility of the FFAB intervention and inform whether further refinements to FFAB are recommended.. This includes delivering the coach training and the FFAB intervention within four clubs to test: whether we can recruit and retain the target population (RQ4); the acceptability of FFAB to clubs, coaches and participants (RQ5); the extent to which our training allows FFAB to be well implemented by coaches (including whether experts in gambling harms are needed) (RQ6); and whether the smartphone app can be used to assess men's engagement with the programme (RQ7).

Coach training: We will use the 2-day training programme developed in Phase 1 to train coaches at two feasibility pilot clubs in Northwest England to deliver the FFAB intervention to groups of male sports bettors (n~15). Specialist training will be provided in an intensive 2-day interactive workshop to upskill coaches in developing awareness of gambling related issues, explore the FFAB sessions (including the behaviour change goals of each), practice delivery of sessions and refresh skills on group facilitation. It will be led by team members from University of Glasgow and BCT, who respectively have experience in training coaches to deliver FFIT and EuroFIT and expertise in training for interventions to reduce gambling harms.

Recruitment to and delivery of FFAB: We will follow the recruitment procedures developed in Phase 1 to recruit ~15 men to attend the 9-week FFAB programme in the two clubs. We will further refine and implement an enhanced recruitment, retention, and delivery strategy according to learning from each club's delivery (RQ 14-17).

Data collection: We will use data from five sources to assess feasibility.

i) Monitoring of recruitment and retention. We will: a) monitor how easy it is to recruit participants, assessing the most productive routes to recruitment and whether different routes differentially reach men from different socio-economic backgrounds; and b) train coaches to record weekly attendance at FFAB sessions, so we can assess the attraction of the programme and retention to it (RQ4).

ii) Observation of delivery sessions. Members of the FFAB research team will observe delivery of all sessions at both clubs to assess engagement with the programme, ease of delivery and acceptability of core elements. Observations will also give the team insight into whether community coaches can deliver FFAB without support from gambling experts (RQs 5&6).

iii) Exit interviews with non-completers. Brief telephone interviews will be conducted with men who miss two or more sessions in a row to ask why they did not attend and whether there are any changes needed to the programme to make it more attractive and engaging (RQs 4&5).

iv) Post-programme interviews with coaches from clubs and gambling behaviour experts. Interviews will elicit views on what went well and what less well, the adequacy of training, how the programme could be strengthened and whether community coaches could deliver the programme without weekly in-stadia support from gambling experts (RQs 5&6).

v) Post-programme focus group discussion with participants. The focus group discussions will elicit views on what attracted participants, why they kept coming, what they liked and did not like about the programme (including the associated smartphone app), what would have improved it, what helped them to make positive changes in their gambling behaviours and their health, and any unanticipated beneficial or adverse outcomes (RQs 4,5,7).

vi) Logged data from the specifically developed smartphone app. The app will capture self-report data on money and time spent gambling and daily step counts as part of men's self-monitoring. We will use these data to assess engagement with the app, whether and how it might need to change, and its potential as a data capture tool in a future trial (RQs 5&7).

Data analysis: Qualitative data will be transcribed and analysed thematically, to identify what helped or hindered the delivery of the programme and what needs changing. Descriptive analysis will be used to summarise recruitment and retention and (from app logged data) explore patterns of usage, any problems with use and the extent to which the smartphone app can be used as a data collection tool. Analyses will be triangulated to gain a detailed understanding of whether and how coach training, the app, programme materials and delivery format, and recruitment strategies should be optimised. (RQs 6&7).

6 STUDY SETTING

All the phases of this project will be multicentre, using four professional football clubs respectively in England. The majority of the study activities will be carried out within these premises. These activities include:

Phase 1: 2 Focus groups in two different clubs

Phase 2a: Delivery of intervention in two different clubs

Coach training in two different clubs

Post-programme focus groups

Phase 2b: Delivery of intervention in two different clubs

Pre-programme focus groups

Coach training for two different clubs

Post-programme focus groups

7 SAMPLE AND RECRUITMENT

7.1 Eligibility Criteria

Our target population is regular male sports bettors who feel their gambling may be affecting their health, wellbeing, or relationships *and* who would like to make positive steps to change their gambling behaviour.

7.1.1 Inclusion criteria

Phase 2a.

1. Males aged 18-44.
2. Self-reported sports bettors (at least once a week).
3. Express an interest in reducing their involvement in gambling in the context of improving their health and wellbeing.
4. Can commit to attending sessions once a week for nine weeks.

Phase 2b.

1. Males aged 18-55.
2. Self-reported sports bettors (at least once a week).
3. Express an interest in reducing their involvement in gambling in the context of improving their health and wellbeing.
4. Can commit to attending sessions once a week for nine weeks.

7.1.2 Exclusion criteria

Phase 2a.

1. Females
2. Males < 18 or > 44 years old
3. Has a Problem Gambling Severity score of 15 or higher
4. Cannot read/speak sufficient English to give informed consent

Men who are excluded from the study on the basis of being a problem gambler (according to their PGSI score) will be signposted to services for support and treatment.

Phase 2b.

1. Females
2. Males < 18 or > 55 years old
3. Has a Problem Gambling Severity score of 15 or higher
4. Cannot read/speak sufficient English to give informed consent

Men who are excluded from the study on the basis of their PGSI score will be signposted to services for support and treatment

7.2 Sampling

Phase 1: We will aim to recruit approx. 12- 16 men for the focus groups (n= 6-8 at each group)

Phase 2: We will aim to recruit approx. 30 male sports bettors for each of the feasibility deliveries in Phase 2 (n= 15 at each club).

7.2.1 Size of sample

Guidance for pilot studies varies [18,19]. We will aim to recruit a total of 60 men (n= 15 at each club).

7.2.2 Sampling technique

For phase 2a, our sample will be men aged 18-44 who want to reduce their gambling. For all phases, participants will be asked to opt-in to the study. In phase 2b, our sample will be extended to men aged 18-55 who want to reduce their gambling. The sampling methodology will be a mix of convenience sampling with other methods like snowballing should recruitment prove more difficult than anticipated.

Convenience sampling is appropriate for all phases of the study as it allows easy access to a potentially hard to reach target audience, using the available mechanisms at the club to advertise and recruit participants.

The clubs themselves are purposively sampled based on the following criteria: a) at least one club with a primary betting partner and at least one with little/no gambling sponsorship; b) at least one urban/city-based club and at least one suburban club; e) at least one larger club (attendance at home games >20,000 people) and a smaller club (attendance at home games <20,000).

7.3 Recruitment

Approach: Building on insight gained in Phases 1 and 2, clubs (supported by Healthy Stadia) will use a range of recruitment strategies, including advertisements via the club's social media and at the club's ground, use of local fan networks and community groups, and advertising on local media to advertise and recruit to the study. Where data protection rules and club permissions permit, clubs will send direct recruitment material via email and post to potential participants.

- We intend to utilize the existing community and fan programmes that are run by football Clubs in both the Premier League and lower divisions as vehicles to refer men on to FFAB. Clubs have a wide range of these programmes, such as EuroFIT, Man V Fat, walking football, health checks and wider wellbeing programmes for men and family units and they have advised us that they are confident that these can be utilized effectively to attract participants. We anticipate that a minimum of 30% of men will be successfully recruited to FFAB through this method.
- In addition, most Clubs have strong links with local organizations who employ large numbers of men (e.g., bus or taxi companies, Royal Mail, warehousing), and these are an excellent way of recruiting participants to gender-sensitised programmes. Healthy Stadia will be able to work closely with each club foundation to ensure that these referral pathways are maximized to meet recruitment targets.
- We will also draw on the communications apparatus that Clubs have at their disposal. The infrastructure that Clubs have to engage and recruit men is extremely effective. For example, Everton FC (one of our pilot clubs) has a 'community database' of over 50,000 people. If we assume that 30% of those on the database are men aged 16-44 and that at least one third are regular gamblers, this gives an initial target population of c.5000 men from which to recruit 30 participants. Clubs will send direct recruitment material via email and post to potential participants

- We will use a range of materials and media to recruit men to the programme. We have budgeted for a professional design company to produce and print a range of FFAB branded recruitment materials. The FFAB 'brand' and logo will be specifically designed to appeal to our target group, and will be developed by the project co-development group, made up of team members, PPI Cis, as well as a football fan and a recovered problem gambler. The visual imagery will be used consistently across a range of media, including flyers and posters, and will be distributed widely to advertise and recruit to the programme. We intend to develop a project website and linked social media accounts and will also target local community media networks and organisations, as well as Football Club grounds.

Process: The process of recruitment will be informed by learning from the Standard Operating Procedure (SOP) of the EuroFIT programme, which will be adapted for the specific context of FFAB.

- *Planning***:** we will allow approximately 3 – 4 weeks to promote the programme before enrolment begins. We will work with Clubs to plan how best to promote FFAB through their community and fan programmes, as well as locally, focusing on where, how and when is best to do this, and what materials are needed.
- *Targeting*: we will discuss with Clubs which strategies to use and where to target. These will include:

    - Club-based venues, organisations and activities
        - Posters/flyers in Club
        - Posters/ flyers in community programmes
        - Advertisement on club/trust/fans website
        - Club/community trust twitter feed/ Facebook
        - Direct email to club fans with recruitment message
        - Announcement in fan newsletters
        - Match-day advertising, with a recruitment team in attendance to hand-out leaflets and collect contact details
        - Match-day programme advert and in-stadia announcements
    - Local Media
        - Newspapers (local, regional, national), radio and TV coverage
    - Other local organisations
        - Local employers (e.g. bus and taxi companies, warehousing, Royal Mail, community centres)

Recruitment text: a clear recruitment message, to be included on all recruitment materials, will be produced by the development group. It will explain the programme and outline the inclusion criteria. We will set up a single project contact email address and mobile phone number which will be included on all materials.

FFAB website: A project website will be established and linked to all participating organisations, including Clubs. Information about the programme and contact details for potential participants will be included.

7.3.1 Sample identificationFor all phases, participants will self-identify and opt-in to the project by responding to recruitment advertising co-developed with clubs and the project teams.

A multimedia recruitment strategy will be developed and will include social media posts, posters, and leaflets, all of which will provide instructions on how to join the study and necessary contact details. The football clubs and study partners will design and execute a co-developed recruitment strategy that makes use of these materials.

Interested participants who contact the study team will be asked a series of questions to screen for eligibility. This will aim to identify men who are: aged 18-44 (phase 2a) and 18-55 (phase 2b); self-report that they bet on sports at least once a week; express an interest in reducing their involvement in gambling and say they can commit to attending sessions once a week for nine weeks. At this point, men will also be screened to determine their gambling status, using the Problem Gambling Severity Index (PGSI) questionnaire. In both phases only those with a PGSI score of 14 or less will be eligible.

Participants who take part in focus groups and/or in-depth interviews will be offered a £20 voucher to thank them for their time. Participants who take part in the full FFAB feasibility test or the pilot RCT will be offered £20 voucher to thank them for their time.

7.3.2 Consent

Informed consent will be obtained from all individuals before participation in the study. During recruitment, they will be provided with an information sheet, which outlines the purpose of the research, their potential role in it, and explains that participation is entirely voluntary, confidential, and can be stopped at any time. It will also have information about sources of further information, and of support and help. The information sheet will be received at least 24 hours (either in person or via email) before the informed consent procedure.

The informed consent procedure will be conducted by a trained member of the research team, who will explain the aims of the research, its benefits, and potential risks, to ensure potential participants fully understand what participation in the study will involve. They will have the opportunity to ask questions, and to discuss any aspect of the research with the research team member.

Before signing consent forms, a trained member of the research team will ensure that they are satisfied all participants are fully informed and understand the nature and purpose of study.

8 ETHICAL AND REGULATORY CONSIDERATIONS

The research aims and methods are designed to develop an intervention that will help a population group at high risk of gambling related harm to reduce their involvement in gambling, and to improve their overall wellbeing. The research process is guided by the principles of informed consent, participatory collaboration, and of doing no harm to participants. We have built in robust safeguards to uphold the wellbeing and dignity of participants at each stage of the research process.

We believe that the benefits to gamblers, their families and communities and society as a whole outweigh any possible inconvenience or discomfort to participants during the course of the study. Ultimately, the FFAB programme has the potential to reduce gambling-related harms and increase health and wellbeing among our target population.

If successful, this will reduce the burden of gambling on the NHS and society. Our project will assess this potential and, should results look positive, then we will move to a full-scale trial to provide the most robust evidence of effectiveness and cost-effectiveness.

8.1 Assessment and management of risk

Risk/ Potential risks of the study. We are aware that gambling can be a sensitive topic, and that asking men to talk about their attitudes about it could involve bringing up issues of compulsive behaviour, mental health issues and financial problems, and could be distressing for some. Discussing gambling in a group context could encourage some participants to reflect on their own behaviour, and may generate feelings of shame or stigma, or prompt some to think they may have a gambling problem. Unanticipated outcomes could include participation in the study enabling a partner/family member to realize that the participant was involved in gambling, and precipitating rows/relationship breakup, or causing them to drink more to cope with the worry. For some, it could increase feelings of shame or guilt as the participant realizes the broader impact of their gambling on others, or the extent to which gambling has limited their range of engagement in other things. Non-gambling related outcomes could relate to sustaining an injury because of increased involvement in physical activity as a consequence of taking part in FFAB. Throughout the project, we will explore the consequences of taking part in the study within all qualitative interviews with participants and coaches.

Risk management plan for risks of harm to participant. / others : The project team are aware of the potential for distress that could arise from discussing gambling. We have made use of the extensive experience within our team to mitigate it. Academic members of the team have experience in designing health-based interventions around sensitive topics (e.g., weight loss), while the gambling behaviour organisations have experience of dealing with issues related to gambling harms and mental health. We are confident that the co-development of the research, and its ongoing monitoring by these individuals and groups, will work to minimise risk and safeguard participants wellbeing.

To this end, we have built in safeguards at each step of participants' trajectory through the research.

- During recruitment, to ensure that participants understand the research and what it involves, participants will be provided with an information sheet and consent form which clearly explains the aims of the project, and their role in it. From the outset, this will include the details of project partners Betknowmore and Beacon Counselling Trust, as well as details of other organisations, including GamCare, a national treatment provider who have specialist online forums, chatrooms and a 24-hour helpline phone number. Discussion and questions about the research will be encouraged, to ensure that clear communication is established with the researcher, allowing for informed consent to be given.
- Before and during the sessions themselves, researchers will explain to participants that they do not have to participate in discussions/ respond to questions if they do not want

to, and that if they become uncomfortable at any time, they are free to stop participating/ leave the group. Researchers will also be sensitive to the impacts of discussions during the focus groups and will monitor participants for signs of distress throughout. Being mindful of the group context of discussions, they will take steps to pause it if they feel that a participant needs a break, or if they wish to end the session. Researchers will be vigilant for signs of any psychological, emotional or other issues that may arise at any point during the study and will be prepared to signpost/ refer an individual to sources of support if necessary. While coaches will be trained to ensure participants exercise within their limits, and how to respond when any injuries occur, any injuries that are sustained during the physical activity component of the project will be reported by coaches to the research team, as an adverse/serious adverse event.

- Throughout and at the end of discussions, details of organisations who provide support for a range of issues related to gambling, mental health, and other problems, will be made available for participants who might wish to discuss anything further. These will be listed on the Participant Information Sheet. At the end of the session, participants will be thanked for their input and reminded of this list of organisations.

Risk management plan: We have identified a referral procedure for dealing with safeguarding issues. It has been guided by our CI partner, Neil Platt, Clinical Director of the Beacon Counselling Trust. As well as being a specialist gambling treatment provider, the Trust is also one of the largest mental health support providers across the Northwest of England, engaging with over 3500 patients per year. Neil Platt has advised on adapting the Trust's protocol for referrals to the current study. As such, should any participant disclose to any team member as experiencing psychological, health or emotional issues during the study, or be identified by a team member as experiencing them, they will be offered an immediate referral for initial assessment at Beacon. There, they will be seen by a trained professional, who will assess their needs and identify the most appropriate next steps. This may involve continued care from Beacon therapeutic staff, or a referral into another, more appropriate service, which would be facilitated by Beacon. This process would be carried out following a standard care pathway, and in collaboration with the individual concerned.

8.2 Research Ethics Committee (REC) and other Regulatory review & reports

Before we begin the process of research, we will obtain ethical approval from The University of Glasgow's College of Social Sciences Research Ethics Committee, which is compliant with the ethics framework set out by the Economic and Social Research Council. This will be based on the protocol for the study, the informed consent document, plain English information leaflet and draft topic guide.

Regulatory Review & Compliance

No phase of the study will commence until the PI has received final approval letters from University of Glasgow, College of Social Sciences Ethics Committee. Each football club will only be permitted to commence the study on certified completion of coach training, which will include full guidance on how to implement the FFAB programme. Requests for

amendments will be submitted to the same committee for approval before being implemented by the project management team.

Amendments

Amendments to the study design, will first be discussed with the legal team responsible for the University of Glasgow's sponsorship arrangements before being submitted to the ethics committee (University of Glasgow, College of Social Sciences Ethics Committee) for consideration.

8.3 Peer review

Before submission to the funding body, the study was peer reviewed internally by two academics with specialisms in public health and intervention research at the University of Glasgow. After submission, the study was reviewed twice (outline and full proposal) by a committee of independent experts convened by NIHR's Public Health Research stream. Recommendations made at the outline stage were addressed and incorporated into the full study proposal. Recommendations made at the full proposal stage were subsequently agreed and incorporated into the design before the researchers signed a contract with the funder committing to deliver the study.

8.4 Patient & Public Involvement

We have a strong commitment to public involvement, and our PPI partners have been actively involved in the design and development of every stage of the development of the proposal. They will continue to be involved throughout the duration of the research. They include Healthy Stadia (HS), who liaise with football clubs on a national scale; Beacon Counselling Trust (BCT), part of the nationwide GamCare treatment services network providing treatment and support for people dealing with gambling-related harms and Betknowmore (BKM), an organization which specialises in peer-peer support for gamblers. Development: Each partner was fully involved in developing the proposal for the research: presenting views at 2 full team meetings held in Glasgow, writing, and contributing to sections of the proposal and reviewing final drafts. Healthy Stadia advised on the recruitment of clubs and of participants and worked with the research team to write introduction letters for clubs. This has led to three clubs already committing to involvement in FFAB. Intervention development: BCT and BKN have been instrumental in the design of the FFAB programme itself, which was co-developed between them and the academic team members. BCT and BKM designed the template for the programme, adapting techniques and materials they had used with their clients, into an approach and format tailored to suit our study population and objectives. We drew on their working knowledge of gambling behaviour in our analysis of the most up to date research evidence on interventions for reducing gambling harms. This iterative process ensured that the lived experience of people who work with gamblers on a daily basis was incorporated into every aspect of the intervention, ranging from content and materials to timing of delivery.

Two 'experts by experience' (recovering problem gamblers) were also involved in

intervention development. This led to the specific development of a session within the intervention on industry tactics, especially around advertising. Discussions with AG and AM also led to specific changes in our recruitment criteria; namely broadening the focus to include regular gamblers and focusing on project tag-lines around the theme 'loving the game not the gamble' which they felt would be more acceptable to the target audience. AG and AM have both read and provided comments on multiple drafts of the proposal and intervention to ensure the views of those with lived experience of gambling are represented in the FFAB programme.

PPI underpins the design, delivery and implementation of our research. Together, HS, BCT and BKM form our co-development group. The group will be involved throughout the process of the research, from advising on ethical procedures to active involvement in coach training and programme delivery.

Undertaking and development of the research: PPI is key to the ongoing development of the project. At each stage, we will seek views, feedback and insight from football club coaches and male football fans. In particular, the views of sports fans will be sought on the recruitment strategy, on the form and content of the programme sessions, and on the usability of the smartphone app, and their suggestions incorporated into refinements of the research. BCT and BKM, along with the academic team, will continue to have responsibility for the further development of the FFAB programme. Prior to the start of the project, they will work together on developing a draft FFAB training manual to be refined and tested in Phase 1 of the study. Football clubs themselves will be key to the success of the project and will be centrally involved with the research. Led by Healthy Stadia and supported by the academic team, we will seek the views of the clubs on the best methods for recruiting our target population and for promoting the study widely. This will aim to ensure that our strategies are tailored to local contexts, settings, and demographics.

Dissemination Our PPI partners are also key to dissemination and impact activities. BCT are part of a nationwide network of gambling treatment providers, and HS are involved in national and international networks for the delivery of health interventions. Their networks will be important for ensuring that findings from the study are communicated to a wide audience in the fields of sport and gambling and to the public more generally, ensuring reach beyond our PPI partners themselves.

8.5 Protocol compliance

The study team are aware that accidental protocol deviations can happen at any time. Such deviations will be documented using forms tailored to each activity within the research study and reported to the Chief Investigator and Sponsor immediately. Any deviations found to be occurring on a regular basis will initiate an emergency meeting of between the PI, the sponsor, representatives of the TSC and SSCs to consider appropriate action, including termination of the research study. Decision making processes will be documented and shared with the funder and ethics committee

The research team will collect all data using electronic data capture methods, ensuring that data collection activities are logged in encrypted server logs. This will provide a reference point for monitoring deviations from data collection protocols. The research team will also conduct observations of FFAB, which will provide opportunities to identify, report on and, where possible, correct protocol deviations.

8.6 Data protection and patient confidentiality

We will protect participant confidentiality throughout the study, in line with the requirements of the General Data Protection Regulation 2018.

All *focus group and individual interviews* will be audio recorded, with permission, using an encrypted recorder. On completion, recordings will be transcribed, and the transcripts and the notes of groups will be identified with a unique ID/group number, and the names corresponding with those numbers will be kept separately on a password protected list (destroyed on completion of the project). Data will be uploaded and held in a managed storage environment on the Glasgow University server, accessible only by the research team, through use of a secure password.

Data collected by the mobile diary designed for use by participants during the trial will be stored on a secure database hosted by a cloud computing provider (Google Firebase), which is necessary for the functioning of the application. Users will be given a unique username and password and will also be able to set a pin-code for accessing the data on their own device. The data collected via the diary will include self-reported data about time and money spent gambling, goals set by the user and free-text notes. In addition, we will collect engagement data concerning how often the diary is used, and how it is accessed (the type of web browser or mobile device used). We will also offer user-support via email

No real names will be used in reports/publications and identifying details will be removed.

8.7 Indemnity

The University of Glasgow maintains research insurance which will cover the study design and protocol. Arrangement for insurance and any claim resulting from participation in the study will be detailed in the patient information sheet.

8.8 Access to the final study dataset

All investigators will have access to the full dataset, as will the research associate employed by the study. A publication proposal form will be developed and agreed by the research team, which investigators will have to complete before being granted permission by the PI to author papers derived from the dataset. All patient documentation – information sheet and consent form – will make clear that their

anonymised research data may be made available to other bona fide researchers for secondary analysis.

9 DISSEMINIATION POLICY

9.1 Dissemination policy

On completion of the study, the data will be analysed and tabulated, and a Final Study Report prepared and submitted to the NIHR PHR programme for publication in its *Public Health Research* series, which is open access a publicly available via the NIHR's website.

All research publications arising from the study will be submitted to peer reviewed journal. We anticipate that all publications will be completed within five years of the study's end date. The NIHR PHR programme will be acknowledged in these publications, but no NIHR staff or representatives will have influence or control over the content of these publications.

A lay report will be produced aimed at participants, football clubs, members of the third sector and other non-academic audiences. Participants and football clubs will be informed of results on request, but not until the main findings from the study have been published.

. Qualitative data will be deposited online, when doing so is possible without significantly increasing the risk of compromising participant anonymity. After an embargo period to enable publication, requests for access to these data from bona fide researchers will be considered by the CI and an independent academic identified in conjunction with the SSC.

9.2 Authorship eligibility guidelines and any intended use of professional writers

All individuals who have had input into the research design, production and analysis of the data will be granted authorship on the final study report. This will include all the study Investigators and the RA and the lead statistician providing the analysis.

For manuscripts submitted to peer review journals, the International Committee of Medical Journal Editors criteria will be observed.

10 REFERENCES

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11 Appendix 1- Required documentation

1. Patient Information Sheet which has been adapted to include the Club's logo
2. A copy of the consent form
3. A copy of a summarised version of the protocol suitable for reading by lay audiences, such as football club coaches and representatives.
4. A list of the coaches approved to deliver the FFAB programme and proof of training completion, signed off by one of: the training lead for the study (Dr Bunn); the PI (Prof Reith); or a designate from the research team authorised to do so by the PI.

12 Appendix 2 – Schedule of Procedures for phase 2

Procedures		**Visits (insert visit numbers as appropriate)**				
	Screening	**Baseline**	**Weeks 1-9**	**Week 10**	**6 months**	**12 months**
Phase 2						
Informed consent	x					
Observation of treatment			x			
Focus Group with completers/coaches				x		
Exit interviews with non-completers				x		

13 Appendix 3 – Amendment History

Amendment No.	Protocol version no.	Date issued	Author(s) of changes	Details of changes made