
Article:
Such, E. orcid.org/0000-0003-2242-3357, Burton, H., Copeland, R. et al. (6 more authors) (2020) Developing a theory-driven framework for a football intervention for men with severe, moderate or enduring mental health problems: A participatory realist synthesis. Journal of Mental Health, 29 (3). pp. 277-288. ISSN 0963-8237

https://doi.org/10.1080/09638237.2019.1581339

Routledge
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Journal of Mental Health

ISSN: 0963-8237 (Print) 1360-0567 (Online) Journal homepage: https://www.tandfonline.com/loi/ijmh20

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To cite this article: Elizabeth Such, Hannah Burton, Robert James Copeland, Richard Davies, Elizabeth Goyder, Ruth Jeanes, Sue Kesterton, Kelly Mackenzie & Jonathan Magee (2019): Developing a theory-driven framework for a football intervention for men with severe, moderate or enduring mental health problems: a participatory realist synthesis, Journal of Mental Health, DOI: 10.1080/09638237.2019.1581339

To link to this article: https://doi.org/10.1080/09638237.2019.1581339

Published online: 12 Mar 2019.

JOURNAL OF MENTAL HEALTH
https://doi.org/10.1080/09638237.2019.1581339

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ORIGINAL ARTICLE

Developing a theory-driven framework for a football intervention for men with severe, moderate or enduring mental health problems: a participatory realist synthesis

Elizabeth Such[a], Hannah Burton[b], Robert James Copeland[c], Richard Davies[b], Elizabeth Goyder[a], Ruth Jeanes[d], Sue Kesterton[c], Kelly Mackenzie[a] and Jonathan Magee[d]

[a]School of Health and Related Research, University of Sheffield, Sheffield, UK; [b]Barnsley Recovery College, South West Yorkshire Partnership NHS Foundation Trust, Wakefield, UK; [c]Sheffield Hallam University, Sheffield, UK; [d]Faculty of Education, Monash University, Melbourne, Australia

ABSTRACT

Background: Physical activity interventions are an important adjunct therapy for people with severe to moderate and/or enduring mental health problems. Football is particularly popular for men in this group. Several interventions have emerged over the past decade and there is a need to clearly articulate how they are intended to work, for whom and in what circumstances.

Aims: To develop a theory-driven framework for a football intervention for men with severe, moderate and/or enduring mental health problems using a participatory realist approach.

Methods: A participatory literature review on playing football as a means of promoting mental health recovery with a realist synthesis. It included the accounts and input of 12 mental health service users and the contributions of other stakeholders including football coaches and occupational therapists.

Results: Fourteen papers were included in the review. Analysis revealed that interventional mechanisms were social connectedness, identity security, normalising experiences and positive affectivity. These supported mental health recovery. Outcomes were moderated by social stigma and several interventional factors such as over-competitiveness.

Conclusions: The context mechanism outcome configuration framework for these interventions map well onto social models of mental health recovery and provide insight into how they work. This now requires testing.

ARTICLE HISTORY
Received 15 April 2018
Revised 12 October 2018
Accepted 31 October 2018

KEYWORDS
football; mental health; adjunct therapy; physical activity; recovery; gender; realist

Background

Physical activity-, sport- and recreation-based interventions are an increasingly important adjunct therapy for people with severe-to-moderate and enduring mental health problems (Fenton et al., 2017; Soundy, Roskell, Stubbs, Probst, & Vancampfort, 2015). Football interventions are particularly popular in the UK, especially among men, owing in part to their "gender congruence" (Curran et al., 2016; Friedrich & Mason, 2017a, 2017b; Mcardle, Mcgale, & Gaffney, 2012; Spandler, Roy, & Mckeown, 2014). Several interventions have been developed and existing evidence suggests that football-based mental health interventions are broadly acceptable and can derive benefits such as: reducing stigma associated with clinical environments; reducing social isolation; improvements in physical health and provide opportunities for normalising social activity (Mason & Holt, 2012). These promising initial findings have been further reinforced in a recent literature review that suggests that that football can support mental health recovery for men with serious and/or enduring or moderate mental health problems because it is physically active, gender-congruent and socially inclusive (Friedrich & Mason, 2017a).

While empirical evidence is building for the potential value of football in supporting people with a mental health problem, there is a relative paucity of quantitative studies measuring effectiveness (Friedrich & Mason, 2017a). There are several reasons for this. Firstly, football for mental health interventions are still in their infancy with a host of approaches being adopted with a range of participant groups. Robust interventional and evaluative strategies are yet to be developed. Secondly, "football for mental health" interventions – like other physical activity initiatives – are complex with multiple components, potential confounders, mediators and moderators. Knowing what these are, explaining them and/or controlling for them is challenging. Finally, while interventions tend to focus on improving mental health, the intended outcomes of interventions are generally multi-dimensional and, as a consequence, interconnected in a complex causal chain. These challenges point to a need to better theorise what football

CONTACT Elizabeth Such e.such@sheffield.ac.uk ScHARR, University of Sheffield, 30 Regent Street, Sheffield S1 4DA, UK

for mental health interventions are seeking to achieve, how they try to do it, what are the intended and unintended outcomes for whom and in what circumstances. More explicit and coherent programme theories of football for mental health interventions are required to better inform intervention development in this growing, complex and sensitive area.

Aims

The aim of the project was to help develop a theory-driven locally relevant football intervention for men with moderate to severe mental health problems. This would be achieved through a focussed systematic literature review and consultation with players and stakeholders. Its purpose was to establish what types of interventions, models of delivery and interventional components "work" for the subject group and what factors moderate optimisation. This was achieved through a collaboration between researchers, mental health and physical activity professionals and service users/players and was informed by the UK's Medical Research Council's complex intervention development guidance (Craig et al., 2006). In particular, the guidance was used to help establish what mechanisms underscore football-based interventions and to build a theory-driven intervention that would be suitable for piloting. As such, the project sought to develop a detailed research-informed, co-created programme theory using a realist framework (Pawson, Greenhalgh, Harvey, & Walshe, 2004).

Methods

A mixed methods approach was used in the study. Firstly, a focussed realist review of the evidence on the use of football as a mental health intervention was conducted. Secondly, a consultative exercise with a range of stakeholders including mental health providers and professionals, and local football community trusts was undertaken. Finally, public and patient involvement (PPI) with a range of mental health service users was used to establish what was feasible, acceptable and desirable for a mental health intervention based on football. Taking each one in turn:

Focussed systematic realist review

The review adopted a realist approach to unearth and refine theories of how football for mental health interventions are expected to work for men with serious mental health problems in particular contexts and circumstances. As such, the review is reported according to RAMESES (Realist And Meta-narrative Evidence Syntheses: Evolving Standards) guidelines (Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013).

Initial scoping identified a core base of interventions that had been subject to some form of evaluation or explicit programme design process. With a small base we pursued all possible intervention development and evaluative studies regardless of scientific quality. Scientific databases Medline, CINAHL via EBSCO, Web of Science and PsychInfo were searched using a standard PICO format (Appendix A). The eligibility criteria were:

- Participants were adult men (aged 18+) with moderate-to-severe and/or enduring mental health conditions.
- Participating in/playing football or soccer as the intervention.
- Outcomes focused on subjects' mental health/wellbeing with or without other outcomes.
- All study types including reviews, effectiveness studies, intervention development studies, evaluative case studies and qualitative work.
- Published in English from 1990 to 2016.

Excluded studies were those where:

- Participants <18 years or elite athletes, those with dementia or mild/low-level mental health problems.
- Interventions involving watching football only, using football metaphors in talking therapies or the use of football clubs as a setting for a more general physical activity intervention.
- Outcomes focused exclusively on physical health.

Screening at title and abstract was conducted by a single researcher in the first instance; at full text by two researchers independently.

Limited relevant initial search results were supplemented by Google searches for relevant interventions and grey publications. Citations from included studies were followed-up for additional references. Authors of evaluations of the Coping Through Football intervention were contacted directly and consulted about emerging programme theories.

A standardised data extraction template was produced and tested by the lead author and applied to the selected studies by three members of the research team. Ten per cent of selected papers were checked for extraction accuracy and consistency. Analysis was guided by thematic trends emerging through reported study findings and consultations and clustered according to their place within a context mechanism outcome configuration (CMOc) (Dalkin, Greenhalgh, Jones, Cunningham, & Lhussier, 2015). This framework was used to help elucidate theories implicit and explicit in the design of football for mental health interventions. Analysis integrates the findings of the literature and the consultative work.

Consultation with professionals

Mental health professionals involved in supporting mental health service users were consulted along with football coaches/physical activity practitioners who ran and/or organised sessions (Table 1). This was done to explore what they did to promote positive outcomes for players and to establish what worked well or not so well in their experience. Prior to the project and in scoping the literature, it was evident that football programmes for people with mental health problems had been in operation regionally and nationally for around a decade. The project sought to

capture the tacit knowledge and expertise gained among people working in such services in order to inform "best practice" in the delivery, organisation and evaluation of such projects. The programmes in place included football sessions that had started as "kick abouts" in hospital grounds and had grown to formal affiliated teams in mental health leagues and play/training sessions that had been driven by community arms of professional football clubs. Consistent across all programmes were regular training sessions, team structures and occasional external competition. Consultation focused on the overall value of football for mental health recovery; referral and access processes; retention and engagement; the valued components of interventions; the football environment and ethos; stigma; and the acceptability of different wellbeing/recovery scales.

Public and patient involvement

Mental health service users/players from three local NHS Trust areas were consulted to share their experiences and help identify "what works" for them in the management, delivery and broader context of their play. This phase of the work purposively sought "experts by experience" (Noorani, 2013) and adopting the participatory principles and practices of national PPI guidance (INVOLVE, 2012).

Data synthesis and analysis: The different components of the project were carried out simultaneously so that emerging themes from the review could be cross-referenced and developed into a single narrative. Analysis and synthesis was informed by the realist, participatory methods in systematic reviews developed by Harris et al. (Harris, Croot, Thompson, & Springett, 2016).

Results and discussion

Fourteen papers were included in the review from 11 interventions (Figure 1). A summary of the components and main findings of the included studies are summarised in Table 2.

An outline of common interventional components highlighted in the review is reported in Table 3 using the Template for Intervention Description and Replication (TIDieR) framework (Hoffmann et al., 2014). These represent commonly cited components derived from programmatic strategies across multiple sites.

Table 1. Three "clusters" of participants in the consultative exercise, including PPI participants.

Players (PPI)	Football sector/providers	Mental health service providers/ practitioners
Three discussion groups Total of 12 men who were mental health service users involved in football interventions	Professional football club Community Trust coaches/project leads (4) Regional football governing body disability officer (1) Volunteer community coaches (2)	Occupational therapists (3) Hospital-based fitness instructor (1) NHS Foundation Trust Physical Activity Lead for mental health service users (1)

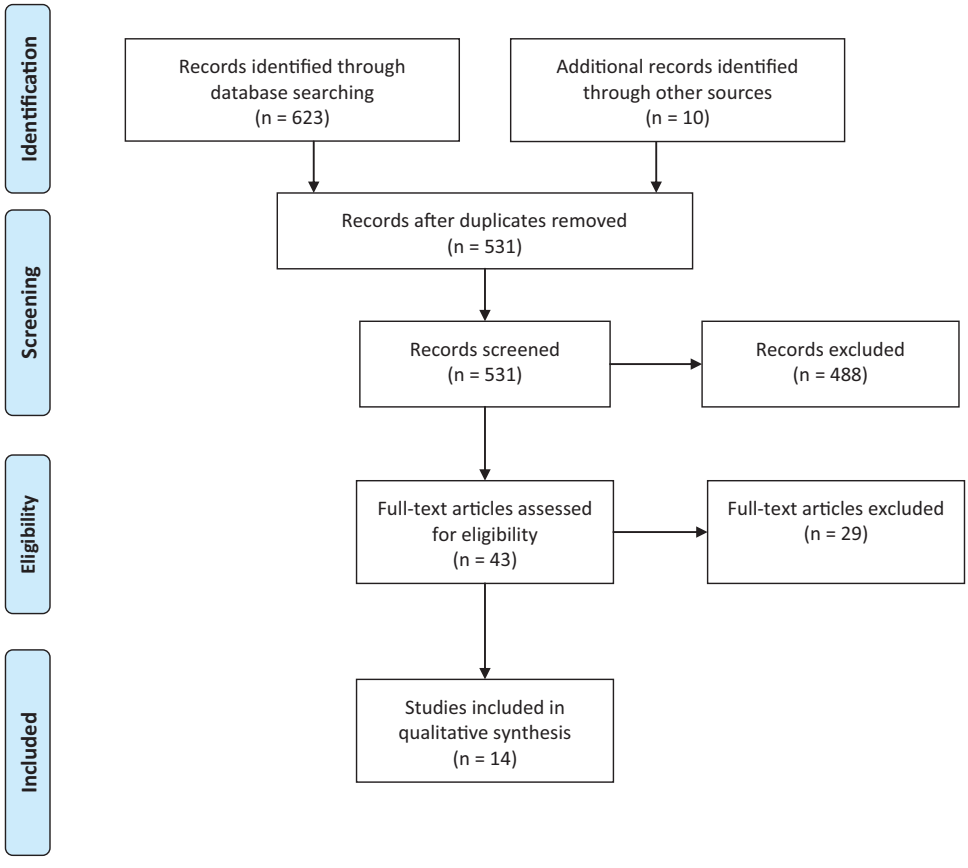

Figure 1. PRIMSA flow diagram (Moher, Liberati, Tetzlaff, & Altman,2009).

Table 2. Included studies' characteristics and main findings.

Paper	Participants	Methods	*n*	Main findings
Battaglia et al. (2013)	Male Aged 18+ Diagnosis of schizophrenia	Randomised Controlled trial	18 Action (10); Control (8)	Overall improvement in psychophysical health • 10.5% improvement in physical component measure from baseline. • 10.8% improvement in mental component measure from baseline. Reduction in antipsychotic medication-related weight gain Statistically significant improvement in physical test measures e.g. 30 m sprint
Brawn et al. (2015)	Male (implied) Aged 25–63 Range of MH conditions from mild to severe	Qualitative interviews	7	Valued components: "connection stories" shared between players encourages ongoing involvement; also connects players to society Ethos of mutual respect "Safe environment"' that encourages mutual aid Participation has "restorative power" to build confidence Players display a "recovery identity": connection to the younger (well) self are important Fosters feelings of belonging and community (unity); "supportive reciprocal relationships" League helps build "team identity" with unity, respect and support at centre Football an "empowering setting"
Darongkamas et al. (2011)	Male Aged 24–50 Low SES Severe and enduring mental health problems MH service users	Survey questionnaire	10	Football enjoyable/fun and highly rated by participants Players felt comfortable and valued in the team; offered support/a network for recovery Felt benefits of socialising: camaraderie and friendship (reported inclusion as a strong outcome) Playing improved how players felt about themselves and their outlook on life Reported change in attitude towards their illness (self-stigma) – saw MH as only a part of themselves/the person Improved confidence and self-esteem; "spill over" to other life areas e.g., education, employment Easier to cope with MH symptoms and stressors
Douglas and Carless (2012)	Mixed male/female Serious mental illness	Qualitative interviews Documentary analysis Routine data analysis Service user feedback forms	21 25	Positive experiences e.g. friendly, "safe" place, supports trajectory of recovery, gives confidence Structural funding over time improved interventional reach, improved partnership developments and enabled continuity of service Range of sessions met different needs of those during their recovery from SMI Service users' contributions to the development of programme was empowering and satisfying Structure and ethos of sessions – friendly, welcoming, accepting, caring, not overly competitive, offered reciprocal support. Must see the connection, friendships, schedule of the intervention in the light of the very limited and limiting experiences that go along with SMI – isolating, lonely, boredom, trauma Qualities of leaders/coaches critical - friendliness, accepting nature, relaxed demeanour, respectfulness, flexibility, supportive, approachable, and encouraging. Also – allow

(*continued*)

Table 2. Continued.

Paper	Participants	Methods	*n*	Main findings
				to play at own level whilst gently pushing for improvement and can offer skills training (encouraging mastery)
Derby County in the Community (2010)	Male Aged 18–49 (mean 32) Mental health problems	Focus groups	20	Improved sociability, friendship connections; evidence of sociability between players outside of formal sessions Important attention paid to timing (afternoon), cost (subsidised), regularity (weekly, same time each week), local venue [enabling access to the intervention] and value structure to sessions and training with coaching from a qualified coach Reports of reducing MH symptoms e.g. anxiety, reduction in stress Referred to as "normal" activity; distracts from problems Family support and improved relationships facilitated participation Improved confidence, motivation Value of teamwork, developing skills Family feel of club valued Improved physical fitness Desire to see integration with non-MH participants
Edwards (2006)	Young men with mental illness	n/a Intervention development description	n/a	Travel to/from training can become self-supporting as players devise friendship networks through football Motivation to attend training mitigated by mental illness; can be frustrating Suggests offering football as a sport and not a MH referral service can usefully separate treatment and everyday life Helpful if players can organise/take ownership over time Notes that players socialise outside of football Comments on need to sensitise and train coaches on some of the challenges of mental illness
Henderson et al. (2014)	83% male at baseline 49% unemployed at baseline Unclear: age and MH conditions	Focus groups Survey questionnaire	5 182	Valued components: social contact and interaction Part of a structured week – routinisation and normalisation Liked being treated as an equal by staff Reported easily accessible and welcoming; in particular, not too much paperwork Reported improved self-esteem and confidence in players Physical health improvements reported by players No significant difference reported in development of social capital using objective measure Significant difference in the development of personal skills between baseline and follow-up
Time to Change (2013)	82% male Adult Broad definition of mental health problems	Survey questionnaire Focus groups Routine data analysis	196 5	Different way of attracting traditionally hard to reach group; Football appealing Helps reduce isolation – interaction and sense of community, social connection, increased social capital Provides purpose Benefit of non-traditional treatment environment; opportunities for informal discussion and further referrals Assisted participants to feel empowered to challenge stigma and discrimination. Projects affiliated to football clubs reached large numbers of people with key messages about mental health stigma and discrimination Despite positive qualitative feedback the evaluation did not

(*continued*)

Table 2. Continued.

Paper	Participants	Methods	*n*	Main findings
				show a statistically significant change in wellbeing using WEMWBS
London Playing Fields Foundation (2010)	93% male Adult (96% in 20s–40s) Low SES Many with drug/alcohol dependency ("dual diagnosis") Chronic mental ill health	Interviews Survey questionnaire	21 61	Addresses stigma – not a MH group; a football group Reduces isolation – friendships; Promotes belonging Provides structure and reduces boredom Identity: Connects to previous identity when well; Reconceptualization of self-player/skilled/active; Promotes positive sense of self -positivity associated with football "Safe" environment – free expression and mutual support Helps devise pathways to employment/education Improves confidence/self-esteem; Enhanced wellbeing Improves physical fitness Keeps participants engaged – may normally at high risk of dropping out of services
London Playing Fields Foundation (2013)	Gender – unclear Age 16-45+ Low SES Enduring/chronic mental health problems Many with drug/alcohol dependency	Survey questionnaire	94	Reduces boredom; Provides structure to life Friendships/sociability created; Meet other service users with similar problems so isolation feelings reduce; Promotes sense of belonging Supports clients to build friendships and be more social to others Football is more than a hook – positive football environment more important than the activity itself Football associated with a positive sense of self-worth, confidence and self-esteem Clients consider it a football group with friends rather than a medical intervention; recognition it is therapy but more fun than other models Alternative way of attracting and retaining traditionally hard to reach groups, especially Black, Asian and minority ethnic service users Pathway in employment and training Client users are able to remain with the programme even when MH treatment has ended
London Playing Fields Foundation (2015)	93% male Age 13+ "Chronic mental ill health" Many with drug and alcohol dependency Low SES	Survey questionnaire	167	Greater sense of self and self-worth Football provides a positive to life Isolation feelings reduced; Sense of belonging to a broader (football) community Social calendar alongside football activity encouraged social connection Developed friendships with others similar to self Confidence increased through feeling able to cope and deal with problems Football-first approach valued
Magee et al. (2015)	Male 18–40	Qualitative interviews	38	Three organising themes – stigma, social isolation and engagement with support services Non-clinical environment valued, non-stigmatising Premier League "hook" was attractive. Engagement – primary attraction of football. Practice of engaging disengaged. Coaches creating positive atmosphere – fun, respect, enjoyment Teamwork – relies on unity, responsibility – Team ethic assistive

(*continued*)

Table 2. Continued.

Paper	Participants	Methods	*n*	Main findings
				Developing relationships with other service users –playing and through group therapy: safe place for expressing emotion Potential to enhance client-patient trust; "therapeutic alliances" through group work, workshops. Enhance access/engagement with recovery. Positive symbolism of football – positive masculine identity Group activity raises self-confidence Group contact reduces social isolation/shame – social connectedness; developing relationships with other service users Competitive nature of football – may exacerbate mental illness e.g. aggression and violence; winners/losers; performance anxiety, stress.
Mason and Holt (2012)	Male Age 20–45 Severe and enduring mental health conditions Low SES	Qualitative interviews	19	Six themes 1. Service with a difference – support not problem focussed but person-centred. Different experience to "therapy" 2. Identifying with past self-memories of football pre-illness. Positive and enjoyment 3. Opening up the social world 4. Psychological safety – self-expression, mutual support and belonging. "Family atmosphere" – helps development of bonds and trust. Shared identity/issues with other participants and common understanding (low stigma setting) 5. Feeling good – fitter, healthier, weight loss, stopping smoking 6. Empowerment – increased confidence and self-esteem strong outcome
McElroy et al. (2008)	Male Age 16-65 MH conditions/severity not described	Survey questionnaire	131	71% felt much less isolated 80% felt happier because of regular involvement 81% felt enthused and energised 81% increased confidence 69% increased levels of self-esteem 77% reduced stress and anxiety 66% improved coping skills 90% agreed/strongly agreed MH had improved

MH: Mental Health; SES: Socio-Economic Status; SMI: Serious Mmental Illness.

Table 3. TIDlieR checklist of interventional components (Hoffmann et al.,2014).

Item 1 Name	Football for mental health recovery
Item 2 Why?	Football in a group setting can support mental health recovery for men with serious and/or enduring or moderate mental health problems
Items 3 and 4 What? "Ingredients" and procedure	Football training with a qualified (voluntary and/or professional) coach including: Warm up Progressive football skills development Team play/friendly competition Cool down Social interaction with peers, coaches and others Optional: employability and "life skills" support Optional: leagues and/or tournaments (NB carries risk)
Item 5 Who provided?	Participating OTs/HPs/support workers with football/physical activity interest Coach with mental health experience (personal and/or professional) Empathetic "soft skills" evident in delivery Optional: Player-led organising group/team management
Item 6 Modes of delivery	Group-based; big enough for team play Supporting contact from organiser – phone, text Supportive/empathetic ethos across all participants/organisers
Item 7 Where?	Convenient setting, local to the player Consistency of location for training Non-clinical setting Links to public transport
Item 8 When and how much?	Daytime/daylight Weekday Afternoons At least weekly Regular times Ongoing engagement dependent on other commitments/stage in recovery
Item 9 Tailoring	Frequency of engagement, intensity of activity and skills component tailored to the player e.g. levels of confidence, experience, physical ability, medication side effects, co-morbidities

Included studies made use of pre- and post-test (Battaglia et al., 2013), longitudinal (Henderson, O'Hara, Thornicroft, & Webber, 2014; London Playing Fields Foundation, 2013; Time to Change, 2013 and cross sectional designs (London Playing Fields Foundation, 2015; McElroy, Evans, & Pringle, 2008). Qualitative research dominated with four studies exclusively using such methods (Brawn, Combes, & Ellis, 2015; Derby County in the Community, 2010; Magee, Spaaij, & Jeanes, 2015; Mason & Holt, 2012). There was one small RCT reported (Battaglia et al., 2013) one intervention development description (Edwards, 2006) and six studies adopting mixed methods. One evaluation report made extensive use of a range of methods including documentary analysis, routine data analysis, interviews with stakeholders and players and analysis of service user feedback forms (Douglas & Carless, 2012). This profile of studies reinforces Friedrich and Mason's observation that quantitative effectiveness reviews are not currently possible in this field (Friedrich & Mason, 2017a). As such, careful extraction of programme theories is a first step towards testable interventional design (Craig et al., 2006).

Theoretical framework for intervention design

Programme theories about interventions were largely implicit. Several different contexts were explored, for example, football for men with a diagnosis of schizophrenia was explicitly examined in one study (Battaglia et al., 2013); others included participants with a range of mental health conditions from mild to severe (Brawn et al., 2015; Derby County in the Community, 2010); most explored interventions working with men with generally described serious mental illness (Darongkamas, Scott, & Taylor, 2011; Douglas & Carless, 2012; London Playing Fields Foundation, 2010, 2013, 2015; Mason & Holt, 2012). Overall, specific conditions were considered marginal to other factors that connected participants; namely, high incidence of social isolation/detachment, felt stigma, enduring loneliness, low social contact, low self-esteem and confidence and low motivation. Players were "in the same boat" in multiple ways.

Outcomes of interventions were rarely objectively measured using recognised, validated scales. Player self-report of physical health, wellbeing, mood, stigma and discrimination, isolation and engagement with services are some examples of outcome measures. This reflects the different goals, local contexts, maturity, complexity and capacity of interventions. In consultation, stakeholders referred to a desire to find and use a validated and acceptable tool that could measure mental health recovery in their interventions. Both players and coaches identified problems with both the content and the administration of tools such as the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) in the context of a mental health interventions; they were keen to avoid replicating elements of the clinical environment and reinforcing any associated stigma.

The multi-faceted ambitions of interventions also led to a lack of clarity in the articulation of the intended outcomes of interventions. This meant many programmes were not in a position to outline how interventions were expected to deliver outcomes. Examples of outcomes included in interventions were: reducing self and social stigma, improving confidence and self-esteem, developing feelings of belonging and community, developing teamwork and encouraging mastery.

Taken together, the literature review and the consultation revealed ambiguity about preferred primary outcome measures. Social models of recovery were commonly adopted (Brawn et al., 2015; Douglas & Carless, 2012; Henderson et al., 2014; London Playing Fields Foundation, 2010, 2013, 2015; Time to

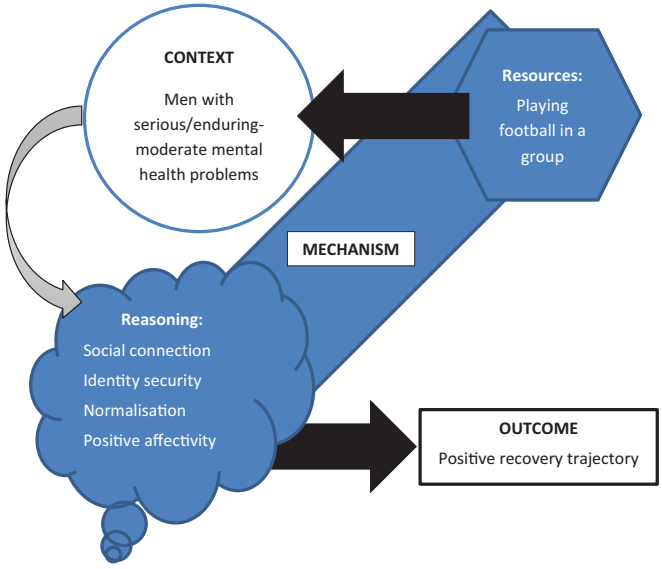

Figure 2. CMOc for football for mental health intervention.

Change, 2013) and football was seen as part of a recovery journey for individuals with complex psychiatric and social needs.

The mechanisms of football intervention worked in four interrelated ways: 1 Bringing about social connection; 2. Promoting identity security; 3. Enhancing normalisation; and 4. Encouraging positive affectivity. These are represented in the CMOc model in Figure 2 and explained in more detail below. The mechanism's resource was playing football in a group but this was often conflated with the programmatic strategy of the intervention (Table 3) (Dalkin et al., 2015). As Table 3 demonstrates, programmes were multi-faceted with several preferred characteristics of delivery. This is not to say, however, that these facets are mechanisms in themselves. Following Weiss' argument, mechanisms are not the programme service but the response it triggers from service users (Weiss, 1997). These require reasoning on the behalf of the user.

Social connection

Changes to participant reasoning were related to how activity positively connected players to others in the group (Brawn et al., 2015; Darongkamas et al., 2011; London Playing Fields Foundation, 2010, 2013, 2015; Magee et al., 2015; McElroy et al., 2008; Time to Change, 2013). This connection triggered positive feelings and practices of genuine friendship, camaraderie, confidence, reciprocity, mutual support, belonging and community (Brawn et al., 2015; Darongkamas et al., 2011; Derby County in the Community, 2010; Douglas & Carless, 2012; London Playing Fields Foundation, 2010, 2013). The mechanism of sharing "connection stories" between players encouraged progress in recovery (Brawn et al., 2015). The cumulative benefits of social connection encouraged on-going participation which in turn delivered physical health benefits (actual or perceived) that could elevate confidence, a sense of mastery and self-esteem. Connections also provided social support during periods when mental health deteriorated.

Identity security

Mechanisms of change were rooted in players' opportunity to connect to their younger, mentally well self through football; a masculine and "accepted" culturally powerful practice. Players often reported a history of an interest in football and connected those positive experiences in their reasoning for engagement. It could be a "hook" to spark initial interest and an ongoing motivating factor in a reconceptualization of the self as competent, skilled and active (London Playing Fields Foundation, 2010, 2013; Magee et al., 2015; Mason & Holt, 2012). Developing a positive sense of self and a secure identity through football promoted recovery and countered self- and socially-stigmatising narratives.

Normalisation

Football added "normal" routine, structure and a sense of purpose to players' lives (Derby County in the Community, 2010; Henderson et al., 2014; London Playing Fields Foundation, 2010, 2013). These factors were noticeably absent prior to participation. Bringing back routine and purpose to daily life and getting players away from clinical settings promoted recovery. For some, football was a stepping stone to other mainstream, normalised practices such as employment and training, although this was recognised as an upstream and sometimes distant recovery goal for many (Darongkamas et al., 2011; London Playing Fields Foundation, 2010, 2013; Mason & Holt, 2012).

Positive affectivity

Football was fun (Darongkamas et al., 2011; Magee et al., 2015; Mason & Holt, 2012). Players cited positive feelings and emotions during play, tournaments, kick-abouts, celebrations and when mingling before and after sessions. Affective display in the form of, for example, celebrating goals, shouting support to fellow players, clapping and cheering was also positively experienced and promoted mental wellness. Showing emotion such as "letting off steam" was also valued, within certain parameters (Magee et al., 2015; Mason & Holt, 2012).

It is important to note that these mechanisms were mutually reinforcing and interdependent but importantly shaped by a series of intervening factors. Many of these related to the programmatic strategy of the intervention but some were broader, social systematic moderators over which players and programmes had no control such as the social stigma of serious mental illness (Magee et al., 2015). This systemic factor was problematic in the development of "mental health" teams or leagues because labelling could reinforce self-stigma and moderate identity security and social connectedness. Other moderators related to the resource itself: playing football is competitive; team play and tournaments produce winners and losers. There is also the potential for aggression and violence. Football as a mechanism of change was moderated when it violated the ethos of respectful play, mutual encouragement, player unity and responsibility (Magee et al., 2015). To mitigate these effects, many programmes reported the importance of the skills and

training of coaches; for example, the need for empathy, understanding, approachability and respectfulness as well as technical ability (Douglas & Carless, 2012; Edwards, 2006; Magee & Jeanes, 2013; Mason & Holt, 2012). Including health professionals in football games and training may help "level the playing field" and break down the hierarchical relationship between service deliverers and users. In addition, entering competitions/tournaments required consideration of the teams'/players' needs and stage in recovery and had to reflect the practical limitations of many (Table 3).

Discussion

This review sought to develop a framework for the development of a local football intervention for men with serious/enduring to moderate mental health problems. It did so in the context of the growing popularity of physical activity interventions for promoting good mental health and the involvement of many football clubs, sport governing bodies, mental health charities and mental health service providers developing their own programmes.

This review was limited by an overall small evidence base. These limitations have been noted in previous work (Friedrich & Mason, 2017b). The quality of the evidence base was generally low (indicated by several grey publications) but with some robust in-depth qualitative studies that begin to identify programme theory. Notable omissions from the evidence base were studies with control or comparison groups, research with people who have attended and dropped out and people for whom the interventions were intended but did not attend, notably, women. The consultation also reflected these omissions.

Importantly, the review helps fill a critical gap in understanding of what works for whom, how and in what circumstances. Such syntheses of evidence and theory have not been attempted in this field and are rare in the physical activity field in general, despite a broad movement towards mental health programme development in the UK. Engagement by service users and deliverers is particularly absent, despite delivering several advantages in terms of theory, intervention development and refinement and ethical research practice (Crawford et al., 2011; Harris et al., 2016).

This analysis pays particular attention to mechanisms of football interventions. In so doing it clarifies the resources and reasoning at play that combine to promote recovery. These findings now need to be tested. The question of outcome measures continues to represent a serious challenge to this field (Connell, O'Cathain, & Brazier, 2014). Recent developments in bespoke objective measure development and tools hold great promise (Keetharuth et al., 2018) and we must continue to invest in answering questions about how tools should be administered, by whom and in combination with what other measures and tools (Crawford et al., 2011).

The CMOc framework devised fits clearly within well-established models of mental health recovery such as the CHIME framework which emphasises connectedness, hope, identity, meaning in life and empowerment (Leamy, Bird, Boutillier, Williams, & Slade, 2011). Crucially, the present paper clearly articulates how football as a mental health intervention for men "turns the dimmer switch" (Dalkin et al., 2015) towards recovery and how identified moderators can dim that light. Attention to programmatic strategy and content is essential in this regard. As noted, however, some moderators relate to social, structural and systemic factors over which players and organisers have little, if any, control, particularly the stigma of mental illness. In the development of this model, it is important not to ignore these wider determinants and continue to develop realist methods and understanding that connect interventional experience with structural parameters (Dalkin, Williams, Burton, & Rycroft-malone, 2018).

In summary, whilst the current review cannot claim to represent a universal theoretical framework for football for mental health interventions in general, it provides a timely and clear articulation of what such interventions are intending to achieve, how, for whom and in what circumstances.

Acknowledgements

Special thanks go to all the contributors to this work, particularly the players. In addition, Jack Matthews, Jason White and Sam Firth of Sheffield and Hallamshire County Football Association; Michele Hayden and Emma Davidson of the Yorkshire Sport Foundation and Trudi Race of the Rotherham United Community Trust have assisted greatly in the project. Thanks go to Rotherham United, Barnsley Recovery College and Sheffield Hallam University for providing facilities to conduct consultation events. We are also grateful to the advice and guidance of Bettina Friedrich and Oliver Mason of UCL who provided helpful reflections on this emerging area of practice.

Ethics

This project was a participatory review for intervention development. Consultees were not research subjects. Rather, consultees offered their experiential expertise to help construct a locally-relevant and theoretically robust physical activity intervention. Please see the methods section for more detail. The ethical principles and practices adhered to were those identified by the UK Public and Patient Involvement advisory body: NIHR INVOLVE http://www.invo.org.uk/ and the consultation was funded and monitored by NIHR Research Development Service Yorkshire and Humber.

Disclosure statement

The authors declare no conflict of interest. The views and opinions expressed are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

Funding

The project was funded by Sheffield Health and Social Care NHS Foundation Trust [ref. no. 149016], NIHR National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care Yorkshire and Humber [CLAHRC YH; www.clahrc-yh.nihr.ac.uk] and NIHR Research Development Service Yorkshire and Humber.

ORCID

Elizabeth Such http://orcid.org/0000-0003-2242-3357
Elizabeth Goyder http://orcid.org/0000-0003-3691-1888
Jonathan Magee http://orcid.org/0000-0002-4988-8405

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Appendix A

All databases had the following limits applied to the searches:

- English language only
- Published during or after 1996

Database	Search terms	Number of articles
Medline	1. Football OR soccer 2. Mental health OR mental condition OR mental disorder OR mental illness OR anxiety OR depression OR bipolar OR mood disorder OR panic OR phobia OR post-traumatic stress disorder OR substance abuse 3. Men OR male* 4. #1 AND #2 AND #3	106
CINAHL via EBSCO	1. Football OR soccer 2. Mental health OR mental condition OR mental disorder OR mental illness OR anxiety OR depression OR bipolar OR mood disorder OR panic OR phobia OR post-traumatic stress disorder OR substance abuse 3. Men OR male* 4. #1 AND #2 AND #3	111
Web of Science	1. Football OR soccer 2. Mental health OR mental disorder OR mental illness OR anxiety OR depression OR bipolar OR mood disorder OR panic OR phobia OR post-traumatic stress disorder OR substance abuse OR eating disorder 3. Men OR male* 4. #1 AND #2 AND #3	82
PsycInfo	1. Football OR soccer 2. Mental health OR mental disorder OR mental illness OR anxiety OR depression OR bipolar OR mood disorder OR panic OR phobia OR post-traumatic stress disorder OR substance abuse OR eating disorder 3. Men OR male* 4. #1 AND #2 AND #3	324
Total		623