Mental Health and Wellbeing Interventions in Sport:

A Review and Recommendations

sport Northern Ireland

Ulster University

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Executive Summary

While participation in sport can have positive physical and mental health benefits, evidence suggests that, particular aspects of competitive sport may also, paradoxically, contribute to deterioration in mental health. The sport setting lends itself to the communication of positive mental health and wellbeing messages, yet the best way of achieving the delivery of these messages remains uncertain.

In response to this uncertainty, a review of mental health and wellbeing awareness programmes in sport was undertaken in order to provide direction to the **Strategy Steering Group for Mental Health and Wellbeing In and Through Sport** on how best to engage the sporting community.

Aims

- To identify and examine the effectiveness of international peer reviewed programmes that promote mental health and wellbeing awareness in sport; and
- To review regional mental health and wellbeing policies, strategies and interventions.

To do so, two key phases of the research were completed by the Research Team:

1. A desk-based review using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines; and
2. Focus group discussions and face-to-face interviews with key stakeholders in mental health and wellbeing in Northern Ireland.

Findings

The findings from the current review suggest that while knowledge-based mental health programmes in sport settings may improve mental health literacy and reduce stigma, the evidence base is limited.

The interviews and focus group discussions indicated the existence of at least 16 sport-based programmes in Northern Ireland. To our knowledge, these programmes have not been evaluated. Participants also had concerns related to:

- Who should deliver training in clubs?
- The resources available?
- Who should attend training?

Questions were also raised with reference to what would be the specific role of a Club Wellbeing Officer, if established, and whether this was to sign post to already existing services or provide support.

Recommendations include:

- The need to develop a Mental Health and Wellbeing In and Through Sport Strategy / Action Plan and secure resourcing;
- Determining which programmes for mental health and wellbeing awareness are effective and should be introduced in sport settings for coaches, athletes and club members;
- The introduction of a Mental Health and Wellbeing Officer to sport clubs; and
- Integrating mental health and wellbeing within already established networks across sport in Northern Ireland.

Introduction

Sport and health benefits

Sport can have positive psychosocial benefits, and moderate-to-vigorous intensity physical activity can improve physical and mental health (Biddle, Mutrie & Gorely, 2015). However, evidence suggests that competitive sport may contribute to poor mental health (Bauman, 2016) and may lead to specific stressors that hinder an athletes' mental health optimisation (Donohue et al., 2007). These stressors are:

- Pressure to achieve success (Evans, Weinberg, & Jackson, 1992);
- Extended times being separated from family (Masland, 1983);
- Negative emotional consequences of injury (Wiese-Bjornstal, 2010);
- Substance and alcohol abuse (King, Dowdall, & Wagner, 2010); and
- Relationship problems (Donohue et al, 2007).

The likely times of higher stress or risk of mental health problems for athletes are during times of career transition (e.g. retirement), non-selection or whilst being injured.

Organisations within sport are just starting to address the management of mental health (Bauman, 2016). However, athletes are poorly supported to manage their mental health; instead, sporting culture celebrates mental toughness and is disapproving of any weakness disclosure. This situation has not been helped when an athlete's mental health is discussed using language related to mental illness (Hughes and Leavey, 2012). Consequently, emotional and psychiatric problems for many athletes remain hidden (Bauman, 2016). It is through the delivery of mental health training to coaches and players, within their own sport settings, that awareness to managing mental health concerns can increase (Breslin et al, 2017).

Linking sport and wellbeing together in Northern Ireland

Following a roundtable discussion 12 October, 2012 on mental health and wellbeing, chaired by Carál Ní Chuilín, the then Minister Department of Culture Arts and Leisure (DCAL) , DCAL and Sport Northern Ireland drafted a pilot programme in support of the Public Health Agency's (PHA) campaign to raise awareness of mental health issues for sports clubs.

The 'Mood Matters in Sport' report (Breslin, et al. 2015; 2017), an evaluation of a pilot psycho- educational programme to enhance knowledge and help-seeking of coaches in sport, indicated that sports clubs provide an effective and accessible environment for tackling mental health issues. Engagement in awareness raising and training opportunities enables sports clubs to enhance people's knowledge and confidence in supporting others, and also promote mental health at club level. Despite the positive outcomes reported from the Mood Matters in Sport report, several questions remained: (a) what other interventions are effective?; (b) what has been evaluated?; (c) who have been delivering programmes to, (i) athletes, (ii) coaches and (iii) club members?; and finally what was the content and duration of programmes being delivered across Northern Ireland. By

addressing these questions, the development, implementation and dissemination of subsequent programmes can be determined.

Round table discussion on mental health in and through sport

On 26 January, 2016, Sport Northern Ireland hosted the first stakeholder workshop 'Mental Health and Wellbeing In and Through Sport' which was attended by: Department for Communities (DfC) representatives; national governing bodies of sport; health professionals; university academics; community groups; and representatives from psychology, psychiatry, sports clubs, and mental health charitable organisations. The aim of the workshop was to begin discussions on the need for a strategy / action plan for mental health and wellbeing in and through sport. At the workshop a report, considered and approved by the Board of Sport Northern Ireland, was tabled for discussion.

Several actions from the meeting were:

1. Appoint a lead officer within Sport Northern Ireland for Mental Health and Wellbeing In and Through Sport who would be responsible for both the strategic direction and operational aspects to drive this initiative forward;
2. Sport Northern Ireland to sign up to the Mental Health Charter for Sport created and launched by Sport and Recreation Alliance in 2015;
3. Establish a Mental Health and Wellbeing In and Through Sport Strategy Steering Group from all relevant statutory and voluntary partner organisations;
4. Complete a desk-based review of relevant policies, strategies and interventions that have used sport as a tool for promoting mental health and wellbeing; and finally,
5. Develop a Mental Health and Wellbeing In and Through Sport Strategy / Action Plan with an associated research monitoring and evaluation framework.

[1]Research Review Aims and Objectives

The aim of the current report is to review interventions that have used sport as a tool for promoting mental health and wellbeing to provide guidance to the Strategy Steering Group.

To achieve this aim, the research findings presented in this summary report had two main objectives:

1. Conduct a systematic review of peer reviewed interventions available across the world which promotes positive mental health and wellbeing in sport; and
2. Conduct a regional review of mental health and wellbeing policies, strategies and interventions.

1 To date, progress has been made by Sport Northern Ireland with Ulster University (Breslin et al.) in relation to points 1 and 3. Progress is being made with point 2; the current report addresses point 4, with the findings from the research contributing to point 5.

Method

Two phases of research were conducted:

- Phase 1: a systematic review of six electronic databases; and
- Phase 2: qualitative interviews and focus groups with key stakeholders in the development, implementation or delivery of mental health and wellbeing programmes through sport in Northern Ireland.

Phase 1: Systematic review of peer reviewed interventions in sport that have promoted positive mental health and wellbeing

Protocol

All methods of data analysis and reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2015)

Eligibility Criteria

Studies: Randomised controlled trials (RCT), clustered randomised controlled trials, quasi-experimental and pre-post studies examining the effect of mental health interventions in sport were included. Only peer reviewed studies published in the English language were included. Non-peer reviewed literature (i.e. PhD dissertations, reports and 'grey literature') and reviews or studies using a prospective or cross-sectional design were excluded.

Participants: Participants were adolescents and adults who were considered as an athlete, leader, coach or member within a professional or amateur sporting club or organisation.

Interventions: Mental health interventions that took a general focus on improving mental health (i.e. reducing depressive symptoms) or interventions tailored to focus on a specific mental health issue (i.e. stigma reduction, awareness). To be deemed eligible interventions had to take place within a sports setting which was defined as: 'structured physical activity that is competitive, rule-governed, and characterised by strategy, prowess and chance' (Rejeski and Brawley, 1988). Exclusion criteria applied to interventions that were outside the domain of sport (i.e. physical activity, exercise, leisure, art and music). The mode of delivery was: individual, group or web-based.

Outcome measures: Studies needed to include at least one outcome measure which was categorised as: related to mental health attitudes (i.e. stigma, prejudice); knowledge of mental health (i.e. recognition) or behaviour regarding mental health (past or intended discrimination); mental health competencies (i.e. mindfulness, coping); or specific mental health (i.e. anxiety, depressive symptoms, positive affect) and wellbeing (i.e. subjective/ psychological wellbeing domains, life satisfaction) outcomes.

Information sources and search strategy

Searches were identified using electronic databases and by hand-searching reference lists of articles. Six electronic databases were searched: Psychinfo, Medline (OVID interface), Scopus, Cochrane, Cinahl and Sport Discus. Each database was searched from its year of inception to March 15 2016. Risk of bias for each study was also assessed.

Phase 2: Interviews and Focus Groups with Stakeholders in Northern Ireland

Participants

All members of the Mental Health and Wellbeing In and Through Sport Strategic Steering Group were invited via email to participate in the study. During the interviews it became apparent that there were some programmes being delivered in Northern Ireland, yet the organisations were not members of the Steering Group. To avoid the exclusion of any known programmes, recruitment was expanded beyond the Strategic Steering Group. A total of 26 participants volunteered to take part (20 -male and 6 -female). A list of the participating organisations is shown in Figure 1.

Participants represented included: DfC; PHA; mental health programme management; mental health and wellbeing programme developers and facilitators; governing bodies of sport; university academics, psychologists; psychiatrists; sport coaches (participation and high performance); sport clubs; child safeguarding welfare officers; sport engagement forums; community workers; and representatives from both amateur and professional sports.

Figure 1: Organisations /stakeholders who took part in the research

Interviews

A total of 17 interviews were conducted: 14 face-to-face at the House of Sport, Belfast), and three telephone interviews to accommodate participants who could not attend in person. All fieldwork took place from 3 May 2016 to 6 June 2016. All interviews were conducted by a British Psychological Society (BPS) Chartered Sport and Exercise Psychologist and Health Care Professions Council Practitioner (HCPC) and transcribed by a member of the research team.

The interview schedule included four sections covering the main areas of investigation:

1. **Section A: Understanding of mental health and wellbeing:** The aim of this section was to establish the participants' understanding of mental health and wellbeing; the significance of mental health and wellbeing - personally and organisationally; the perceived benefits of addressing mental health; and awareness of initiatives or interventions in Northern Ireland to promote mental health and wellbeing in their sport or other sports.

Section B: Support provision: This section determined views on the role of sports governing bodies in providing messages on mental health and wellbeing; current, or planned, policy and/or procedures on mental health and wellbeing; designated individuals, if any for promoting mental health and wellbeing within their organisation; record-keeping and audits of any mental health or wellbeing issues, if they arose; and whether the approach taken was the same for children, adolescents and adults.

Section C: Training requirements: This section assessed perceived organisational requirements to tackle mental health and wellbeing in sport;

Section D: Monitoring and Evaluation: Participants were asked what they would like to see in place to monitor and evaluate mental health and wellbeing in sport.

Trustworthiness and Accuracy of Reporting

Each interview was recorded via a Digital Dictaphone (Phillips Voicetracer, 660) and was subsequently transcribed verbatim. Each interview was anonymised to ensure confidentiality. A copy of the transcribed interview was emailed to each participant to confirm the content was accurate. Participants were given the opportunity to correct any inaccuracies.

Focus Groups

Focus groups were conducted with coaches and some national governing bodies of sport.

Two separate focus groups were conducted. The first at Sport Northern Ireland which was attended by four national governing body representatives, and the second at Girdwood Community Hub, Belfast, attended by five volunteer coaches. Questions posed to the focus group participants were similar to those utilised within the interview process. Each focus group was recorded via a digital dictaphone (Phillips Voicetracer, 660) and transcribed verbatim.

Data Analysis Approach

A thematic analysis was undertaken based on the main topics of interest. A general Inductive Approach was applied to the data because it i) allows researchers to condense raw textual data into a summary format, ii) allows the establishment of links between research aims and summary findings from the transcripts, and iii) can be used to inform a framework for interpretation from the views of the participants (See Thomas, 2006).

Results

Phase 1: Systematic review of peer reviewed interventions in sport that have promoted positive mental health and wellbeing

A total of 1,095 titles and abstracts were reviewed; of these, 912 were identified as irrelevant and were excluded. Ten percent of excluded titles and abstracts were screened by two researchers and consensus was reached for their exclusion. A total of 95 articles were identified as relevant and underwent a further detailed screening for full-text printing eligibility, of these 11 met the criteria for a standardised independent full-text screening by two authors. From the 11 articles, authors agreed upon four articles to be excluded because they did not meet the inclusion criteria on at least one level.

Study characteristics

Study characteristics are detailed in Table 1 (see appendix). The interventions were delivered to a range of sports participants including non-elite and elite athletes, coaches and club leaders.

Studies adopted various research designs including intervention pre-post testing (n=2; Bapat, Jorm and Lawerence, 2009; Pierce, Liaw, Dobell and Anderson, 2010), randomised control trial (n=2; Van Raalte et al., 2015; Gulliver et al., 2012), controlled trial (n=1; Longshore and Sachs, 2015) and a descriptive case trial (n=1; Donohue et al., 2014).

Study results

Key study characteristics (e.g. authors, year published, design, population, intervention, and outcome measure(s) and findings) are summarised in Table 2 (see appendix). All studies took place between 2009 and March 2015. A range of measures were used to assess levels of mental health knowledge, referral efficacy, intentions to seek help, and psychological outcomes. Three studies (Gulliver et al., 2012; Longshore and Sachs, 2015; Van Raalte et al., 2015) included a control group, of which two (Gulliver et al., 2012; Van Raalte et al., 2015) used randomisation procedures.

Studies were typically short-term (i.e. collecting data before and immediately after the programme). Also, sample sizes were generally small, with four of six studies having 40 participants or fewer, and the majority of participants were female.

Generally, findings from the studies supported the introduction of knowledge-based mental health programmes in sport settings. Five of the six studies found significant positive changes on at least one outcome measure (Bapat, Jorm and Lawerence, 2009; Gulliver et al., 2012; Pierce et al., 2010; Longshore and Sachs, 2015; Van Raalte et al., 2015); while one study did not report statistical tests of significance (Donohue et al., 2014). Two studies found significant positive changes for all their outcome measures, both finding positive changes in increased knowledge about mental health disorders (Bapat, Jorm and Lawerence, 2009; Van Raalte et al., 2015).

Stigma was significantly reduced in two studies (Bapat, Jorm and Lawerence, 2009; Gilliver et al., 2012), while mental health literacy or referral-efficacy was significantly improved in four studies (Bapat, Jorm and Lawerence, 2009; Gilliver et al., 2012; Pierce, Liaw, Dobell and Anderson, 2010; Van Raalte et al., 2015). Two studies reported positive changes in participant mental health and wellbeing (i.e. reductions in depressive symptoms, or anxiety) (Donohue et al., 2014; Longshore and Sachs, 2015). Despite these findings, using appraisal tools, all but one of the six included studies were found to have a high risk of bias.

Phase 2: Interviews and focus groups with stakeholders in Northern Ireland results

A summary interpretation of the main points detailed by participants is presented collectively in Table 3 (see appendix) - from an individual, organisational and policy level perspective. Quotes from participants can be viewed in the full report (available from www.sportni.net)

Discussion

Phase 1: Systematic review

The first aim was achieved and revealed six studies that supported the use of knowledge based mental health programmes in sport settings. Five of the six studies found significant positive changes on at least one outcome measure while one study did not report statistical tests of significance. Two studies found significant positive changes for all their outcome measures, both finding increased knowledge about mental health disorders. Stigma surrounding mental health was reduced in two studies, while mental health literacy or referral-efficacy was increased in four studies. Two studies reported increases in participant mental health and wellbeing.

Although the findings from the review offer support for programmes that increase mental health literacy and improving mental health and wellbeing, there was considerable heterogeneity in the content and delivery of such programmes and the potential beneficiaries (e.g. elite athletes, club leaders, players, student athletes) (Bapat, Jorm and Lawerence, 2009). The delivery method also varied; two programmes were delivered online (Gulliver et al., 2012; Van Raalte et al 2015); three were delivered in groups by trained facilitators; one was through 12 individual meetings on a range of topics (Donoue et al, 2014); and one programme combined groups with follow up individual sessions in the athlete's own home (Longshore and Sachs, 2015).

Although this review found support for positive changes in mental health literacy, there were study design limitations worth noting. For example, three studies (Bapat, Jorm and Lawerence, 2009; Donohue et al., 2014; Pierce, Liaw, Dobell and Anderson, 2010) did not include a control group. In this regard the use of randomisation methods and treatment conditions (control or experimental groups) found in Gulliver et al. (2012) and Van Raalte et al. (2015) helped control for potential confounding factors.

Furthermore, these design methods helped us determine that effect sizes were either small for significant positive changes (Van Raalte et al., 2015); or varied from small, medium to large depending on the intervention conditions (Gulliver et al., 2012).

By profiling the study quality and risk of bias using appraisal tools, it was found that just one study (Gulliver et al., 2012) was deemed as having a low risk of bias, one study was unclear for bias (Van Raalte et al., 2015) and the four non-randomised studies (Bapat, Jorm and Lawerence, 2009; Donohue et al., 2014; Pierce, Liaw, Dobell and Anderson, 2010; Longshore and Sachs, 2015) were of weak quality.

Taking this evidence collectively, it is difficult to assume confidence in the effects of the majority of studies reported in this review, aside from one exception that was a well-designed trial (Gulliver et al., 2012). However, each study demonstrated innovative attempts to deliver mental health interventions in sport, such as, tailoring the intervention for a specific population (Donohue et al., 2014; Van Raalte et al., 2015); using online as the mode of delivery (Gulliver et al., 2012; Van Raalte et al., 2015); adapting existing programmes (Pierce, Liaw, Dobell and Anderson, 2012) and testing the effects of mindfulness meditation (Longshore and Sachs, 2015).

Phase 2: Qualitative review of stakeholders

The second phase of the research showed that participants had a varied understanding of what mental health and wellbeing were, and their understanding was predetermined by the background training of the participant. For those in the delivery of programmes it was no surprise that they were knowledgeable of the terms, for those not, this would imply further training may be required on key terms such as mental health, wellbeing and mental illness.

All participants perceived the benefit of integrating mental health and wellbeing messages through sport and for their organisations. Not all participants were aware of initiatives or programmes that are currently available to promote mental health and wellbeing within Northern Ireland, suggesting a need for more awareness of programmes to governing bodies and clubs.

More than 16 programmes that promote mental health and wellbeing were mentioned during the interviews and focus group discussions; however even this figure is not likely to include all programmes being delivered across Northern Ireland. It was not clear whether all programmes were monitored and evaluated to a level that assessed impact within a sport context, with participation figures only being available for some programmes. Without appropriate monitoring, an evaluation of the effectiveness of programmes cannot be determined.

The majority of participants indicated governing bodies could play a crucial role in enhancing awareness of mental health and wellbeing. The fact there are pre-existing networks available to deliver mental health programmes is positive. If a decision was made for governing bodies to provide the mental health message to the sporting population a similar approach to that adopted for safe guarding children in sport through the child safeguarding/ welfare network and training was recommended. The lessons learned from The National Society for the Prevention of Cruelty to Children (NSPCC) in engaging clubs and having a designated club member trained was recommended.

Few clubs and/or organisations had a specific strategy which mentioned mental health and wellbeing. For those participants who did mention mental health and wellbeing they mentioned specifically the Protect Life Strategy and Suicide Prevention Strategy. Other participants either: outlined their corporate strategy, the Sport and Recreation Alliance Mental Health Charter, cited that their Human Resource department looked after health in their organisation, or were unaware of any mental health strategy. Although one of the aims of the research was to review the strategies and policies available in Northern Ireland, few members of the steering group had knowledge of the strategy documents. For those that did, they felt that specific mentioning of mental health in sport was required in order to ensure a 'start-stop' approach to delivering mental health and wellbeing messages through

sport is avoided, as this is what had occurred previously.

When participants were asked about their organisations or clubs future plans regarding mental health and wellbeing, a cautionary response was provided. Respondents referred to their organisation as only starting to consider what they could do in terms of mental health and wellbeing for members. When discussing this point with those who deliver mental health and wellbeing programmes they were of the view that their organisation practiced what they delivered to others. Some participants acknowledged that the current research study would help guide them in the development of future plans, and they were keen to see the strategy further developed.

Some governing bodies they suggested that further training on mental health and wellbeing was required to understand what could be provided in terms of supporting athletes and club members. It was evident from the discussions that this training would be required first before any individualised plans could be made.

In support of this training when asked whether there was a designated individual who was responsible for promoting mental health and wellbeing, the welfare officer, child protection officer or human resources was suggested. Some participants were unaware if a person was designated in their organisation.

Everyone agreed that a different approach was required for adults compared to children in addressing mental health and wellbeing. The competitive level of athletes was also a factor noted that requires consideration, as what is available for high performers would be different from participants who participate in sport on a recreational level.

When asked about what they would like to see in sport to tackle mental health and wellbeing, some suggestions included:

- Already established networks could be used to promote positive mental health messages, such as safe guarding training and coach education.

Sport Northern Ireland should select champions in the community and highlight these to others as good examples to emulate.

In terms of resources, it was felt that sport specific materials and film footage of those who have experienced a mental health problem could be developed.

That any targeting of athletes should consider the unique experiences that the culture of sport and development of mental toughness brings to athletes.

The establishment of a mental health and wellbeing in sport officer to visit clubs and deliver the training.

The development of an evidence base for mental health in sport to support and guide future programme developments.

To develop the area of mental health and wellbeing in and through sport in Northern Ireland, the following organisations were identified as having a key role to play:

- Government Departments;
- Local Government;
- Sport Northern Ireland;
- Public Health Agency; and
- Governing bodies of sport.

It was evident from the responses that it was not felt that one organisation should have exclusive responsibility.

The question of who should be delivering within the community setting was viewed as integral to the success of the programme. It was clear that the skill set of the person to promote mental health and wellbeing in each club should be someone who was; caring, knowledgeable, had good communication skills, and came from a background in mental health, social work, or psychology. It was clearly identified by those involved in sport that it should be someone who wants the role and who is aware of challenges faced by those involved in sport. It would be a person who people in the club feel they can talk to, or 'go to' not necessarily the highest appointed person in the club.

In terms of monitoring and evaluation, an evidence base was recommended to determine the effectiveness of programmes put in place at the strategic policy level with a monitoring accountability framework attached. Monitoring and evaluation was also viewed as something that should not be bolted on at the end, but given consideration when developing future design and prior to implementation. The challenge of what to measure, at how many time points and who to assess were raised. It was also apparent that measuring impact may be a challenge, as each programme may have different aims, i.e. to raise awareness, to increase help seeking, to support others, or to support themselves. In determining a programme's 'success', does an attendee who comes forward for help to the facilitator indicate success, or does seeking help from a friend, who will be unknown to the facilitator indicate success?

There was some evidence of programme evaluation in interventions delivered in other countries; the evaluation of programmes in Northern Ireland was limited in number and research quality. When developing or modifying existing courses, the designers may want to consider the Medical Research Council's: Developing and Evaluating Complex Interventions Guidance (Craig et al., 2008).

Recommendations

To establish the way forward for mental health and wellbeing for the sporting population in Northern Ireland, there are a number of key recommendations which relate to the development of a sport specific strategy for mental health and wellbeing, knowledge and understanding of mental health and wellbeing concepts, programme content development, implementation, dissemination, and monitoring and evaluation. These core principles and proposed next steps are detailed below:

A. Strategy Development

1. In the absence of an existing mental health and wellbeing strategy specific to sport, there was a resounding need for direction and leadership in this area; the development of a strategy should be considered to provide this leadership and direction.
2. A range of key stakeholders from across the public, private and voluntary sectors should be encouraged to work in partnership to develop the strategy in mental health and wellbeing in sport. This work could be coordinated by the Strategy Steering Group that has already been established.
3. A new strategy / action plan should help avoid a 'start stop' approach to the delivery of mental health and wellbeing in sport, and within existing strategies on mental health and wellbeing, sport should be specifically mentioned.

B. Resourcing the Strategy

1. Resources to deliver training and the development of the strategy, action plan and evaluation would need to be put in place, with a dedicated team to over-see the strategy.

C. Mental Health and Wellbeing Awareness Programmes

1. Knowledge and understanding of the terms mental health and wellbeing was found to be dependent on the background of the participants. Mental health awareness raising through training to governing body personnel is required in the first instance. The training programme delivered should be developed, piloted and reviewed before being rolled out across Northern Ireland.
2. The evidence for the effectiveness of mental health awareness programmes in sport settings lacks a sound methodological foundation on which to determine what types of programmes are most effective. Given this gap in knowledge cautionary steps should be taken when designing, selecting the content, implementing and evaluating future programmes.

D. Mental Health and Wellbeing Officer

1. If governing bodies decide to put in place a mental health and wellbeing officer, training will be required to help develop the appropriate skill set.

E. Integration of Mental Health and Wellbeing into Existing Available networks

1. Consideration should be given to the integration of effective mental health and wellbeing programmes into coaching qualifications; and lessons learned from the NSPCC when engaging with clubs in regard to safeguarding and welfare matters could be considered.
2. Clubs and organisations should consider updating their safeguarding, health and welfare protocols to reflect mental health and wellbeing concerns.
3. Psycho-educational mental health and awareness programmes should be made available to coaches and athletes, this maybe through increasing awareness of existing courses (once evaluated) or developing sport-specific courses for delivery in clubs. In the development of new courses guidelines for effective intervention design should be adhered to.

Appendix

Table 1: A description of the six included studies

Authors (year of study)	Study Design; duration	Sample characteristics	Mental health descriptor; mode of delivery
Bapat, Jorm and Lawerence (2009)	Pre-post design	Sport club leaders (n=40; age =38.62; 16 male, 24 female)	Mental health literacy through mental health first aiding training; eight-hour training program delivered over three sessions using a range of presentations, tasks and homework.
Donohue et al (2014)	Pre-post and follow up design	Athletes with previous history of substance abuse or dependence (n=7; age= 20; 4 male, 3 female).	Modifying behavioural and cognitive skills to overcome substance abuse; 12 individual meetings on a range of topics.
Gulliver et al (2012)	Randomised control trial	Elite athletes (n=59; age = 25.5; 16 male, 43 female).	Mental health literacy; participants were allocated to one of a series of online psycho-educational programs.
Pierce, Liaw, Dobell and Anderson (2010)	Pre-post design (club leaders); controlled trial (football players)	Club leaders (n=36; age = 45); and football players (n= 275; age= 21)	Mental health literacy; 12-hour psycho-educational group sessions for leaders; information sessions were conducted with players alongside informal information.
Longshore and Sachs (2015)	Controlled trial	College coaches (n= 20; age= 34.5; 12 female, 8 male)	Mindfulness training programme to develop emotional awareness and reduce stress; an initial 1.5-hour group session followed by a six-week home programme.
Van Raalte, Cornelius, Andrews, Diehl and Brewer (2015)	Randomised controlled trial	Student athletes (n=153; age=19.63; 103 female, 46 male)	Mental health literacy; web-based program using exercises and interactive material.

Table 2: Study outcome measures, main findings and comments on each study

Authors (year of study)	Mental health outcome measure(s)	Main findings	Comments
Bapat, Jorm and Lawerence (2009)	SQ KQ ?V	Significant reduction in levels of stigma (p<.001); increase in knowledge about mental disorders (p<.01); increased confidence to help someone with mental disorder (p<.001). Weak study quality and risk of bias.	Small sample size (n=40); no control group; no follow-up data.
Donohue et al (2014)	SCL-90-R BDI SARI TLFB RAB	Psychiatric functioning mean scores improved from baseline to post. Scores remained stable in 1 & 3 month follow-up; Depressive mean scores decreased from baseline to post intervention. Improvements were shown for all relationship domains. Weak study quality and risk of bias.	Small sample size (n=7); no values provided for study effects (i.e. p value); no control group.
Gulliver et al (2012)	ATSPPH-SF GHSQ AHSQ D-Lit A-Lit DSS GASS	No significant interaction effect for help-seeking attitudes, intentions or behaviour from baseline to follow up. However, significant positive interaction effects were observed for depression (p≤.05) and anxiety literacy (p<.01), and anxiety stigma (p<.05) from baseline to follow up relative to control group. Strong study quality and low risk of bias.	Effect sizes for significant positive interaction effects differed for treatment condition (literacy condition, feedback condition and help-seeking) in comparison to control, ranging from small, medium to large. Caution was advised when interpreting as the sample size was small.
Pierce, Liaw, Dobell and Anderson (2010)	?1 ?2	**Leaders**: Significant positive change in recognition of mental illness (p<.001), confidence that anti-depressant medication can be helpful (p<.01) and confidence in helping someone with mental health problem (p<.001). **Players:** no significant changes Weak study quality and risk of bias.	**Leaders:** Small sample size (n=36), no control group). **Players:** Unclear information on their attendance and involvement in the intervention.

Authors (year of study)	Mental health outcome measure(s)	Main findings	Comments
Longshore and Sachs (2015)	MAAS TMS STAI PANAS BRUMS	No significant interaction effect reported for anxiety, mindfulness awareness or experience, or moods. A significant interaction effect was reported for reduction in negative affect (p=<.05, ES= .21). Weak study quality and risk of bias.	Small sample size (n=20). Despite largely non-significant results mean scores showed positive trends, and effect sizes were generally small to moderate. Interviews with participants showed positive changes in coaches' personal life and mindfulness.
Van Raalte, Cornelius, Andrews, Diehl and Brewer (2015)	MHRES MHRK	Significant positive changes were observed for mental health referral efficacy (p=<.001, ES=0.1) and knowledge (p=<.01, ES=.04) for intervention group in comparison to control group. Unclear risk of bias.	Intervention was tailored for the population. Qualitative data showed positive feedback for intervention acceptability.
Summary	Battery of measures used.	Positive significant findings for all outcomes measured (n=2); Positive significant findings on at least one outcome measure (n=5).	No control group (n=3); Small sample size (n=4); randomisation (n=2).

Note*: SQ = Stigma questionnaire; KQ= Knowledge questionnaire; ?V= no name given to confidence measure for vignette; SCL-90-R= Global severity index of the general psychiatric symptoms-90- revised; BDI= Beck depression inventory; SARI= Student-athlete relationship instrument; TLFB= Timeline follow back; RAB= Risk assessment battery; ATSPPH-SF= Attitudes toward seeking professional psychological help-short form; GHSQ= help seeking intentions; AHSQ = Actual help seeking; D-Lit= Depression literacy questionnaire; Anxiety literacy questionnaire; DSS=Depression stigma scale; GASS= Generalised anxiety stigma scale; ?1 = no name given to measure with questions around mental health recognition, knowledge and confidence; ?2= no name given to customised measure around attitudes and recognition of depression in clinical scenario; MAAS= Mindful attention awareness scale; TMS=Toronto mindfulness scale; STAI=State and trait anxiety inventory; PANAS=Positive and negative affect schedule; BRUMS=Brunel mood scale; MHRES= Mental health referral efficacy scale; MHRK= Mental health referral knowledge scale.

Table 3: Overview of main points learnt from this qualitative phase

Level	Main Points
Individual level	• There was variation in understanding of mental health and wellbeing terms across participants • Limited awareness of mental health and wellbeing strategies in Northern Ireland • The perceived benefits of tackling mental health through sport was positive • Supported the view that mental health can be promoted through sport governing bodies • Recommended a person should be trained and supported to deliver mental health messages in clubs • Concern over another role a volunteer club member has to take, but not supported • Mental health and wellbeing programmes should be monitored and evaluated with some existing programmes needing 'looked at'
Organisational level	• Some organisations purpose are to deliver awareness and support programmes • Few organisations have a wellbeing strategy • Some organisations are in the planning stage of what to implement, while others are at the early stages or have not considered mental health and wellbeing • Few organisations have a mental health and wellbeing officer • Sometimes 'lip service' is only given to mental health and wellbeing • Organisations are mainly reactive if an incident or event occurs • There is a willingness to work with others to promote the mental health and wellbeing message • Little record keeping of events, if an event did occur not clear on what to report • The NSPCC safeguarding practices were referred to as a potential way of embedding mental health and wellbeing messages and delivering awareness training in clubs • The findings from the current report were viewed to potentially guide the development of organisational strategies
Policy level	• Lack of a mental health and wellbeing strategy specific to sport, need for direction and leadership in this area • For mental health and wellbeing in sport to be supported with adequate resources it has to be written in a statutory or strategy document • Some awareness of mental health and wellbeing strategies and policies • Mental health and wellbeing in sport could be specifically mentioned in any forthcoming government strategy (i.e. Protect Life) • Mental health and wellbeing strategy should include a monitoring and accountability framework

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