Mental Health in Scottish Football: Incidence and Role for Intervention

Stewart, K[1], McCrea, C[2], Stewart, W[3], Petrie, S[4], & MacLean, JA[1]

[1] Hampden Sports Clinic, Hampden Park, Glasgow G42 9ED

[2] Heart of Midlothian Football Club, Tynecastle Stadium, Gorgie Road, Edinburgh

[3] Dept of Neuropathology, Laboratory Medicine Building, Queen Elizabeth Hospital, Glasgow and Institute of Neuroscience and Psychology, University of Glasgow

[4] Clinical Psychology Partnership, Baker Street, Stirling

March 2016

Abstract

A number of high profile cases reported in the media have put mental health issues in sport under the spotlight. To date the majority of sports medicine research in football has focused on the management and outcomes of musculoskeletal injuries, with a stigma persisting regarding non-physical injury or illness.

Phase 1 of this study looks to investigate the incidence of mental health problems in Scottish football and identify who players would talk to if suffering from these problems. Phase 2 looks to identify players may currently be suffering from such problems and provide the necessary help they require (Phase 3).

Phase 1: A total of 608 responses were received and the results analysed as a group with 64% of players admitting to having had or known someone with mental health issues including problems with alcohol, drugs or gambling. This significant percentage confirmed the need to develop a formal 'Mental Health Action Plan' for Scottish Football. Player responses indicated the key role of club medical staff (and to a lesser but still significant extent the coaching staff) as being the person(s) the players would discuss such sensitive issues with.

Phase 2 and 3: Involved a questionnaire sent out to each of the Phase 1 players by email and analysed through Survey Monkey. This included standardised questionnaires (GAD-7 and PHQ-9) and questions regarding injury history, in particular head injuries, and adverse behaviours such as alcohol and gambling. Results (n=162) suggest that 25% (n=40) of players require some mental health advice from a trained health professional with 20% of these needing formal on-going specialist support (counselling/clinical psychology/psychiatry).

These results have highlighted the need for a Mental Health Action Plan in Scottish Football and for this to be led by Medical personnel. This has been acknowledged by the Scottish Football Association with continued funding secured from a commercial source.

Acknowledgements

The Research group wish to acknowledge the assistance of Professional Footballers' Association (PFA) Scotland, in particular Michelle Evans, in the completion of this study. Their encouragement to the players ensured a high response rate for both phases of the project.

We would also like to thank the Scottish Football Association (SFA) for their on-going support, in particular Chief Executive Stewart Regan who helped to secure continuous long term funding for the project.

Special thanks also goes to the players who recognised the importance of this research and gave their time to complete the questionnaires and support the project.

Contents

Abstract **2**

List of Abbreviations **6**

Background **7**

1.1. Mental Health in Sport 8

1.2. Chronic Traumatic Encephalopathy 9

1.3. Pilot Study 11

1.4. Aims and Objectives 12

Methods **13**

2.1 Phase 1 13

2.2 Phase 2 13

2.3 Association between head injury and mental health 14

2.4 Phase 3 14

Results Phase 1 ..... **16**

3.1 Demographics 16

2.4.1 Player Perception of Mental Health 17

2.4.2 Who Players Would Consider Approaching for Help 17

2.4.3 Who Players would talk to Within and Out-with Club 18

Results - Phase 2 ..... **19**

2.5 Demographic Data 19

2.5 Relationship Between GAD and PHQ Scores 20

2.6 Mean PHQ/GAD Scores 21

2.7 Raised PHQ/GAD Scores 21

2.7 Players entered into Phase 3 22

2.8 Relationship with History of Concussion and Loss of Consciousness 23

Discussion 24

3.1 Discussion of Results 24

3.2 Evaluation of the Project 25

3.3 On-going Support for the Project 26

3.4 Moving Forward 27

Conclusions 28

Appendix A - Questionnaire 29

Appendix B – Action Plan 30

References 31

List of Abbreviations

CTE	Chronic traumatic encephalopathy
GAD	Generalised Anxiety Disorder Assessment
GP	General Practitioner
PFA	Professional Footballers Association
PHQ	Patient Health Questionnaire
SAMH	Scottish Association for Mental Health
SEM	Sport and Exercise Medicine
SPFL	Scottish Premier Football League
SWF	Scottish Women's Football
TBI	Traumatic brain injury

Background

A number of high profile cases reported in the media have put mental health issues in sport under the spotlight. In particular, reports of a potential association between exposure to sports-associated head injury (concussion) and risk of depression in retired American footballers [1,2], and the suggestion depression and suicide might be early stigmata of a specific neurodegenerative disease associated with brain injury, chronic traumatic encephalopathy (CTE)[3,4], have brought this issue to the fore. However, to date the majority of sports medicine research in (association) football has focused on management and outcomes of musculoskeletal injuries, with a stigma persisting regarding non-physical injury or illness accompanied by a lack of awareness and education of both players and coaches[5]. Nevertheless, recent work provides evidence supporting a high prevalence of mental health issues in current and former professional footballers [6], including suicide [7]. As such, there is a pressing need to improve awareness and detection of mental health issues among professional footballers to allow early intervention.

Recent research carried out by the University of Glasgow has suggested there may be a link between repeated head injury and depressive illness. Better understanding of the association of injury, in particular traumatic brain injury (TBI) is needed to gain insight into whether mental health issues are sport related (so to be anticipated and respond to intervention), or head injury related (so might be reduced by reducing/ better treating TBI). This aspect of this research is innovative and links to the current research and guidelines re the management and of prevention of the long-term sequelae of concussion.

The Scottish Football Association (SFA) has the welfare of current and former players as a priority. It set up the Mental Health Forum in Scotland together with other football partners, the Player's Union, the club chaplains and Scotland's leading mental health charity Scottish Action on Mental Health (SAMH). It is anticipated that the results of this research will be applicable across UEFA and indeed other sports.

Our hypotheses are:

i) that mental health problems are present at higher levels in professional footballers than anticipated from background population data;

ii) that these problems are associated with key events in a player's career;

iii) that a history of head injury in football increases risk of mental health issues.

1.1. Mental Health in Sport

Whilst sport and exercise are widely acknowledged as holding therapeutic positive benefits for mental illness by improving mood and aiding recovery of those suffering from depressive/anxiety disorders, there is a relative lack of supporting data in professional sport[8].

Conversely, recent high profile cases of suicide in retired American footballers have illustrated the potentially devastating consequences of mental health problems in athletes. Recent research supported by The World Football Player's Union (FIFPro), identified higher than expected rates of mental health problems in a cohort of current and former professional footballers. Specifically, the authors reported 26% of active professional footballers suffering from anxiety or depression, this figure rising to 39% among retired players[6]. Of note, 3 key periods were identified when players were at greater risk of mental health conditions compared to the background population:

1. When players are injured
2. Prospect of retirement (older players)
3. Prospect of being released (younger players)

Across these three periods, social support is important to consider. Social support involves a complex combination of multiple processes. In a football context, this means that the existence of a caring and supportive network including family, friends, teammates, coaches and medical personnel, should have a positive effect on an athlete's cognitions, emotions

and behaviours including in relation to mental health issues. The footballer should be helped by the perception that others are available to provide help and support in times of need and by the actual receipt of help and support. The quality and type of social support a football player perceives or receives could presumably affect such things as performance level, resistance to dropping out, enjoyment and coping with and recovering from injury. The beneficial effects of social support may occur through a number of mechanisms, such as protecting individuals from the harmful effects of stress, fostering resiliency and acting as an environmental protective factor, contributing to adjustment and development, raising self-esteem (and self-efficacy and self-confidence) and reducing uncertainty.

Notably, recurrent or severe injuries lead to long periods of time without training or competition and are consequently linked with low mood and depressive symptoms. In support of this, a study by Brewer & Petrie[9] in collegiate football compared those who had sustained an injury in the previous year (n=488) and those with no injury (n=428). Results indicated that athletes with injuries had significantly higher depression scores than those without injury ($p<0.05$). In addition, older and younger players have added stressors of retirement the prospect of being released. **Strategies to better understand prevalence of mental health issues in professional athletes and to facilitate early identification and successful intervention, therefore, are priorities**.

1.2. Chronic Traumatic Encephalopathy

Over 85 years ago, the pathologist Dr Harrison S Martland described chronic motor and neuropsychiatric symptoms in former boxers as the "punch-drunk syndrome"[10]. Over the following decades, further case reports and series emerged indicating boxers exposed to repetitive traumatic brain injury had increased incidence of a potentially progressive neuropsychiatric disorder with a neuropathological basis, termed "dementia pugilistica (DP)" [11,12]. However, largely as a result of cases apparently restricted to former participants of the uniquely brutal sport of boxing, there remained little interest in this disease until observations of similar neuropathological findings to DP in case series and reports of non-boxing individuals exposed to repetitive mild TBI, including former participants in non-boxing

contact sports such as American football[2,13], rugby union[14], association football[13] and wrestling[15]and in military personnel[16]. Thus, almost 90 years after Dr Martland's first account in boxers, there is a realisation **it is exposure to brain injury that is associated with risk of developing CTE, rather than the environment or sport in which brain injury is sustained.**

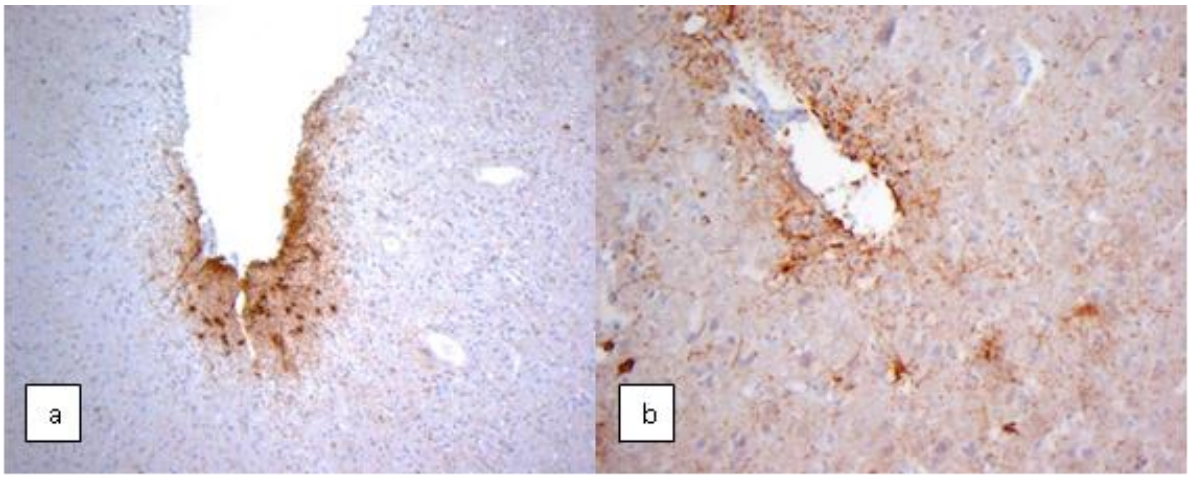


Figure 1: The pathology of CTE in a 59-year-old **former professional footballe**r showing the typical appearance of subpial (a) and perivascular (b) tau deposition (brown).

Early accounts of the pathology of CTE described accumulation of abnormal tau protein as neurofibrillary tangles in affected brain regions (Figure 1), with more recent reports describing pathology in cases with substantial exposures to trauma but no history of dementia. However, emerging from these more recent studies and supporting earlier, historical observations is a picture of a clinical syndrome with prominent, early neuropsychiatric symptoms including emotional lability, personality change, aggression, poor judgment, depression, suicidal ideation and, in some instances, suicide[17]. However, there remains controversy as to whether these more recent, retrospective accounts of neuropsychiatric symptomatology in cases presenting at autopsy reflect true manifestation of symptoms of CTE, or simply reflect an increased prevalence of such symptoms in an athlete population. **As such, there is a need to better understand the proposed association between mental health issues in sport and exposure to brain injury.**

1.3. Pilot Study

In a pilot enquiry into mental health in professional footballers (n=30) within one Championship club in Scotland, we screened players using the Patient Health Questionnaire (PHQ)-9 and the Generalised Anxiety Disorder Assessment (GAD)-7; two validated, structured assessments of mental health. The results revealed that, while a majority of players reported normal findings, 7 of 30 (23%) returned high PHQ scores, while 3 of 30 (10%) returning evidence of mild anxiety on the GAD (Figure 2).

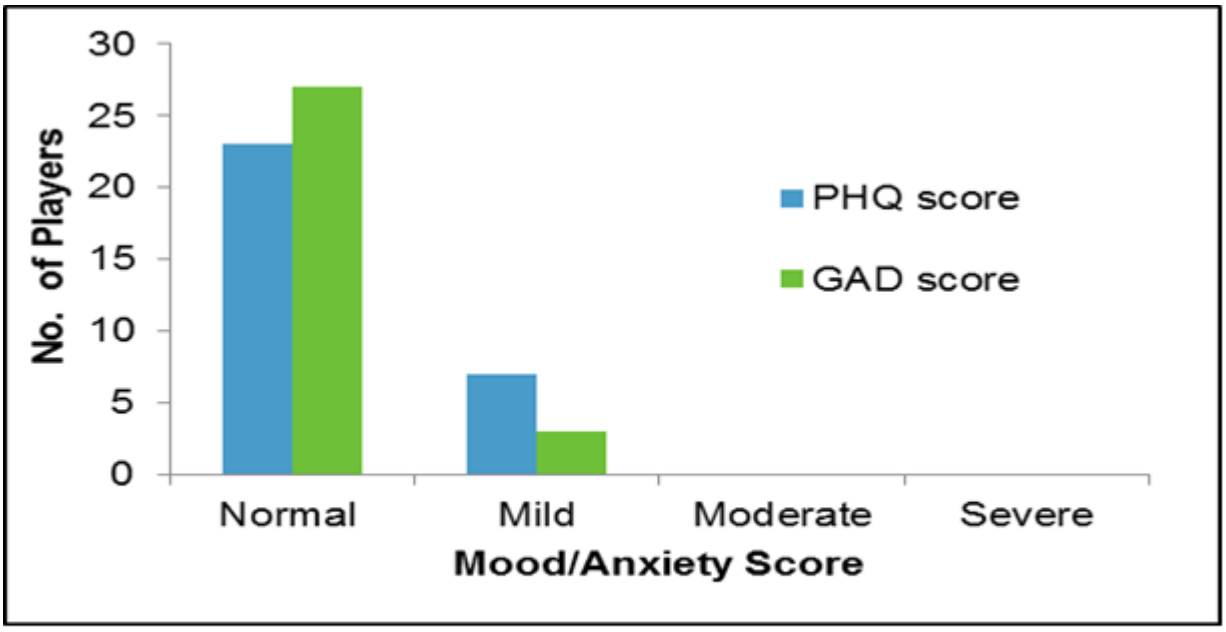


Figure 2: PHQ and GAD scores in preliminary study at 1 Championship club

These data confirmed findings in previous studies, identifying higher than anticipated levels of mental health issues in professional footballers than expected from general population data. Further, we found evidence in support of an association between mental health issues injury and longer playing history.

1.4. Aims and Objectives

The study was designed in 3 phases with both male and female players invited to participate. The PFA Scotland were very supportive of our work and were keen to be of assistance in facilitating the study.

AIM 1: To identify prevalence of mental health issues in professional football and identify possible 'at risk' indictors of mental health issues in this population

AIM 2: To identify who players would speak to if they did feel low or anxious

AIM 3: To identify whether there is an association between mental health issues and history of head injury in professional football

Methods

This research involved several stages: Phase 1 was an anonymous questionnaire, which was followed by more detailed follow up questionnaire (Phase 2) which then identified those players who required intervention and were entered into the final phase (Phase 3).

2.1 Phase 1

All 42 Scottish Professional League clubs (male) and 12 Women's Premier League Clubs were invited to participate in the study. Players 18 and over who agreed to participate were provided with an information sheet and consent form confirming their participation in the study.

In this phase of the study a structured questionnaire (Appendix A) was distributed by the Players Union (PFA Scotland) to all players in each of the 42 League Clubs in Scotland (males) and Scottish Women's Football (SWF) to ascertain:

i) who they would consider speaking to if they had mental health issues,

ii) who they would consider receiving on-going help from if they needed it.

Players were requested to complete the questionnaire anonymously and return via the Players Union Representative.

2.2 Phase 2

This phase aims to identify those at risk of mental health issues. All players who completed Phase 1 of the study were invited to participate in Phase 2.

Players were sent an email from PFA Scotland inviting them to participate in Phase 2. The email contained a link which took players to a questionnaire on Survey Monkey where they were asked to independently complete two validated, structured assessments of mental health, namely:

I. The Patient Health Questionnaire (PHQ)-9

II. Generalised Anxiety Disorder Assessment (GAD)-7

In addition, players were asked to complete a questions regarding family life, injuries (in particular head injuries) and adverse health behaviours such as smoking, alcohol and gambling.

The link to the questionnaire was sent to players 3 times at 10 day intervals to improve compliance with each PFA Scotland Club Representative contacted to encourage teammates to complete the survey. We acknowledged it was an ethical challenge asking players to identify themselves, but were heartened by the large response to Phase 1 of the study and the enthusiasm of PFA Scotland.

2.3 Association between head injury and mental health

Included with the structured questionnaire in Phase 2, detailed enquiry on self-recalled history of traumatic brain injury (TBI) will be sought, including details on non-football exposure to TBI (e.g. through other sports/accidents) and the number of episodes of loss of consciousness, medic-diagnosed concussion and symptomatology of concussion experienced without formal medical diagnosis of reporting. In addition, awareness of and attitudes surrounding sports concussion will be explored using laboratory standardised and validated structured questions. Data from these surveys will then be interrogated to provide information on career exposure to TBI and association with incidence of mental health issues.

2.4 Phase 3

Responses to Phase 2 were collated centrally and players with a raised PHQ and/or GAD score (5+) or any 'red flags' were triaged within 48 hours by a Sports Medicine doctor with experience in mental health issues. This was an initial email followed by a telephone consultation.

Where appropriate, players underwent a more comprehensive standardised clinical assessment face to face or over the telephone. From here players were either referred back

to their Club Doctor for on-going support, referred to counselling services such as Breathing Space (an NHS resource) or were referred for input from a Clinical Psychologist (see Appendix B).

Results Phase 1

3.1 Demographics

A total of 608 responses were collected from 37 Scottish League Clubs (88.1%). One female Club participated in the study (n=22) but these responses were excluded from analysis. Therefore, all results are based on male players attached to League Clubs in Scotland.

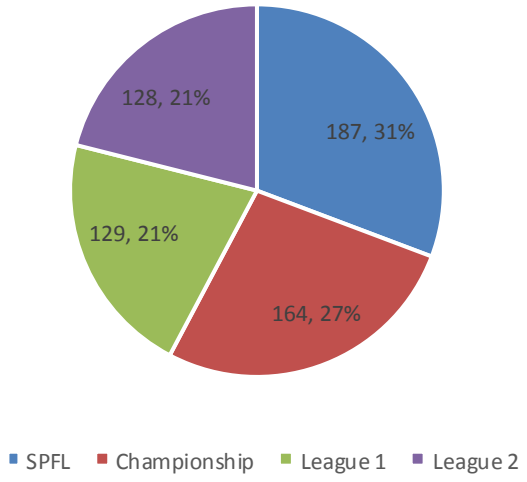


Figure 3: Player responses per division (excluding females)

Figure 3 shows the distribution of responses to the questionnaire according to Division. The mean age of respondents to Phase 1 was 23.9 years (±4.5) with the distribution illustrated in Figure 4.

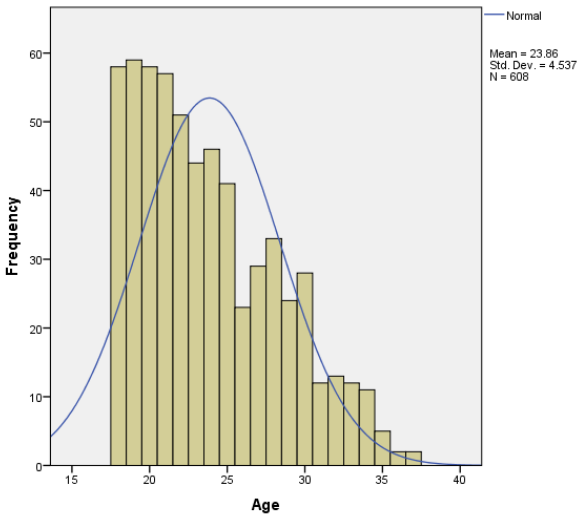


Figure 4: Distribution of age responses to Phase 1

2.4.1 Player Perception of Mental Health

The opening question of the anonymous survey asked players "if they or any of their teammates had experienced mental health issues". Only 43.8% of players (n=266) answered this question but 64% of these (n=170) answered positively.

2.4.2 Who Players Would Consider Approaching for Help

Players were asked who they would approach if they were worried they were suffering from depression, anxiety or other mood problems or having problems with alcohol, drugs or gambling. Figure 5 suggests players would be most comfortable talking to friends and family (86.5%) or their teammates (54.3%).

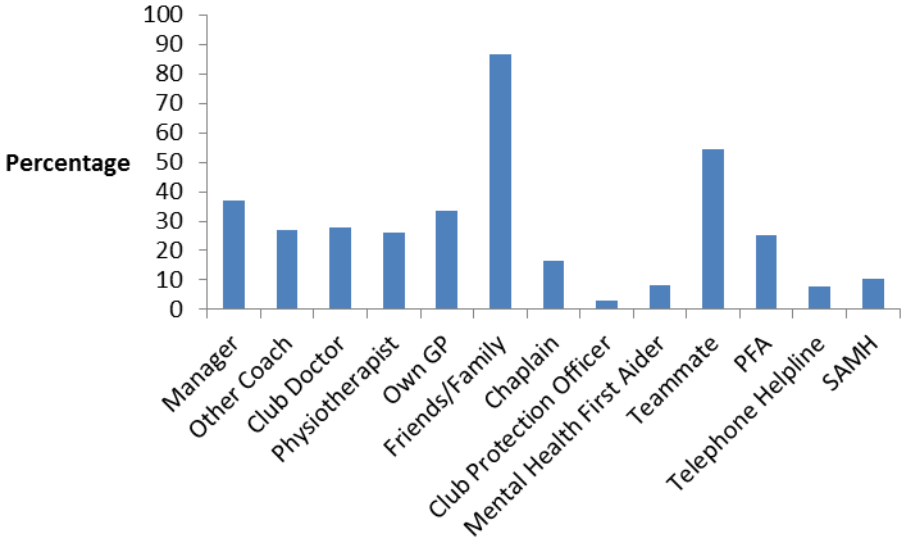


Figure 5: Who players would consider talking to if they had any mental health issues

2.4.3 Who Players would talk to Within and Out-with Club

Players were then asked who they would talk to about mental health issues within and out-with their Clubs. Figure 6 suggests that players would be most likely to contact their own GP (58.9%) or their Club doctor (51.8%). A large number (n=225) would also feel comfortable talking to their manager or coach. It also suggests a preference for face to face counselling rather than a telephone helpline (43.9% vs 16.3%).

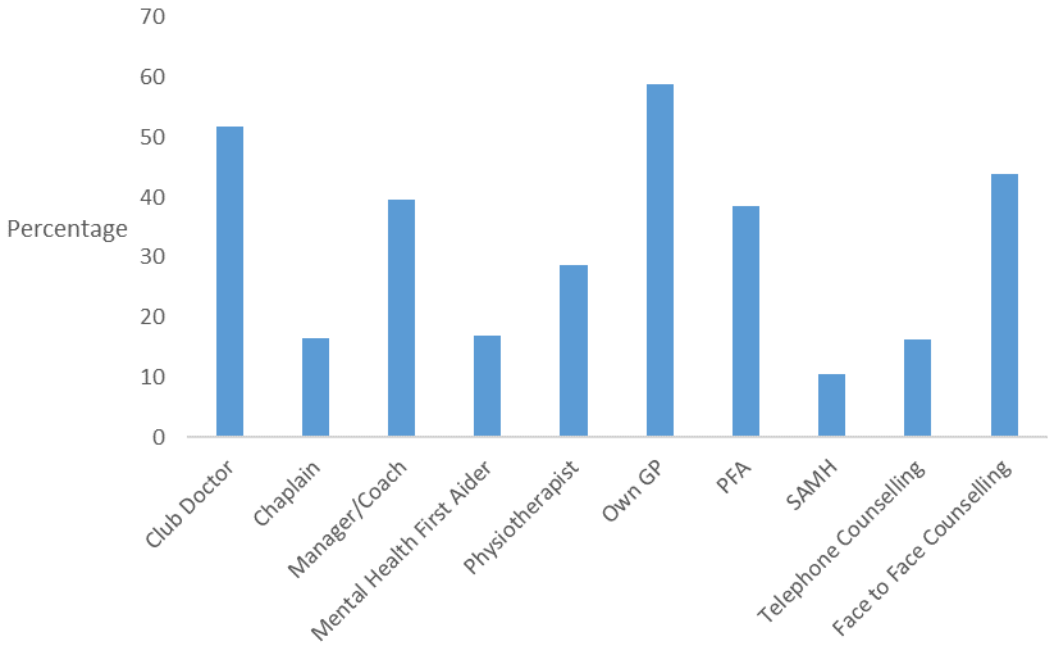


Figure 6: Who players would contact for help if suffering from mental health issues within and out-with clubs

Results - Phase 2

Between 29th January and 8th March 2016, 197 questionnaires were returned. Of these, 35 were incomplete and excluded from analysis. Therefore analysis is based on 162 questionnaires.

2.5 Demographic Data

The average age of respondents was 25.5 (±5.3) years. Figure 7 shows the number of responses per division with Figure 8 illustrating the distribution of age.

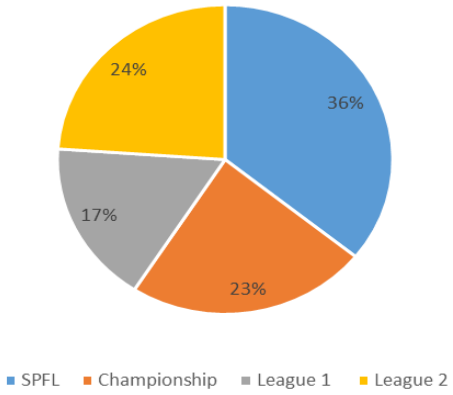


Figure 7: Phase 2 respondents according to Division

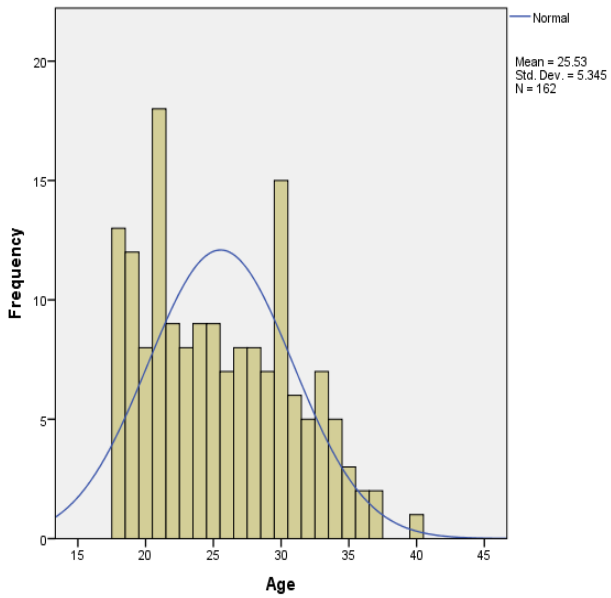


Figure 8- Distribution of age responses to Phase 2

2.5 Relationship Between GAD and PHQ Scores

A clear correlation was found between GAD and PHQ scores (r^2=0.58, $p<0.05$) (shown in Figure 9).

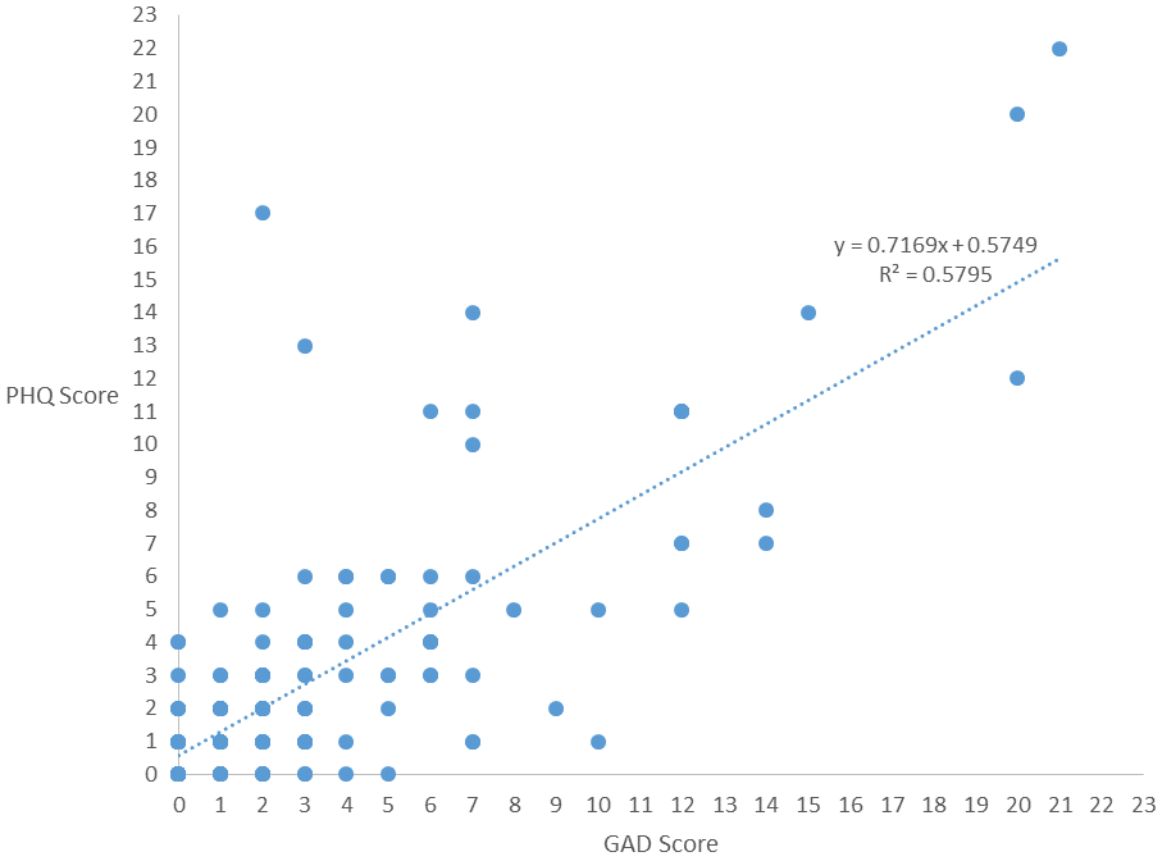


Figure 9: Scatterplot illustrating the relationship between GAD and PHQ scores (r^2=0.58)

2.6 Mean PHQ/GAD Scores

The mean GAD score was 3.1 (±4.1) and the mean PHQ score was 2.8 (±3.9). The mean values for each division can be seen in Table 1.

Table 1: Mean GAD and PHQ scores by Division

Division	Number (n)	Mean GAD Score	Mean PHQ score
SPFL	62	3.47 (±4.3)	3.0 (±3.8)
Championship	36	2.56 (±3.6)	1.97 (±2.2)
League 1	26	3.31 (±3.0)	3.19 (±4.4)
League 2	38	2.87 (±4.9)	2.97 ±4.8)

2.7 Raised PHQ/GAD Scores

Thirty seven players (22.8%) had a raised GAD score (5 or greater) with 10 players presenting with a score equal to or greater than 10 and 4 with severe scores (Table 2).

Table 2: Frequency of players with raised GAD scores

GAD Score	Definition	Frequency	Percentage
0-4	Nil of Note	125	77.2
5-9	Mild	23	14.2
10-14	Moderate	10	6.2
≥15	Severe	4	2.4

Thirty one players presented with a raised PHQ score (19.1%) with 10 players showing moderate symptoms and a further 3 with moderately severe/severe symptoms (Table 3).

Table 3: Frequency of players with raised PHQ scores

PHQ Score	Definition	Frequency	Percentage
0-4	Nil of Note	131	80.9
5-9	Mild	18	11.1
10-14	Moderate	10	6.2
15-19	Moderately Severe	1	0.6
≥20	Severe	2	1.2

Nineteen players (11.7%) had a raised GAD and PHQ score (both ≥ 5) with a further 4 players having both scores greater than 10 indicating moderate to severe depressive symptoms.

2.7 Players entered into Phase 3

A total of 40 players were triaged by an experienced SEM doctor and entered into Phase 3 of the study. One player was then excluded due to his reluctance in speaking to any of the team. Of these 39 players, 8 were referred to clinical psychology for ongoing help, 11 received a consultation with SEM doctor and were provided with self-help resources and a contact for if they felt they needed more help. A further 5 needed no input after initial consultation. Several players have yet to respond to the service and will remain in the system until contact has been established. All players will be followed up in 3 months (results not included as this is ongoing).

2.8 Relationship with History of Concussion and Loss of Consciousness

Players were asked a) how many times they have been concussed and b) how many times they have lost consciousness. Tables 4 and 5 illustrate this.

Table 4: Number of times players have been concussed

No response	5
Never	120
Once	25
Twice	7
3 times	1
More than 3 times	1

Table 5: Number of times players have lost consciousness

No response	3
Never	101
Once	35
Twice	15
3 times	3
More than 3 times	2

There was no associated correlation between GAD score and number of concussions (r^2=0.009) or loss of consciousness (r^2=-0.022). Similarly, there was no correlation between PHQ score and number of concussions (r^2=0.008) or loss of consciousness (r^2=-0.035).

Discussion

This study has highlighted that mental health problems are present among players associated with senior clubs in Scottish football. This suggests the need for a Mental Health Action Plan to be created with clear pathways for players to get the necessary help they require.

3.1 Discussion of Results

Phase 1 of this research, which was completed by 608 players, confirmed that within football surroundings, players would turn to their Club Medical staff if they were suffering from mental health issues. Out-with their Club players would turn to PFA Scotland and have a preference for face to face counselling. It is understandable that footballers are less likely to seek mental help assistance through NHS resources due to confidentiality and embarrassment which confirms the need for a specialist programme to be established.

Phase 2 required players to provide their personal details including contact telephone number and email. This was distributed electronically as this has been shown to improve compliance. We expected a low response rate from the questionnaire, with 162 players completing the survey in full.

We identified 24.7% of Scottish footballers with mental health problems that required a medical intervention (GAD/PHQ scores greater than 5). This has highlighted that mental health issues are highly prevalent among players associated with Senior Clubs in Scottish football; the incidence of such issues is at a level equal of greater than found in the general population with Government statistics suggesting that 1 in 4 people in the UK will experience mental health problems[18].

A GAD and/or PHQ score greater than 10 has been shown to have a high sensitivity and specificity for major depressive illness or anxiety disorder. Four players in our cohort (2.5%) presented with these scores with all of them being referred to a Clinical Psychologist for ongoing help.

Mental health issues can have profound implications for players and their families, as well as for Clubs in terms of how they manage and respond to such issues. The current provision of such services to players within Scottish football is very inconsistent. In addition, the current provision of guidance to Scottish Clubs is poor-there is little or no signposting of services.

Professional sport is inherently a stressful choice of career-whilst the rewards for success can be significant, there are numerous accompanying stresses, pressures and uncertainties, for which young athletes are often ill equipped to cope. Culturally within the sport, there is significant anecdotal evidence to suggest stigma around the reporting of, or seeking help for mental health issues.

In light of the above, our study has highlighted the pressing need for a Mental Health Action Plan to be created and sustained across Scottish football, with clear referral pathways for players and clubs alike, leading to the consistent provision of evidence based clinical treatments for those that require them.

3.2 Evaluation of the Project

This evaluation of this project was based on the number of players being successfully triaged and referred to an appropriate source of help. During triage, a number of themes have emerged suggesting players who may be at risk of mental health issues including:

i) Those nearing the end of their contract/career: uncertainty regarding the future

ii) Those who are out on loan from their Club: lack of support from their Club and social isolation

iii) Those who have been out of the game due to long term injury: uncertainty regarding the future, social isolation, increased frustration at themselves

A number of players indicated that they were aware of other players with significant issues who were unlikely to seek help due to the stigma of them seeming weak. The project aimed to break down some of these barriers but further work is required.

3.3 On-going Support for the Project

The project has already received the backing of the Scottish FA and PFA Scotland. The results to date and plans for the future have now been shared with support from players and Government Ministers:

> *"It is fantastic that the SFA is taking an active concern in mental health issues and we think this provides a powerful example to other organisations and to the general public. Scottish Government recognises mental health as a priority. Your work sets an example to organisations and particularly to young people of the importance of considering mental health. The fact that admired sports people can have mental health problems just like everyone else sets an important example for everyone and goes a long way to de-stigmatise these problems."*
>
> - **Dr Catherine Calderwood, Chief Medical Officer for Scotland**

"Now I have my football, my PT classes and the gym to help me as well as my counsellor. I am sick of covering myself in scars. People who just know me through football might think I'm an arsehole, but I'd like people to understand and I hope that by speaking out it will help others get help. There are definitely other players out there with mental health problems. They should contact the service and get the help they need."

- **David Cox, player who suffered from serious mental health issues and sought help**

"PFA Scotland and the help they got me has turned my life around. I am happier in my football and I am happier away from it too in my personal life. Whenever I feel anxious or down about something I now know how to cope with it, but I also know that if I need professional help again all I have to do is phone the PFA and they will get me the help I need"

- **Anonymous player who has received help**

3.4 Moving Forward

- Following the surprise results that a high percentage (39.6%) of players would approach their manager for help and advice, the Scottish FA have agreed that Mental Health training will become a part of the Coach Education Programme. This will focus on identifying players who may be suffering from mental health issues and 'signposting'-informing coaches of the Mental Health Action Plan and the pathway for them to refer players to the programme.

- With support from the Scottish FA we have now secured funding from a commercial source to continue this project for a further 3 years (outlined in Appendix B). The success of the programme will continue to be evaluated with player testimonials and analysis in the change of the GAD/PHQ scores from entering the programme to discharge, and then a 3 month follow up period.

- In addition to the Mental Health Action Plan, continued funding will allow us to develop and maintain a number of specific education and awareness resources. This will include business cards for all players with details of how to contact the programme, posters for dressing rooms, and development of a specialist application for mobile devices to contain self-help information, details on the programme and ways to contact us including email, telephone and text.

Conclusions

This study has confirmed that mental health issues are prevalent in Scottish Football. It has identified that away from friends and family, players are more likely to seek help and advice from medical professionals and that any on-going programme must be led by professionals with experience in this area.

By securing additional funding, we have ensured that this can be put in place for a further 3 years with resources being developed to raise awareness of mental health issues both within and out-with the professional game. The Scottish Government support this ongoing project as a means to de-stigmatise mental illness particularly in young men.

Appendix A - Questionnaire

Recent reports suggest sportsmen and women participating at a high level in their sport may be at risk of mental health issues, such as depression or anxiety, and related problems with alcohol, drugs or gambling.

In the course of your career to date, as far as you can recall, have you or any of your teammates experienced issues with mental health or related problems with alcohol, drugs or gambling? **YES/NO**

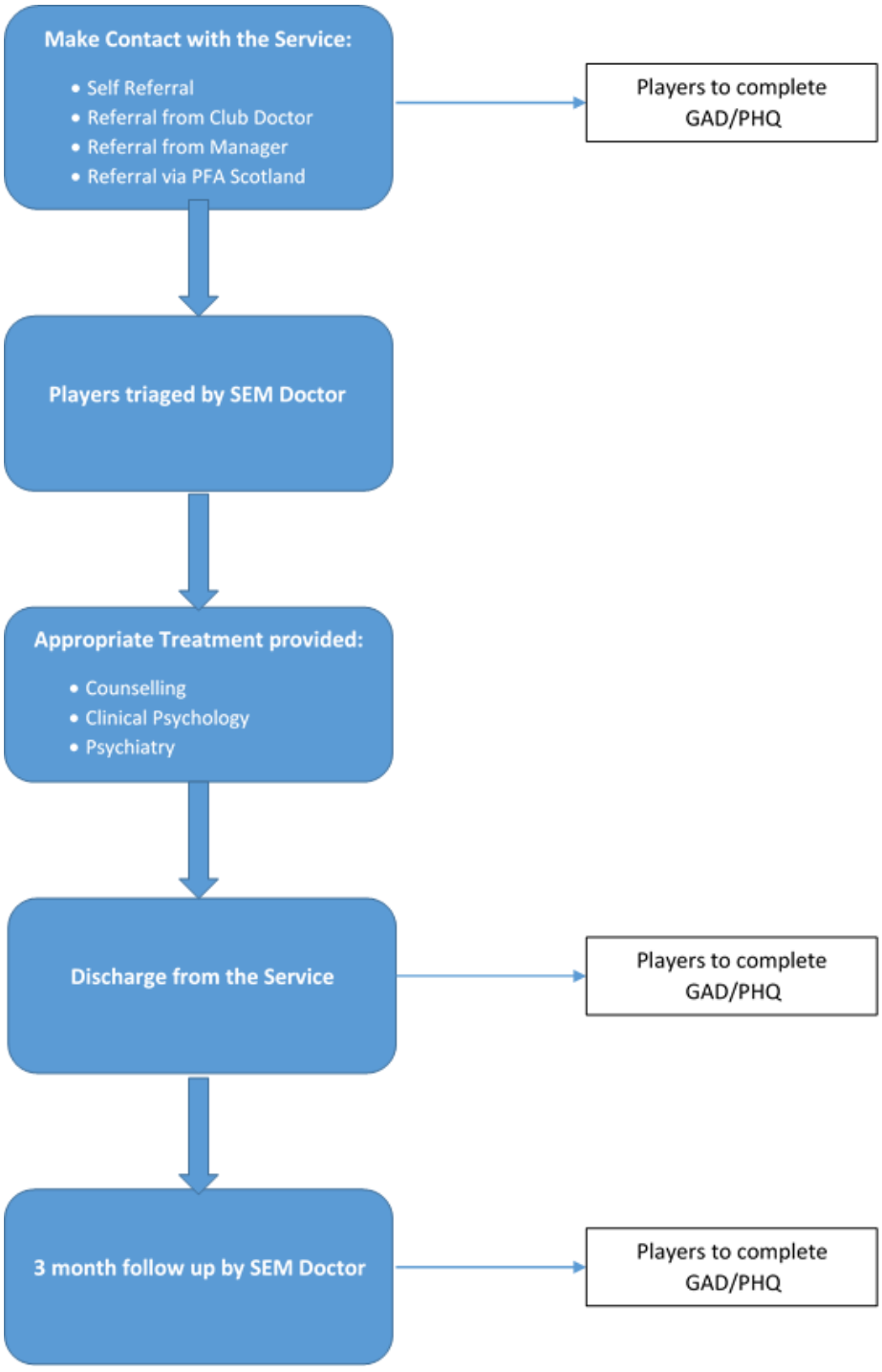
If you were worried you were suffering from depression, anxiety or other mood problems or having problems with alcohol, drugs or gambling who would you consider talking to?

Please tick all that apply	
Manager	
Other Coach	
Club Doctor	
Physiotherapist	
Own GP	
Friends/Family	
Chaplain	
Club Protection Officer	
Mental Health First Aider (within club)	
Team Mate	
PFA Representative	
Telephone Helpline	
Scottish Association for Mental Health (SAMH)	

If you were diagnosed with one of the above problems, who would you feel comfortable receiving help from?

Within Club	**Please tick all that apply**	**Outwith Club**	**Please tick all that apply**
Club Doctor		Own GP	
Chaplain		PFA	
Manager/Coach		SAMH	
Mental Health First Aider		Private telephone counselling	
Physiotherapist		Private face to face counselling	

Appendix B – Action Plan



References

1. Guskiewicz, K. et al (2005) Association between Recurrent Concussion and Late-Life Cognitive Impairment in Retired Professional Football Players. *Neurosurgery*, 57, 719-726

2. Omalu, B.I., et al (2005) Chronic traumatic encephalopathy in a national football league player. *Neurosurgery* **57**, 128-134; discussion 128-134. PMID: 15987548

3. Park, S. et al (2013) Athletes' career transition out of sport: a systematic review. *International Review of Sport and Exercise Psychology* **6 (1)**; 22-53

4. McKee, A. C., *et al*. (2013). The spectrum of disease in chronic traumatic encephalopathy. *Brain* **136**, 43–64

5. Smith, D. H., Johnson, V. E. & Stewart, W. (2013). Chronic neuropathologies of single and repetitive TBI: substrates of dementia? *Nat. Rev. Neurol.* **9**, 211–221

6. Gouttebarge, V., Frings-Dresen, MHW, Sluiter, JK (2015). Mental and psychosocial health among current and former professional footballers. *Occupational Medicine*, doi:10.1093/occmed/kqu202

7. Gouttebarge V, et al (2014). Mortality in international professional football (soccer): a descriptive study. *J Sports Med Phys Fitness*, PMID: 25289716

8. Alexandratos, K. et al (2012). The impact of exercise on the mental health and quality of life of people with severe mental illness: a critical review. *British Journal of Occupational Therapy* **75(2)**; 48-60

9. Brewer, B.W. & Petrie, T.A. (1995) A comparison between injured and uninjured football players on selected psychosocial variables, Academic Athletic Journal **10**, 11-18

10. Martland, H. (1928) Punch drunk. J Am Med Assoc **91**, 1103-1107

11. Millspaugh, J. (1937) Dementia pugilistica. United States Naval Medicine Bulletin 297-303.

12. Corsellis, J.A., Bruton, C.J. & Freeman-Browne, D. (1973) The aftermath of boxing. Psychological medicine 3, 270-303

13. McKee, AC, et al (2014). The neuropathology of sport. Acta Neuropathol, 127, 29-51

14. Stewart, et al (2015). Chronic traumatic encephalopathy: a potential late and under recognised consequence of rugby union? Q J Med, In Press

15. Omalu, B.I., Fitzsimmons, R.P., Hammers, J. & Bailes, J. (2010) Chronic traumatic encephalopathy in a professional American wrestler. Journal of forensic nursing 6, 130-6.

16. Goldstein, L.E. et al. (2012) Chronic traumatic encephalopathy in blast-exposed military veterans and a blast neurotrauma mouse model. Science translational medicine 4, 134ra60

17. Stern, RA, et al (2013). Clinical presentation of chronic traumatic encephalopathy. Neurology, 81, 1122-1129

18. *Mental Health Strategy for Scotland: 2012-2015* Edinburgh: Scottish Government, 2012.www.scotland.gov.uk/Publications/2012/08/9714